BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL PRINICIPAL BENCH, NEW DELHI
In
Appeal No. 62/2025
(IA no 633/2025, 636/2025 and 728/2025)

In the matter of:

Rajpal Singh Saini and Anr. …. APPLICANTS

VERSUS

Union of India & Ors. …. RESPONDENTS

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Place: Delhi **Filed by: Adv. Saurabh Balwani**

Date: 16.03.2026 **On behalf of Central Pollution Control Board**

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

IN

Appeal No. 62/2025
(I.A no 633/2025,636/2025 & 728/2025)

IN THE MATTER OF

Rajpal Saini and Anr.

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RESPONSE ON BEHALF OF RESPONDENT NO. 05 i.e. CENTRAL POLLUTION CONTROL BOARD

1. That, the Hon'ble National Green Tribunal, Principal Bench, Delhi (hereinafter referred as "Hon'ble NGT"), vide order dated 04.02.2026 in Appeal No. 62 of 2025 filed in IA No 728 of 2025, has impleaded Central Pollution Control Board (hereinafter referred to as "CPCB") as the additional Respondent No. 05, a proper party, in the instant appeal and directed for filing the response. Thereby, the response is made in this instant appeal in succeeding paragraphs. A copy of Hon'ble NGT order dated 04.02.2026 is attached as **Annexure I.**

2. That, it is humbly submitted that the answering Respondent herein denies all claims, contentions, allegations and averments against answering respondent CPCB in the above appeal contrary to anything stated or submitted in this reply. Nothing in the appeal may be deemed to have been accepted or admitted by the answering Respondent for want of a specific denial or on the ground of non-traverse, save and except any avernment which has been expressly admitted hereinafter.

3. That, the issue raised in the appeal relates to the grant of Environmental Clearance dated 18 June 2025, issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC) under the Environment Impact Assessment (EIA) Notification, 2006, to M/s Jindal Urban Waste Management (Bawana) Limited for establishing of 30 MW Waste-to-Energy (WtE) Thermal Power Project, designed to process 3,000 tonnes of waste per day (TPD), situated in the DSIIDC Industrial Area, Sector-5, Village Bawana, Sub-District Narela, District North Delhi.

It is alleged that although the project is located in an industrial area, human habitations exit within 500 meters of the project site, and six villages are situated within 5 kilometer radius. The Western Yamuna Canal / Munak Canal flows at a distance of 32 meters from the project site, and a natural drain also passes nearby. It is further, alleged that no buffer zone of 500 meters has been maintained, as mandated under the CPCB guidelines of buffer zone around waste processing facilities, 2019.

Further, this appeal submits that the project site is adjacent to three large industries namely (i) a 24 MW Waste to Energy Plant (currently seeking an

expansion of 60 MW), (ii) a Treatment, Storage Disposal Facility (TSDF), and (iii) the Pragati Power Corporation Limited (PPCL) gas power station. The appellant contends that given the existing pollution burden in the area, permitting another waste to Energy Plant has ignored the environmental and health implications of population residing nearby.

The appeal also submits that the proposed capacity enhancement of existing WtE to 60 MW and the establishment of a new WtE in the same area, are matters to be evaluated by the competent authorities during environmental appraisal and regulatory monitoring and the setting up of the proposed plant in such close proximity to the human habitations may impact the residents.

4. That, CPCB is a statutory Board constituted under Section 3 of the Water (Prevention and Control of Pollution) Act, 1974. It performs the functions under the Water (Prevention and Control of Pollution) Act, 1974 (hereinafter referred to as "Water Act, 1974"), The Air (Prevention and Control of Pollution) Act, 1981 (hereinafter referred to as "Air Act, 1981") and The Environment (Protection) Act, 1986 (hereinafter referred to as "EP Act, 1986").

5. That, the State Pollution Control Boards (SPCBs) / Pollution Control Committees (PCCs) in every State / Union Territory have been constituted under the Water Act, 1974 and the Air Act, 1981 and are responsible for implementation of the provisions of both the Acts in their respective State / Union Territory.

6. That, the Ministry of Environment, Forest and Climate Change (MoEF&CC) has notified the Environment Impact Assessment Notification,

2006 (hereinafter referred to as "EIA, 2006") to ensure the projects or activities to undergo a structured clearance before being implemented. As per Schedule i.e. List of Projects or Activities requiring prior Environmental Clearance (EC) of the EIA, 2006, the project activity 1(d) Thermal Power Plants > 20 MW using municipal solid non-hazardous waste, as fuel, falling under Category "A" in the schedule, shall require prior environmental clearance from the concerned regulatory authority i.e. Central Govt. in MoEF&CC on the recommendations of an Expert Appraisal Committee (EAC) constituted by the MoEF&CC.

7. That, the MoEF&CC, vide No. J-13012/04/2023-IA.I (T) dated 18.06.2025, accorded Environmental clearance to the Proposed Waste to Energy Thermal Power Project of capacity 30 MW by M/s Jindal Urban Waste Management (Bawana) Limited located at DSIIDC Industrial Area, Sector 5, village Bawana, Sub-district Narela, District North Delhi, Delhi, in accordance with the provisions contained in the EIA, 2006.

8. That, the MoEF&CC in exercise of the powers conferred under the EP Act, 1986, has notified the Solid Waste Management Rules, 2016 (hereinafter referred to as "SWM Rules, 2016") vide Gazette Notification dated 08.04.2016. The said Rules provide a comprehensive regulatory framework for the generation, segregation, collection, storage, transportation, processing and disposal of solid waste. The SWM Rules, 2016 delineate the duties and responsibilities of various stakeholders including the CPCB, SPCBs, Urban Local bodies (ULBs), State Governments and other agencies involved in the management of solid waste. These obligations are aimed at ensuring environmentally sound and legally complaint mechanisms for solid waste management.

9. That, Rule 3 (7) of the SWM Rules, 2016, stipulates that the Buffer zone means zone of No development zone to be maintained around solid waste processing and disposal facility, exceeding 05 tonnes per day (TPD) of installed capacity. This will be maintained within the total area allotted for the solid waste processing and disposal facility.

10. That, Rule 11(1) (l) of the SWM Rule, 2016, stipulates that the Secretary-in Charge, Urban Development Department in the State or Union Territory through the Commissioner or Director of Municipal administration or Director of local bodies shall notify buffer zone for the solid waste processing and disposal facilities of more than 05 TPD in consultation with the SPCB.

11. That, CPCB has issued "Guidelines on Provision of Buffer zone around Waste Processing and Disposal Facilities" (as amended in 2019), as per Rule 14 (h) of the SWM Rules,2016, to specify adequate separation distances between solid waste management facilities and its surrounding area having different land usage characteristics. A copy of the guidelines is attached as **Annexure II.**

12. That, Rule 21 of SWM Rule, 2016, stipulates the following Criteria for Waste to Energy process:

a. Non-recyclable waste having calorific value of 1500 Kcal or more shall not be disposed of on landfills and shall only be utilized for generating energy

NOTARY PUBLIC R.L. Chaudhary N.C.T. of Delhi Regd. No. 1513 GOVT. OF INDIA

either through refuse derived fuel or by giving away as feed stock for preparing refuse derived fuel.

b. Higher calorific value wastes shall be used for co-processing in cement or thermal power plants.

c. 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 tons per day processing capacity shall submit an application in Form - I to the SPCB or PCC, as the case may be, for authorization.

d. The SPCB or PCC on receiving such application for setting up waste to energy facility, shall examine the same and grant permission within sixty days.

13. That, industrial sectors are classified by CPCB into different colour coded categories (red, orange, green, white and blue) based on Cumulative Pollution Index, which is calculated by evaluation of three critical environmental pollutants i.e. water, air, and waste, having potential to get generated during the operations.

During 2025, CPCB has revised the methodology for classification and prepared "Report on Classification of Sectors into Red, Orange, Green, White and Blue Categories (A tool for progressive environmental management)", hereinafter refereed as "Classification- 2025".

It is also humbly submitted that human settlements whether located in rural/urban/eco-sensitive area generate sewage, solid waste, and C&D waste, which are required to be managed to prevent adverse impact on environment and human health. Basic environment management facilities are required to be set-up to manage such waste which includes STP, C&D waste processing facility, MSW management facility like sanitary landfill,

material recovery facility & waste processing units, bio-methanation, bio-composting, waste to energy, etc. These facilities are basically essential environment services which play a vital role in protecting environment and human health. These facilities may also bring value addition by producing various by-products such as secondary raw material, compost, energy, etc. and promotes circular economy and sustainable development by converting waste into wealth. Moreover, these categories do not generate hazardous or infectious wastes. As the role and importance of these facilities is different in nature as compared to other activities and industries in the sense that they are primarily set-up for prevention, control and abatement of soil, water and air pollution. In view of the same, in the aforesaid Classification 2025, a separate colour category - Blue Category has been introduced for essential environmental services facilities related to environmental pollution arising from domestic/household activities. Various Municipal Solid Waste Management Facilities, as listed in the aforesaid Classification 2025, have been categorised as Blue Category. The pollution index for such Essential Environmental Services (EES) is calculated as per the same unified formula. Waste-to-Energy Power Plants is one of the Blue Categories with Pollution Index of 97.6.

The Blue category does not exempt facilities from environmental oversight. All prescribed emission and discharge norms remain fully applicable, and facilities must comply with consent conditions, pollution control standards, and performance monitoring protocols.

Further, CPCB vide letter dated 12.02.2025 has issued directions under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981 to all SPCBs and PCCs for adoption and implementation of the aforesaid Classification-2025. A copy of the directions is attached as **Annexure III**.

14. That, the Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi, has registered suo motu case Original Application (O.A.) No. 536/2024, based on the news item titled "Waste to Energy: Smokescreen or solution?" appeared on the Indian Development Review dated 27.03.2024. In compliance of order, CPCB has filed a report dated 18.08.2025 disclosing the details of the Waste to Energy (WtE) plants operated in the country, including Delhi.

    It is respectfully submitted that matter is presently sub-judice before the Hon'ble NGT. The next date of hearing is on 21.05.2026.

15. That, the Hon'ble Supreme Court, vide order dated 24.02.2025 in Writ Petition(s) (Civil) No(s). 13029/1985, M.C Mehta Vs. Union of India & Ors., inter alia, directed CPCB to submit a report to the Hon'ble Court on the impact of waste to energy projects on the environment and public health. In compliance of the order, CPCB has filed a report dated 22.04.2025 and the same is enclosed as **Annexure IV**.

    It is respectfully submitted that matter is presently sub-judice before the Hon'ble Supreme Court. The next date of hearing has not yet been listed.

16. That, it is humbly submitted that WtE plants are required to meet the emission standard for incinerators / thermal technologies as stipulated under the Schedule II read with 16(1) (b) & (e) of the SWM Rules, 2016.

17. That, as per the Rule 16 (1) and (4) of the SWM Rules, 2016, the DPCC shall perform the following important duties:

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a) enforce these rules in their State through local bodies in their respective jurisdiction and review implementation of these rules 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) 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;

d) issue authorisation 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;

e) synchronise the validity of said authorisation with the validity of the consents;

f) 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; and

g) monitor the compliance of the standards as prescribed or laid down and treatment technology as approved and conditions stipulated in the authorisation.

18. That, it is humbly submitted that, response from the DPCC, and the MCD, may be important for adjudication of the matter, since the implementation of the provisions of the SWM Rules, 2016, including infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes and its operation, is a collectively mandated under the SWM Rules, 2016. Further, the response from the MoEF&CC is important for adjudication of the matter in respect of Environment Clearance granted by the Expert Appraisal Committee (Thermal Power & Coal Mining) under the provisions of the EIA, 2006.

19. That, the Answering Respondent craves leave of this Hon'ble NGT to file an additional reply, if required, in the future.

20. That, in light of the above submission, it is respectfully submitted that this Answering Respondent i.e. CPCB, shall abide by all order(s) or direction(s) passed by this Hon'ble NGT in the instant OA and render justice.

NOTARY PUBLIC
R.L. Chaudhary
N.C.T. of Delhi
Regd. No. 1513
GOVT. OF INDIA

(G Thirumurthy)
Scientist 'F'
Central Pollution Control Board

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

IN

Appeal No. 62/2025

(I.A no 633/2025,636/2025 & 728/2025)

IN THE MATTER OF

Rajpal Saini and Anr. **.... APPLICANTS**

VERSUS

Union of India & Ors. **.... RESPONDENTS**

Affidavit in Opposition on behalf of Respondent No. 05 i.e. Central Pollution Control Board

AFFIDAVIT

I, G. Thirumurthy, working as Scientist 'F' in Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi, the Respondent No 05 in the above matter, do hereby solemnly affirm, and sincerely state on oath as under:

1. That, I the deponent herein is well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records, and hence, I am competent to verify, sign and swear this affidavit on behalf of the Respondent CPCB.

NOTARY PUBLIC R.L. Chaudhary N.C.T. of Delhi Regd. No. 1513 GOVT. OF INDIA

2. That, the accompanying response may be read part and parcel of the present affidavit.

3. That the accompanying response has been drafted and filed under my instructions and authority the contents thereof are true and correct on the basis of the record maintained during ordinary course of business of CPCB and available records and documents and the contents of the same are read over and explained to me and are not repeated herein for the sake of brevity.

DEPONENT

जी. थिरूमूर्ति/G. Thirumurthy
वैज्ञानिक 'च'/Scientist 'F'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार
M/o Env. Forest & Climate Change, Govt. of India
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

VERIFICATION

16 MAR 2026

Verified at New Delhi on this day of_____ 2026 that the contents above are correct and true on the basis of the record of the cases as mentioned in the day-to-day affairs of the CPCB. Nothing has been concealed therefrom or mis-stated.

16 MAR 2026

Verified at New Delhi on this the... Day of March, 2026.

DEPONENT

जी. थिरूमूर्ति/G. Thirumurthy
वैज्ञानिक 'च'/Scientist 'F'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
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ATTESTED
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GOVT. OF INDIA

16 MAR 2026

Item No. 19 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Appeal No. 62/2025
(IA No 728/2025)

Rajpal Saini & Anr. Appellant(s)

Versus

Union of India & Ors. Respondent(s)

Date of hearing: 04.02.2026

CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

Appellant: Ms. Shibani Ghosh, Advocate for Appellant

Respondents: Ms. Suhasini Sen & Ms. Raushni Kaura, Advs. for MoEF & CC
Mr. Varun Sharma, Ms. Aditi Anup & Mr. Ramesh Chandra, Advs. for R - 3
Mr. Pramod Gupta, Adv. for DPCC (Through VC)

ORDER

1. IA No. 728/2025 has been filed by the Respondent No. 3 to implead the Municipal Corporation of Delhi (MCD) and the Central Pollution Control Board (CPCB) as the additional respondents in this appeal.

2. Learned Counsel appearing for the Respondent No. 3 has pointed out that the Respondent No. 3 is merely a concessionaire in the project envisaging total power generation capacity of 30MW by utilizing approximately 3,000 tonnes of segregated municipal solid waste per day. He submits that it is the project of the MCD and the Respondent No. 3 has been selected on the basis of the tender floated by the MCD to carry out the project, hence, the MCD is a necessary party. The CPCB which is a regulatory agency is also required to be impleaded as the additional respondents. Having regard to the fact that any order passed in this appeal will affect the project of the MCD, we are of the view that the MCD is a

necessary party in this appeal. So far as the CPCB is concerned, it can be considered to be a proper party.

3. Hence, IA No. 728/2025 is allowed. The Appellant is directed to amend the cause title of memo of appeal and file amended memo of parties and serve the newly added respondents.

4. List on 17.03.2026.

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

February 04, 2026
Appeal No. 62/2025
(IA No 728/2025)
dv

Annexure-II

Central Pollution Control Board

UPC-II

Date: 15-04-2019

OFFICE MEMORANDUM

SUBJECT: - " *Clarification on Buffer Zone* Guidelines " issued by CPCB.

CPCB issued guidelines on Buffer Zone around waste processing and disposal facilities in April, 2017.

Subsequently, Central Monitoring Committee constituted under Solid Waste Management Rules, 2016 suggested MOEF & CC to revisit the buffer zone in respect of distance. The Central Pollution Control Board in its 182nd meeting agreed for revisiting of Guidelines.

It is decided that following changes have been made as mentioned at page no.13 of aforesaid Guidelines;

1. **Land of 200-500 m from the boundary of the processing unit is excluded for setting up the facilities but it is mandatory outside the project site as "No development area" for 30 years.**
2. **"No development area" can be utilized for agriculture purpose.**

(A. Sudhakar)
Member Secretary

To,
(As per list attached)
All SPCBs/PCCs

AMENDED GUIDELINES ON THE PROVISION OF BUFFER ZONE AROUND WASTE PROCESSING AND DISPOSAL FACILITIES

Central Pollution Control Board
March, 2019

Contents

1. Introduction

Indian cities are expanding with the increase in population, economic activities and the resulting urbanization. Whereas population residing in urban areas was 11.4% of total population in 1901, it increased to 28.53% in the 2001 census and crossed 30% as per 2011 census, standing at 31.16%. There are 53 urban agglomerations in India with a population of 1 million or more as of 2011 against 35 in 2001. About 43 percent of the urban population of India lives in these cities. The unprecedented growth of these cities has posed several challenges for municipal authorities. Identification of suitable sites for waste management infrastructure in cities is one of the toughest challenges municipal authorities are facing at present. Lack of proper/ updated land use plan with urban authorities is a stumbling block in implementing solid waste management projects.

Most of the existing solid waste management facilities are practicing crude dumping of solid waste. In some cases where solid waste is processed, the situation is still alarming due to use of conventional treatment technologies coupled with poor operation and maintenance by the fund starved ULB. This situataion is giving rise to numerous environmental and public health concerns in and around urban areas. "Not in My Back Yard (NIMBY) syndrome" and litigations are common as public at large do not trust ULBs in providing credible waste management services. Majority of existing solid waste treatment plants and dumping sites, though initially away from habitation but now have no adequate buffer zone from these habitations. Buffer even where available have come under illegal encroachment in many cities and settling societies demand shifting the waste treatment facility itself. Thus there is a general public resistance to the location of waste management facility in any area. Lack of identified sites for municipal solid waste management in master plan compounds the problem.

Disposal of waste in landfills/ dumpsites without any treatment is still practiced even as it impacts on the surrounding environment. Waste management sites encompass waste processing/disposal facilities, which become sources of pollution in terms of air, water, land and noise besides emitting foul smell. Therefore, provision of buffer zone around these facilities is essentially required to protect people living in the surroundings from

exposure/impacts of such pollutants but also to ensure continued safe operations in the waste management facility by maintaining its "island character". Buffer zone also acts as barrier, absorber and to some extent as remedial measure against the fugitive emissions. Fugitive emissions of pollutants emitted during handling of waste, storage, transportation and movements of traffics.

Currently, no scientific basis is available for making provisions for buffer zone around waste processing/disposal facilities. The provisions recommended in the "Municipal Solid Waste Management Manual, 2016" were broadly drawn from the "Report of the Committee constituted by the Hon. Supreme Court of India in March 1999" on Solid Waste Management in Class 1 Cities in India.

In this context, the Government of India through CPCB has framed these guidelines on maintaining Buffer zone including green belt around waste management facilities. These guidelines will not only facilitate the ULBs in meeting the regulatory requirements, reduce the aforesaid nuisance value of the waste management facilities but also make an effort to enhance their aesthetic appeal. In addition to above, the siting criteria for setting up these facilities for waste processing/ landfill is adopted as mentioned in SWM Rules, 2016 at tailing part of these guidelines.

In some instances, the actual separation distance may vary from those recommended in these Guideline, due to site-specific constraints. In such cases, variations to the recommended separation distances may be acceptable, subject to detailed assessment by concerned authorities and to the satisfaction of the State Pollution Control Board/Committee.

2. Objective of the Guidelines

The purpose of this Guideline is to specify adequate separation distances between solid waste management facility and its surrounding area having different land usage characteristics.

To achieve the purpose, these Guidelines aim to:

- minimize the risk of adverse impacts on the environment (land, air, water, noise pollution) and the impacts on the Public Health
- inform and support strategic land use planning decisions and prevent encroachment of controlled areas
- Generate/ develop public acceptance for solid waste treatment and disposal infrastructure
- Encourage new technological innovations for processing facilities with minimal land requirement

3. Regulatory Framework

The buffer zone was first envisaged in 1982 after Indian task force developed the 'Core-Buffer-Multiple Use Zone' strategy. This strategy aimed at separating incompatible land uses, particularly in relation to wildlife. In this approach, the buffer zone would be under the wildlife park authorities' administration and controlled use of forest produce would be allowed. The multiple-use zone was located outside the park boundaries designated for rural development. With similar analogy, these buffer zone guidelines are framed for waste processing and disposal facilities. The existing regulatory provisions for these guidelines are given as under:

i. Provisions related to Buffer Zone specified in the **Solid Waste Management Rules**, 2016 mentioned as under;

- **Rule 11** Section (l)- **Duties of the Secretary–in-charge, Urban Development in the States and Union territories-** Notify buffer zone for the solid waste processing and disposal facilities of more than five tonnes per day in consultation with the State Pollution Control Board
- **Rule 12** Section (h)- **Duties of Central Pollution Control Board-** 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 tonnes per day of solid waste;

- The **distance/siting criteria's for setting up waste management facilities as** specified in Solid Waste Management Rules, 2016 at **Schedule I (A)(vii)**
- **Schedule I (A) (viii)**-The sites for landfill and processing and disposal of solid waste shall be incorporated in the Town Planning Department's land-use plans.
- **Schedule I (A) (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**.
- **Schedule I (F)**-Criteria for ambient air quality monitoring

ii. The **Coastal Zone Regulation** notified by Ministry of Environment Forest And Climate Change also prohibits setting up and expansion of units or mechanism for disposal of wastes in High Tide Line (hereinafter referred to as the HTL) to 500 mts on the landward side along the sea front. Also dumping of city or town wastes including construction debris, industrial solid wastes, fly ash for the purpose of land filling and the like with high tide line shall be regulated by the concerned authority, where shall implement schemes for phasing out any existing practice, if any.

iii. The buffer zone guidelines for setting up processing and disposal facility also come under the purview of The Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) Act, 1981.

iv. For setting up solid waste processing and disposal facilities, The Environment (Protection) Act, 1986 also need to be adhered to particularly from the angle of Environmental Clearances. Authorities concerned need to deliberate on the number of issues and criteria when siting a buffer zone as broadly categorized below:

a) Environmental considerations

- Distance from the flood plains, coastal regulation, wetland, Critical habitat areas, sensitive eco-fragile areas, highways, habitations, public parks and water sources

- Topography- Hilly areas, land availability and also the slope's landslide potential.
- Wind Speed and Direction- Wind direction is one of the important consideration as to the area that can be affected due to dust and odour.

b) *Proximity and access considerations*

- Transportation Network
- Utilities and Services

c) *Land-use considerations*

- Land Usage and Activities on Adjacent Sites
- Allowable Land Uses and Zoning
- Proximity to Airports
- Proximity to Other Waste Management Facilities

4. Existing Norms for Buffer Zone in India and Abroad

A.) Buffer Zone

The buffer zone, particularly in context of NIMBY syndrome in India, is one of the limiting conditions for obtaining Environmental Clearance for setting up solid waste processing and disposal facilities. At present, there are no published norms for buffer zone for solid waste management facilities by MoEFCC/ CPCB.

However, the "Manual on Municipal Solid Waste Management, 2016" published by CPHEEO, Ministry of Urban Development recommends certain provisions for buffer zone particularly the one of maintaining 500 m buffer zone around the waste processing facilities. In the given pace of urbanization in the country, getting such large piece of land is becoming increasingly difficult and costly. ULBs in setting up waste processing and disposal facilities expeditiously.

The provisions made for Buffer zone for solid waste processing and disposal facilities in various countries are tabulated below:

i. Landfill

International Solid Waste Association	500 m should be provided depending on the size of landfill, height, wind direction
South Australia	500m buffer distance shall be maintained between areas dedicated for waste disposal and the nearest surface water
Ontario, Canada	Buffer area shall be at least 100 m wide at every point, if that does not apply to a buffer area, if the buffer area is at **least 30 metres** wide at every point and a written report confirms that; (a) the buffer area provides adequate space for vehicle entry, exit, turning, access to all areas of the site and parking; (b) the buffer area provides adequate space on the surface of the site for all anticipated structures, equipment and activities; and (c) the buffer area is sufficient to ensure that potential effects of the landfilling operation do not have any unacceptable impact outside the site.
Malaysia	500m
South Africa	Buffer zone min 200m to 500m
Bangladesh	250m from the habitat
Hong Kong	250 m away from the edge of the waste (landfill boundary)

ii. Waste processing facilities

Canada	minimum buffer strip between composting facility boundary and adjacent property. For in-vessel Composting distance between active area and the nearest residential or institutional building shall be min 500m, nearest commercial or industrial building 250 m and nearest property boundary will be **min 100m.**

CANADA-Nova Scotia	In case of in-vessel composting facilities, where it can be demonstrated that particular equipment will not release odours generated from the composting process into the surrounding environment, the distance between the equipment and the nearest property boundary shall be a minimum of **30 metres**
Malaysia	production of compost from organic waste- 500m
Devon city Council (UK)	buffer distance 500m
China	300m buffer zone between incineration plants and local residents

From above, it i s observed that the minimum buffer area varies from 100 m to 500 m in case of both waste processing and disposal facilities.

B.) Facility Siting Criteria

In addition to the suitable provisions of the buffer zone, the SWM Rules, 2016 provides norms for siting criteria for landfills. The same is reproduced below for adoption while setting up **landfill facilities.**

Table 1. Criteria specified for identifying Suitable Land for Sanitary Landfill Sites (Not a treatment facility)

S. No.	Place	Minimum Siting Distance
1.	Rivers	100 m away
2.	Ponds, Lakes, water bodies	200 m
3.	Highway, **Habitations, Public Parks and water supply wells**	200 m from center line
4.	Flood Plains as recorded for the **last 100 years**, zone of coastal regulation, wetland, Critical habitat areas, and sensitive eco-fragile	Sanitary landfill site not permitted

	areas	
5.	Airport/ Airbase	20 km**

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.

However, there is no such siting criteria applicable for setting up waste processing facilities.

5. Recommended Provisions for Buffer Zone

The Solid Waste Management Rules, 2016 specified the terminology of **Buffer Zone**, *as "**no development zone to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total land area allotted for the solid waste processing and disposal facility.**"*

Buffer Zone around the core waste processing area consists of utility area, open parks and green belts etc. Further, depending on feasibility of planning, the interface land use between the boundary of waste processing facility and sensetive receptors, can also be developed as an additional measure.The layout of buffer zone (utility area, open parks and green belts) including core waste processing area and optional interface land use is shown in the figure below:

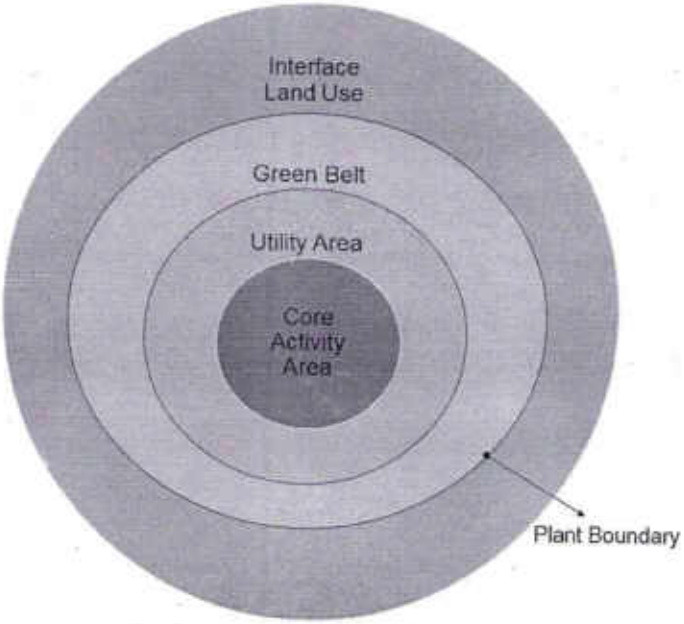

Figure 1 Depicts activity boundary, green belt and separation distance

For the purpose of these guidelines, the Buffer Zone, Separation Distance, Utility Area, Green belt and Interface Land use shall have the meanings set out below, unless otherwise provided, hereafter, for the exclusive interpretation of these Guidelines.

a) The **Buffer Zone** is generally defined as an area of restricted activities, depending on the activity in adjacent land uses. It also ensures long-term continuous availability of disposal sites by avoiding potential conflicts between waste disposal sites and adjacent lands with different users.

b) **Buffer Distance or Separation distance** is measured as the areal distance between the source of emission and sensitive receptors. For the purpose of these guidelines and addressing the required protection from adverse impacts, separation distance is measured from the tip of core SWM facility processing boundary, as the source of emission, to the nearest boundary of the property of sensitive receptors as shown in figure 1.

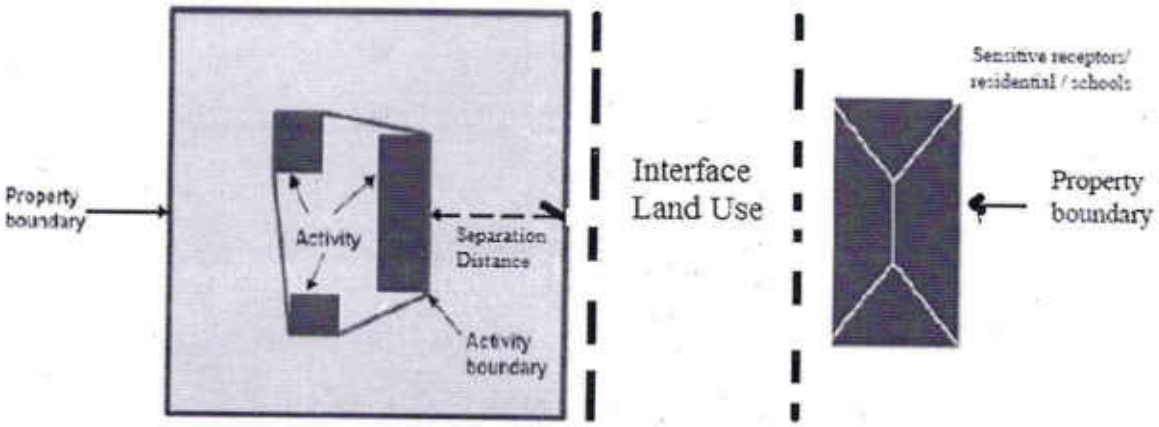

Figure 2. Core Plant activity area, buffer Zone and interface land use

c) **Core Waste Processing/Landfilling Area** typically requires space for receiving waste, storing waste, segregation of waste and treatment units within the facility. Similarly, for Landfilling it is the area of cell which is receiving the waste/inert.

d) **Utility Area** within the facility is designated area for the facility operations other that the core activities like. Weigh bridge, parking, vehicle cleaning, laboratory, emergency services etc.

e) **Green Belt** for the purpose of these guidelines shall refer to an area that is kept in reserve within the alloted land for setting up facility, around the core SWM processing area, for the purpose of plantation and landscaping to reduce the adverse effects from pollutants like air & noise, soil erosion control etc. It also works as a natural shield to protect people around the facility from these pollutants.

f) **Interface Land Use:** The buffer zone could be further augmented with interface land use area, where above beneficial and feasible as an additional optional measure, after due approval of the concerned authorities. The interface land use shall not generate significant emissions, nor warrants protection from them. The activities in the interface land use are **vehicle**

showrooms, service stations, warehouses, display homes, emergency services facilities, funeral, veterinary clinic and parks etc.

i. Separation Distances for Solid Waste Processing and Disposal Facilities

Ideally, a distance of 500 meter from the boundary of the Solid Waste Processing and Disposal Facility (sanitary landfill) should be maintained. However, on case to case basis a distance of minimum 200 meter from the Solid Waste Processing and Disposal Facility (sanitary landfill) can be considered subject to the condition that such facility meets the stipulated standards prescribed by State Pollution Control Board with respect to ambient air as well as for stack emissions.

The above provisions have been made keeping in view of high population density in urban areas, scarcity of land to set up such facilities and protest from local inhabitants in the area of processing/ disposal facility and is in line with those being adopted at international level. Besides, the following three conditions need to be ensured:

(a) the buffer area provides adequate space for vehicle entry, exit, turning, access to all areas of the site and parking;
(b) the buffer area provides adequate space on the surface of the site for all anticipated structures, equipment and activities; and
(c) the buffer area coupled with technological interventions is sufficient to ensure that potential effects of the processing/ landfilling operation do not have any unacceptable impact outside the site.

Note:

1. ***Land of 200-500 m from the boundary of the processing unit is excluded for setting up the facilities but it is mandatory outside the project site as " No development area" for 30 years.***
2. ***No Development area can be utilized for agriculture purpose.***

6. Green Belt

The buffer zone effectiveness is reinforced by the green belt within the solid waste processing and disposal boundaries. An important aspect of a green belt sometimes overlooked is that the plants constituting green belts are living organisms with limits to their tolerance towards air pollutants. For the purpose of these guidelines, the green belt shall refer to an area that is kept in reserve within and around the SWM facility for the plantation and landscaping to reduce the adverse effects from the activity area like air & noise pollution, soil erosion etc. The green belt is an effective pollution sink only within the tolerance limits of constituent plants. The philosophy is that when primary pollutants are taken care of, formation of secondary pollutants will not reach menacing proportions. Primary pollutants of concern are – SO_2, HF, NO_2, CO, CO_2, NH_3, H_2S, Cl, SPM and organics. **Annexure- 1** attached to these guidelines shows the selection criteria for plants near the processing facility.

These guidelines recommend minimum 10 metres green belt within and all around the facility along the boundary. Vegetation, shrubs, trees, and berms with high density greenery can be incorporated into green belt within facility limits to serve as visual barriers and to reduce noise levels. Depending on the monitoring of level of pollutants in ambient air after the boundary of facility, on case to case basis, suitable technological measures/ barriers to check pollutants need to be resorted. The important factors for developing green belt for agro-climatic conditions are stated below:

a) Criteria for Selection for Plant Species

- The plant species should be fast growing
- They should have thick canopy cover
- They should be perennial and evergreen
- They should have high carbon – CO_2 sink potential
- They should be effective in absorbing pollutants without significantly affecting their growth

b) Recommended plant species:

Keeping in view the nature of pollutants expected from the disposal site, a green belt of minimum 10 metre width is recommended and the following plant species can be selected for plantation:

- Acacia nilotica (Babul)
- Deldergia Sissoo (Shishum)
- Acacia auriculiformis (Australian Babul).
- Azadirachta Indica (Neem)
- Lagerstroemia speciosa (jamun)
- Prongamia pinnata (Karanji)

c) Recommended plant species Density around Processing & Disposal/ Landfill site:

These guidelines recommend the green belt width of minimum 10 meters within and all around processing and disposal facilities. The recommended minimum density of the green belt should be as discussed in the green belt model provided in the CPCB guidelines for developing green belts in 2000. These guidelines introduce the concept of a pollution attenuation coefficient for estimating the removal of pollutant while passing through the green belt. The formulation of pollution attenuation coefficient makes use of parameters such as leaf area, density of the tree plantation, deposition velocity of the pollutant on leaf surface and wind speed to the green belt. The model gives the dependence of the pollution attenuation factor of a green belt on various physical parameters of the green belt such as its height, width, distance from the pollution source and on atmospheric stability conditions and hence the model can be used to optimize the design of the green belt in obtaining the desired degree of attenuation of the pollution around an industry. The case to case basis CPCB guidelines for developing green belts (March, 2000) to be referred for optimal density applications.

7. Operationalization Framework

Solid Waste Management Rules, 2016 has empowered Central Pollution Control Board for maintaining buffer zones 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 tonnes per day of solid waste. The guidelines will be updated, from time to time, and address environmental aspects of processing and disposal of solid waste to enable local bodies to comply with the provisions of SWM Rules, 2016.

i. Role of State Pollution Control Board

a) The SPCB shall link the buffer zone achievement with grant of Consent to operate and establish under stipulated norms;
b) The SPCB shall conduct periodic environmental monitoring around buffer zone and assess the impact on the sensitive receptors;
c) The SPCB shall bi-annually review the Green Belt condition within the facility premises and give suggestions to the ULBs for further improvements. Stringent measures and penalties as per the stipulated norms to be imposed in case of default;
d) The SPCB shall extend all necessary support to local authority for the site selection for the newly proposed waste processing and disposal facility;

ii. Role of Local Body/ Facility Operator

a) The ULB shall be responsible for the selection of site in close coordination with SPCB;
b) The ULB/ operator shall be responsible for green belt development and maintenance in the buffer zone;
c) The ULB shall direct the operator concerned, in case it outsources facility to comply with these guidelines

iii. Role of Town and Country Planning Department

a) Town and Country Planning Department shall allocate adequate land for waste

management facilities in the Master Land Use Plan;

b) Town and Country Planning Department shall make all efforts to restrict/ prohibit peri-urban growth near such facility;

c) Town and Country Planning Department shall be responsible for making provisions of Green Area development around such existing/ exhausted facilities to the extent feasible to minimize the impact of pollution to sensetive receptors.

8. Annexure-1- Selection criteria for plants near the processing facility

Table 2.6 Compilation of research in India indicating sensitive and tolerant species, with reference to industrial pollutants

Name of Plant	Sensitive	Tolerant	Reference
Mangifera indica	Coal dust		
Citrus limon		Coal dust	Rao, 1971
Phaseolus aureus (Green gram)	Petro coke		Prasad and Rao (1981)
Zea mays	Cement dust		Sree Rangaswamy et al. (1973)
Syzygium cumini	Cement dust		Jafri et al. (1979)
Psidium guyava	Cement dust		Yunus and Ahmed (1980)
Triticum aestivum	Cement dust		Singh and Rao (1980 a)
Calotropis procera	Cement dust		Yusuf and Vyas (1982)
Cassia fistula	Cement dust		
Dalbergia sissoo	Cement dust		
Withania somnifera	Cement dust		
Glycine max	Cement dust		
Hordeum vulgare		5% fly ash	Singh and Rao (1979 a)
Portulaca sp			Bhatia (1976)
Triticum aestivum	Above 20% Fly ash		
Trifolium aestivum		6g/m²/day fly ash	Pawar and Dubey (1982)
		4g/m²/day fly ash	Dubey et al. (1980)
Dolichos lablab		4g/m²/day fly - ash	
Abelmoschus esculentus Var Pusa sawani	Cement and Coal dust	fly - ash	Pawar et al. (mean) (1983)
Commelina benghalensis	Air borne dust		Pawar et al. (1982)
Brassica oleracea	Urban		Chapholer et al. (1980)
Chenopodium album	sit		Garg and Varshney (1980)
Cicer arietinum			
Dolichos lablab			
Sonchus asper			
Withania somnifera			
Tabernaemontana coronaria	Polluted environment		Srivastava et al. (1980)
Calotropis procera		Polluted conditions	Yunus and Ahmed(1981)

(Contd....)

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Table 2.6 (*Contd...*)

Name of Plant	Sensitive	Tolerant	Reference
Calotropis gigantea	Polluted areas		Bhirava Murthy and Kumar (1983)
Boro paddy, Var. Ratna	Urban dust		Das and Pattanayak (1978)
Mangifera indica		Dust Collector	Shetye and
Thespesia populnea			Chaphekar (1980)
Erythrina indica	Poor dust Collector		
Polyalthia longifolia			
Ficus benghalensis		Dust Collector	Das 1981 and Das et al. (1981)
Ficus infectoria			
Ficus religiosa			
Mangifera indica			
Tectona grandis			
Polyalthia longifolia			
Shorea robusta			
Terminalia arjuna			
Cassia fistula	Poor dust Collector		Das (1981) and Das et al. (1981)
Poinciana regia			
Sesbania sp.			
Pithecolobium dulce		Better dust collector.	Rao (1971)
Argyrea speciosa			
Leucaena leucocephala			
Melilotus alba	Polluted area		Ghouse and Khan (1983)
Banana Crop.	SO_2 and dust From brick Kiln		Bedi et al. (1982)
Lycopersicum esculentum	SO_2 and dust from brick Kiln		Bell and Bedi (1981)
Mangifera indica	SO_2		Rao 1972 Shetye 1979 Giridhar (an published data) Pawar and Dubey (1983)
Helianthus annus	To pollute areas		Chapheker et al. (1980 a)
Crotalaria juncea			
Commelina benghalensis			
Cyamopsis tetragonoloba			
Cicer arietinum	Fly ash SO_2		Dubey et al. (1982)

(*Contd.....*)

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Table 2.6 (Contd....)

Name of Plant	Sensitive	Tolerant	Reference
Medicago sativa (Alfa-alfa)	SO_2		Singh and Rao (1975, 1980)
Sorghum vulgare var CSH - 1	SO_2		Boralkar and Chaphekar (1978)
Glycine max	SO_2		Pandey and Rao (1979), Prasad and Rao (1982)
Phaseolus aureus	SO_2		Singh and Rao (1980)
Arachis hypogea	SO_2		Mishra (1980)
Dolichos lablab	SO_2		Banerjee and Chaphekar (1979)
Phaseolus aureus Var. Vaishakhee	SO_2		Boralkar and Chaphekar (1980)
Trigonella foenum-graecum	SO_2		Boralkar and Chaphekar (1983)
Pisum sativum	SO_2		Varshney and Varshney (1978)
Crossandra undulaefolia	SO_2		Chaphekar and Kamthan (1974)
Mirabilis jalapa			
Amaranthus spinosus	SO_2		Boralkar and Chaphekar (1980)
Spinacea oleracea			
Raphanus sativus	SO_2		Banerjee and Chaphekar (1979)
Commelina benghalensis			
Erythrina indica			
Barley, Cotton, Wheat, Aster, Cosmos, Verbena Zinnia, Sweat Pea, Ipomoea purpurea, 4 o'clock plant, Bean, Beet, Carrot, Chilli, Pumpkin, Radish Bhendi, Sunflower etc.	SO_2		Pandey and Vaidya (1979)
Most trees		SO_2	Pandey and Vaidya (1979)
Mangifera indica	SO_2		Chaphekar (1972)
Terminalia catappa			
Malachra capitata Dahlia			
Croton, Plumeria		SO_2	Chaphekar (1972)
Opuntia, Nerium			
Dahlia, Petunia, Alfalfa, cotton	SO_2		Vashisavi (1976)
Barley			

(Contd....)

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Table 2.6 (*Contd...*)

Name of Plant	Sensitive	Tolerant	Reference
Dalbergia sissoo Terminalia arjuna Cassia fistula Cedrela toona Syzygium cumini Oat, Pea, Brinjal, Potato Cucurbit	SO_2		Yunus and Ahmed (1979)
Azadirachta indica Ficus religiosa Pithecolobium dulce Calotropis procera Trees, Bushes, crops of those areas		SO_2	Yunus and Ahmed (1979)
Phaseolus aureus	SO_2, O_3, SO_2+O_3		Agrawal and Rao (1983)
Cicer arietinum		SO_2, O_3, SO_2+O_3	
Oryza sativa	SO_2, O_3, SO_2+O_3		
Panicum miliaceum		SO_2, O_3, SO_2+O_3	
Solanum melongena	SO_2, O_3, SO_2+O_3		
Vicia faba	SO_2, O_3, SO_2+O_3		
Abelmoschus esculentus Var. Pusa savani	SO_2, O_3, SO_2+O_3		
Abelmoschus esculentus	SO_2, O_3, SO_2+O_3,		Bolalkar and Shinde (1983)
Phaseolus aureus	SO_2, HF,		Sharma
Triticum aestivum	SO_2+HF		(1981)
Brassica juncea			
Triticum aestivum	NO_2		Prasad and Rao (1979)
Triticum aestivum	NO_2+SO_2		Prasad (1980)
Dalbergia sissoo	SO_2		Rao et al. (1983)
Madhuca indica			
Pisum sativum var. Bonneville,	NaF		
Pisum sativum var. T163			
Hordeum vulgare			
Zea mays			
Lycopersicum esculentum	NaF		Arya (1971)
Terminalia tomentosa	HF		Pandey (1979)
Buchanania lanzan			
Zea mays	HF		Rao and Pal (1978 b)
Gladiolus sp.	HF		Pandey and Rao (1980 a)

(*Contd...*)

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Table 2.6 (*Contd....*)

Name of Plant	Sensitive	Tolerant	Reference
Spinacia oleracea	Gasoline Vapour,		Prasad (1980)
Abelmoschus esculentus Cyamopsis tetragonoloba Crotalaria juncea Trigonella foenum-graecum	Ammonia		Chaphekar and Boralkar (1979)
Nerium indicum	SO_2		Varshney, (Unpublished)
Cynodon dactylon	HF		Meenakshy et al (1961)
Cicer arietinum Nasturtium indicum Petunia alba Tradescantia axillaris	SO_2		Varshney and Varshney (1981)
Madhuca indica	SO_2, fly-ash		Agrawal M (1989)
Cassia siamea Delonix regia Shorea robusta			
Acacia arabica		SO_2, fly-ash	
Acacia catechu Zizyphus sp			
Mangifera indica		Dust	Agrawal & Khanam (1989)
Ficus benghalensis L Ficus infectoria Roxb Holoptelia integrifolia Planch Ipomoea fistulosa Mart ex choisy Lagerstroemia sp Nyctanthes arbortristis L Peltophorum pterocarpum (DC) K Heyne		Dust	Ahmad Yunus et al (1991)
Tectona grandis L Terminalia arjuna W & A Thevetia nerifolia Juss Acacia arabica Willd Bougainvillea spectabilis Willd Hibiscus rosa sinensis Willd Morus alba		Dust	Ahmad Yunus et al (1991)

(*Contd....*)

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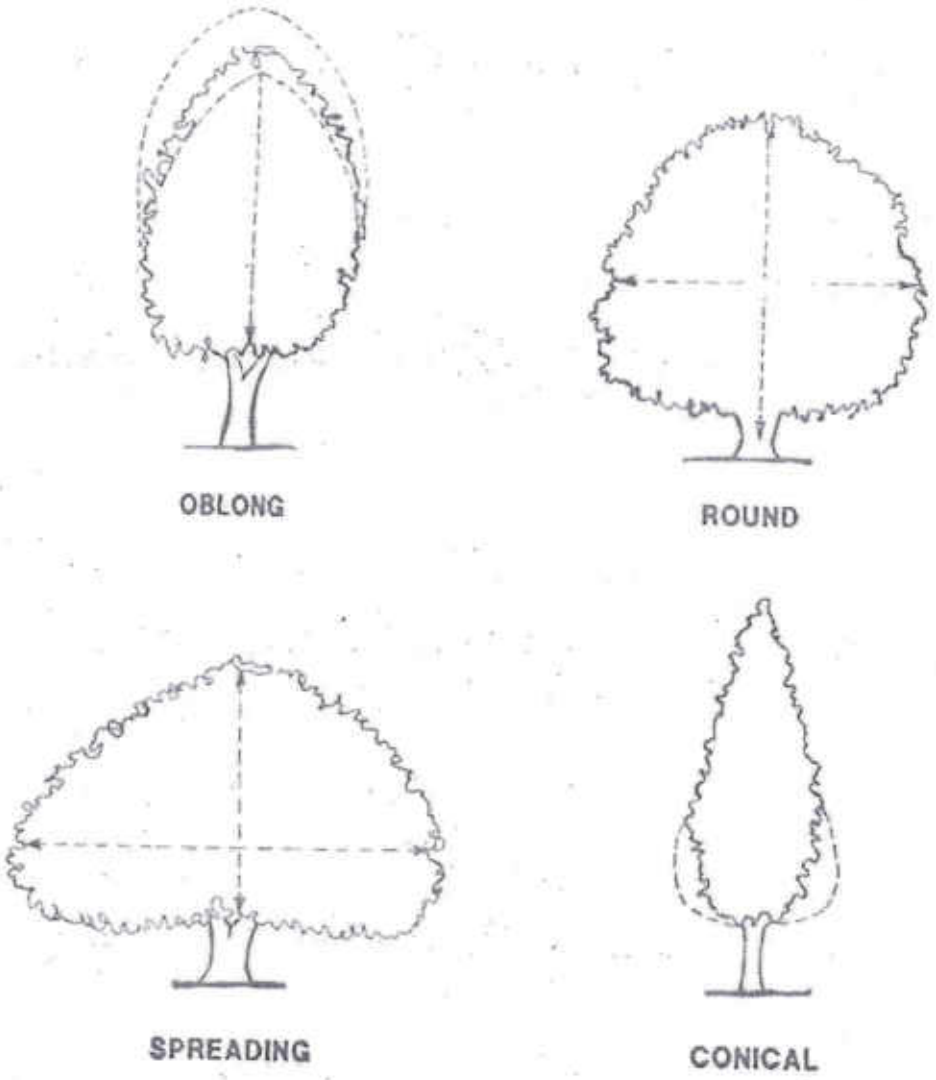
Table 2.6 (Contd...)

Name of Plant	Sensitive	Tolerant	Reference
Nerium indicum Mill Thevetia perifolia Juss Dalbergia sissoo Roxb		Cement dust	
Azadirachta indica A.Juss Brassica campestris L Citrus aurantium L Delonix regia Raffin Syzygium cumini (L.) skeel Mangifera indica L Pisum sativum L Tabebiamontana coronaria Willd Trifolium aestivum L Zizyphus mauritiana Lamk Helianthus annus L	Cement dust	fly ash	Pandey, Misra et al (1994)
Opuntia monacantha Opuntia dillenii Kalanchoe marmorata Crassula		SO_2	Raza S.H., Shylaja G. (1992)
Bryophyllum Aloe Bryophyllum tubiflorum Euphorbia cattamindoose	SO_2		
Caesalpinia pulcherima Eugnia jambolana Polyalthia longifolia Pongamia pinnata	SO_2	SO_2	Murthy M.S.R. et al (1990) Raza S.H. et al (1991)
Caesalpinia pulcherima Pithecolobium dulce Cassia fistula Pongamia glabra Polyalthia longifolia	Dust	Dust	
Pithecolobium dulce Caesalpinia pulcherima Polyalthia longifolia Pongamia pinnata	SO_2	SO_2	Raza S.H. et al (1989)

Fig.5.1 TREE CANOPY SHAPES



The shapes given here are for convenience only. Many crown shapes range between those identified following viz. Oblong-Round, Round-Spreading, Conical-Oblong, etc. Some shapes also change with age or environmental stresses.

FIG. 5.1 TREE CANOPY SHAPES

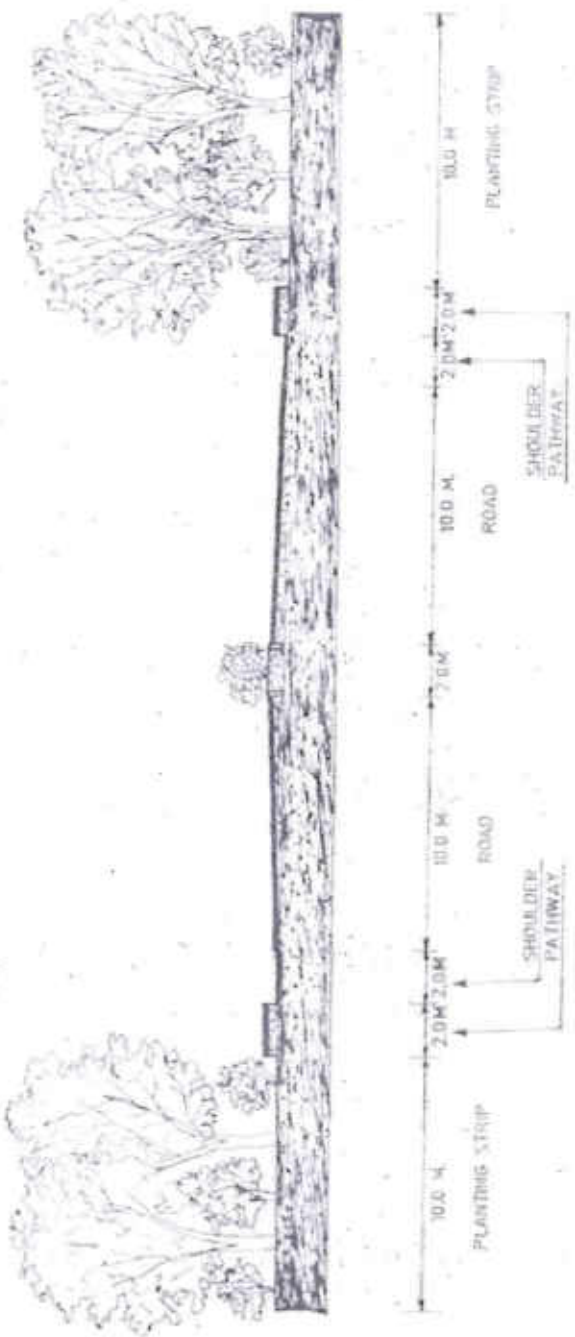


FIG. 5.2 TYPICAL ROAD-SIDE PLANTATION

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

CP-18/1/2023-IPC-VI-HO-CPCB-HO

Date: 12.02.2025

To

The Chairman
State Pollution Control Board/Pollution Control Committee
(As per the list)

Sub: 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 and Blue 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 the classification of industrial sectors under different categories. Therefore, in 2012, to have uniformity in classification throughout the country, CPCB vide letter no. B-29012/1/2012/ESS/1526-1563, dated 04.06.2012 issued directions under section 18(1(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs to adopt and implement standardized list of Red, Orange and Green categories of industries; and

WHEREAS, in 2016, the Central Pollution Control Board (CPCB) developed a scoring methodology based on the Pollution Index (PI) to harmonize the criteria for classification of industrial sectors. The PI is determined based on Precautionary Principle- by evaluating potential of water pollution, air pollution, and hazardous waste generation from particular sector. CPCB vide letter no. B-29012//ESS(CPA)/2015-16, dated 07.03.2016 issued directions under section 18(1(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs to adopt and implement revised classification. SPCBs/PCCs were also directed to categorize any new or left over sectors at their level by constituting a Committee and following the methodology prescribed by CPCB; and

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, New Delhi - 110032
दूरभाष/Tel: 43102030, 22305792, वेबसाईट/Website : www.cpbc.nic.in

WHEREAS, CPCB vide letter no. B-29016/ROGW/IPC-VI/2020-21, dated 30.04.2020, issued directions under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs regarding segregated list of non-industrial sectors (activities/ facilities/ infrastructure/ services) such as sewage treatment plants, healthcare facilities, hotels, building and construction projects, airports, highways etc. Further, CPCB also classified few additional sectors from time to time; and

WHEREAS, based on the experience gained over the years in Pollution Index calculation, use of cleaner fuels like PNG/CNG etc., adoption of cleaner technology resulting in reduced emission/wastewater generation, a need was felt to revisit the classification methodology of 2016; and

WHEREAS, during July 2023, CPCB prepared a "Draft Report on Classification of Industrial Sectors into Red, Orange, Green and White Categories: A Tool for Progressive Environmental Management" which was uploaded on CPCB website for seeking comments/suggestions of the stakeholders/public on the same. The draft report was also circulated to SPCBs/PCCs/MoEF&CC for comments; and

WHEREAS, CPCB vide office order dated 26.09.2023 constituted a committee to critically examine and analyse the comments/suggestions and to make recommendations for suitable incorporation in the finalizing the methodology and classification; and

WHEREAS, based on the stakeholders' comments, a need was felt to promote/incentivize units for adopting measures resulting in better environmental performance. Additionally, a requirement was also felt for separate category – Blue Category- for essential environmental services for management of environmental pollution arising from domestic/household activities. Accordingly, CPCB prepared an "Addendum and substitution thereto in Draft Report on Classification of Sectors into Red, Orange, Green, White and Blue Categories", which was shared with SPCBs/PCCs and also uploaded on CPCB website on 11.07.2024 for seeking inputs/comments; and

WHEREAS, the amendment in Section-21 of the Air (Prevention and Control of Pollution) Act, 1981 through the Jan Vishwas (Amendment of Provisions) Act, 2023 and amendment in Section-25 of the Water (Prevention and Control of Pollution) Act, 1974 through the Water (Prevention and Control of Pollution) Amendment Act, 2024, grant exemption to certain categories of industries, as notified by Central Government, for obtaining consent under these Acts; and

WHEREAS, the Ministry of Environment, Forest and Climate Change, Government of India vide notification no. G.S.R. 702(E), dated 12.11.2024 granted exemption of consent under the Water Act, 1974 and the Air Act, 1981 to exemption of Consent to Establish (CTE) and Consent to Operate (CTO) to all industrial plants having pollution index score upto 20 (at present total 39 industrial sectors under white categories as per 2016 methodology) subject to

condition that such plant shall inform in writing to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC); and

WHEREAS, the MoEF&CC vide letter no. Q-15012/2/2022/-CPW-Part (1)/e-240741, dated 14.11.2024 has issued Standard Operating Procedure for implementation of the said Notification dated 12.11.2024. The SOP includes the following provisions for White categories of industries:

i. Industry to intimate to concerned SPCB/PCC about operations and self-declare the compliance with prevalent rules & regulations,
ii. Concerned SPCB/PCC to maintain separate list of such industries/activities, and
iii. Concerned SPCB/PCC to ensure that no activities other than those intimated, are carried out by exempted units.

WHEREAS, the Committee constituted by CPCB evaluated the comments, incorporated the suitable changes and finalized the revised methodology as well as classification of sectors. Final report in this regard titled as "Classification of sectors in to Red, Orange, Green, White and Blue Categories (A tool for progressive environmental management)" was submitted to Ministry of Environment, Forest and Climate Change (MoEF&CC) for concurrence. The MoEF&CC vide letter no. Q-16017-57-2015-CPA, dated 15.01.2025 granted concurrence to the revised classification; and

WHEREAS, as per the revised methodology, the category of the sector is decided based on the following ranges of Pollution Index:

i. Red: $PI \geq 80$,
ii. Orange: $55 \leq PI < 80$,
iii. Green: $25 \leq PI < 55$,
iv. White: $PI < 25$; and

WHEREAS, based on the revised methodology, CPCB has classified a total of 419 sectors and sub-sectors as under:

i. The Red Category: 125
ii. The Orange Category: 137
iii. The Green Category: 94
iv. The White Category: 54
v. The Blue Category: 9; and

WHEREAS, the purpose of classification is to ensure that the industry is established in a manner consistent with the environmental objectives and also to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in the generation of no or minimum pollutants. The revised classification system also defines criteria for incentivizing such industry. The industry may self-assess the PI score as per defined criteria and can submit application to respective SPCBs/PCCs for consideration; and

NOW, THEREFORE, in the exercise of the powers delegated 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 dated 07.03.2016 and subsequent directions/letter in the context of categorization of industries are withdrawn with immediate effect and following **'Directions'** are hereby issued for compliance by all SPCBs and PCCs:

1. That SPCBs and PCCs shall immediately adopt the revised methodology for classification of sectors and list of 419 sectors/sub-sectors classified under Red, Orange, Green, White, and Blue categories as detailed in the **attached** report- "Classification of Sectors into Red, Orange, Green, White and Blue Categories (A tool for progressive environmental management)".
2. That all pending application for consideration of consent (CTE/CTO) and future such application shall be processed as per the revised classification. In case CTE granted before the revised classification, applicability of CTO will be as per revised classification.
3. That the revised sectors/subsectors classified under Red, Orange, Green, White, and Blue category of sectors as given in the attached document shall be used by the SPCBs and PCCs for consent management, inventorization of units under different categories, siting criteria, deciding environmental surveillance frequency, calculation of environmental compensation, etc., as per the guidelines issued from time to time.
4. That SPCBs and PCCs shall prepare the inventory of Red, Orange, Green, White and Blue categories of units operating in their jurisdictions, based on the revised classification. SPCBs and PCCs shall upload the category and sector-wise list of such units on their website. SPCBs and PCCs shall also forward such list to CPCB, latest by 30.06.2025 and thereafter updated list by 30th June every year.
5. That the classification of sectors shall not be linked to sanction of loans/finance of bank proceedings.
6. That any further addition of any new or left-out sector and their classification which is not listed in the revised list of Red, Orange, Green, and White categories, shall be done at the level of concerned SPCB /PCC by constituting a Committee and following revised criteria & guidelines as detailed in the attached report and no concurrence of CPCB shall normally be required. Intimation of same from time to time will suffice. However, addition in Blue Category Sectors-Essential Environmental Services for domestic waste management, will be done at the level of CPCB only. SPCBs/PCCs may forward their proposal, if any, to CPCB in this regard.
7. That SPCBs and PCCs are required to prepare and submit list of additional sector classified under white category to CPCB on annual basis, by 30th of June every year, in the prescribed format (Annexure-V) as given in the attached report, for further notification for exemption from consent as per the provisions of the Jan Vishwas (Amendment of Provisions) Act, 2023, the Water Act, and the Air Act as amended from time to time by MoEF&CC.
8. That SPCBs and PCCs shall constitute a committee as prescribed in the report to evaluate the applications of the units for incentives due to adopting measures resulting in better environmental performance and reduction in PI score. The SPCB/PCC shall

place the separate list of such units on their website and also submit list of such units to CPCB on Annual Basis by 30th June every year.

The SPCBs/PCCs shall acknowledge the receipt of directions and submit the "Action Taken Report" in compliance with these directions to CPCB before 20.02.2025.

Encl. As above.

(Bharat Kumar Sharma)
Member Secretary

Copy to:

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   (As per the list)
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6. All Regional Directorates, CPCB
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(Bharat Kumar Sharma)
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Classification of Sectors into Red, Orange, Green, White and Blue Categories

(A tool for progressive environmental management)

Central Pollution Control Board

"Parivesh Bhawan", East Arjun Nagar

Delhi-110032

(January 2025)

तन्मय कुमार, भा.प्र.से.
अध्यक्ष
Tanmay Kumar, I. A. S.
Chairman

सत्यमेव जयते

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
CENTRAL POLLUTION CONTROL BOARD
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

FOREWORD

The concept of classifying industries into different pollution categories originated in 1989 with the Doon Valley (Uttarakhand) Notification issued by Ministry of Environment and Forests. Subsequently the concept of pollution index was developed by Central Pollution Control Board (CPCB) during 2016 to classify the sectors into different category. The 2016 classification helped State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) in streamlining consent management, prioritizing regulatory oversight & environmental monitoring, taking decision related to siting of units, etc. However, necessity felt for refining the concept of calculating Pollution Index to overcome certain limitation and to bifurcate sub-sectors based on pollution load, scale of operation etc.

Accordingly, draft methodology was prepared and widely circulated for inputs/comments/suggestions by placing the same on CPCB website (public domain) as well as by inviting comments from MoEF&CC/SPCBs/PCCs. As of 11.08.2024, i.e. the extended date for receipt of suggestions, CPCB received 170 representations, comprising over 700 comments from PSUs, NGOs, industries, industrial associations, including feedback from SPCBs of Kerala, Nagaland, Tamil Nadu, Mizoram, West Bengal, Punjab and Lakshadweep. The report has been finalised after examining all the comments by a working committee.

The 2025 classification methodology bifurcates sub-sectors based on pollution load, scale of operation, production technology, and type of fuel used into Red, Orange, Green, White and Blue categories. Red indicates the highest pollution potential, requiring stringent regulatory oversight, while White signifies minimal or no pollution, with much reduced compliance burden of merely intimation to the concerned SPCBs/PCCs. **A new Blue Category has also been introduced to distinguish the Essential Environmental Services** required for management of environmental concerns arising from anthropogenic pollution due to domestic/household activities which otherwise will have large littering potential. Additional 2 years validity for consent to operate (as per Pollution Index) is prescribed for the blue category.

This report also outlines the implementation pathway, which includes guidelines for State Pollution Control Boards/Pollution Control Committees to follow and implement the new classification system. Earlier classified 257 sectors have now been bifurcated and classified into 403 sectors (including sub sectors) and additionally, 16 new sectors have been introduced. Thus, the revised classification of 273 key sectors comprising of total 419 sectors/sub-sectors are further classified into Red Category (125 nos.), Orange Category (137 nos.), Green Category (94 nos.), White Category (54 nos.) and Blue Category (9 nos.). Progression between red, orange and green categories for the industrial sectors is also incorporated based on the use of less polluting available processes and technologies.

The report also comprises provisions for individual units to adopt cleaner technologies and practices resulting in reduction of pollution load in any sector. Incentives, such as extended validity for Consent to Operate (CTO) and reduced inspection frequencies, are outlined to encourage continual improvement of environmental performance. The incentive mechanism allowing progression between categories will thereby promote Ease of Doing Business by extended consent validity and enhance duration between inspections, thereby leading to reduced compliance burden.

To sum up, this report aims to create a more transparent, consistent, and incentivized regulatory mechanism for better environment management, promoting sustainable industrial development and better governance. I hope the report will be useful to all concerned in the field of industrial pollution control in the country and would incentivise the industries to switch over to cleaner process and technology leading to reduced air, water and soil pollution and also encourage setting up of blue category industries.

I would like to place on record my sincere appreciation for the hard work and valuable contributions by the CPCB team comprising of Shri Amit R. Thakkar, Add. Director, Shri Saubhagya Dixit, Scientist D, and Dr. Anantha N. S., SSA under the guidance of Shri Bharat Kumar Sharma, Member Secretary. I would also like to extend my thanks to Dr. Prashant Gargava, former Member Secretary, Shri P. K. Gupta, former Director and Shri Ajay Aggarwal, former Director, for their contribution. I would also express gratitude to the Working Committee, CPCB, MoEF&CC, SPCBs/PCCs and others for their contributions in the preparation of this report.

(Tanmay Kumar)

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EXECUTIVE SUMMARY

The concept of classification of industrial sectors into red, orange, and green categories based on the size of operations and consumption of resources was first introduced in 1989 for Doon Valley, Uttarakhand. This classification aimed to aid decisions regarding siting of industries. Over the period of time, this concept was extended nationwide to manage consents and establish norms for surveillance and inspection of industry. In 2012, to have uniformity in classification throughout the country, the Central Pollution Control Board (CPCB) issued a standardized list of 244 sectors, classified under red (85 sectors), orange (73 sectors) and green (86 sectors) categories.

In 2016, the Central Pollution Control Board (CPCB) developed a scoring methodology based on the Pollution Index (PI) to harmonize the criteria for categorizing industries. This PI was determined by evaluating water pollution, air pollution, and hazardous waste generation. Using this methodology, CPCB classified 257 industrial sectors into four categories: Red (63 sectors), Orange (91 sectors), Green (65 sectors), and White (38 sectors). The White category was introduced for sectors considered "practically non-polluting" during 2016. Additionally, State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) were authorized to categorize any new or left over sectors according to the CPCB's 2016 methodology.

Further, based on the experience gained over the years, the increased use of cleaner fuels like PNG and bio-CNG, adoption of cleaner technology resulting into reduced wastewater generation, normalisation approach & different formula for calculating PI etc. a need was felt to revisit the classification methodology of 2016 for several such identified areas for improvement. Separate scoring for trade effluent and sewage effluent was also required due to differing characteristics and treatment methods.

Considering the scope of revision, CPCB published a draft report revising the methodology for calculating PI and accordingly classification of sectors into Red, Orange, Green, and White categories based on pollution index range was placed in the public domain for inputs/comments. Around 160 representations comprising more than 700 comments were received. Based on feedback/suggestions and examination of same by the working committee constituted for the purpose, the methodology was finalised. As per the final methodology, the scoring criteria for the following three major pollutant groups are as follows:

i. Water Pollutant Score (PI_W): Assesses the water pollution potential considering the oxygen demand of wastewater, other pollutants in the wastewater and quantity of wastewater generated.
ii. Air Pollutant Score (PI_A): Evaluates the potential air pollution due to process emissions (point source), work zone emissions (fugitive and odour) and type & quantity of fuel used.
iii. Waste Pollutant Score (PI_H): Considering the type and quantity of waste (which are hazardous/toxic/infectious/bulk in nature) generated.

Each pollutant group is scored out of 100, and the Cumulative Pollution Index is calculated. The category of the sector is decided based on the pollution index range, if $PI \geq 80$ the category

of sector is Red, if PI ranges between 55 ≤ PI < 80, the category of sector is orange, similarly for the range of PI between 25 ≤ PI < 55, the category is Green and for PI < 25, the category of the sector is white.

Further, based on the stakeholders' comments, a need was felt to introduce a separate "blue category" for Essential Environmental Services (ESS) required for management of waste generated from domestic/household activities and, an incentive mechanism to promote units in a particular sector, taking measures resulting into better environmental performance. An addendum was prepared, shared and presented to all SPCBs/PCCs. The addendum was also placed in the CPCB Website on 11.07.2024 for inputs/comments. 09 representations were received in the addendum. All representations were examined, and classification based on revised methodology is finalised. Based on the revised methodology, CPCB has classified total 419 sectors and sub-sectors under Red (125), Orange (137), Green (94), White (54) and Blue (9) categories.

The report introduced incentive mechanism for the units in any sector that adopt environment friendly practices such as treatment and recovery of 100% wastewater, use of 100% cleaner fuel/renewal energy etc. and ensuring continuous compliance. These incentives are designed to encourage continuous improvement in environmental performance and to reward units that demonstrate proven implementation of sustainable practices and compliances.

Following are the salient features of the revised classification methodology:

- Methodology focusses on "Potential to pollute the environment" by the sector.
- Simplified single formula for Cumulative Pollution Index for all cases.
- Equal weightage to all three pollutant groups- Air, Water, and Waste.
- Cumulative PI based on weighted proportionate scores of pollutant groups.
- Separate scoring criteria for sectors generating sewage (such as Building & construction projects, STPs, Airports, etc.) and bio-medical waste (Health Care Facilities).
- Introduced Blue Category for 9 sectors under Essential Environmental Services required for management of waste generated from domestic/household activities.
- Appropriate weightage to scale of operations by introducing more slabs to bifurcates sub-sectors based on pollution load, scale of operation, production technology and type of fuel used.
- Introduction of sub-categories for sectors based on cleaner technologies, fuel types, integrated/segregated operations etc.
- Motivation to industries for progressive environmental management.
- A tool to assess the Cumulative Pollution Index and category based on revised method.

This report, prepared by the Central Pollution Control Board (CPCB), presents a revised methodology for classifying sectors based on their pollution potential. The classification aims to enhance environmental management and regulatory oversight by classifying sectors into red, orange, green, white, and blue categories. The report covers in detail about the genesis of

classification, need for the revision of 2016 methodology, scoring methodology for calculation of cumulative PI, etc.

The report also outlines guidelines for implementing the classification system. The classification may be used for consent management, inspection frequency, siting criteria, cluster development, pollution control plans, levying environmental compensation, promoting progressive environmental management, etc.

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LIST OF ABBREVIATION

CBG: Compressed Biogas

CNG: Compressed Natural Gas

CPI: Cumulative Pollution Index

CPCB: Central Pollution Control Board

CTE: Consent to Establishment

CTO: Consent to Operate

EC: Environment Compensation

ETP: Effluent Treatment Plant

EES: Essential Environmental Services

Gen-Set: Generator Set

HAPs: Hazardous Air Pollutants

HCFs: Health Care Facilities

HW: Hazardous Waste

MoEF&CC: Ministry of Environment, Forest & Climate Change

LNG: Liquefied Natural Gas

LPG: Liquefied Petroleum Gas

NGT: National Green Tribunal

NOC: No Objection Certificate

OCEMS: Online Continuous Effluent/Emission Monitoring System

PCC: Pollution Control Committee

PM: Particulate Matter

PI: Pollution Index

PI_A: Air pollutant score

PI_H: Waste pollutant score

PI_W: Water pollutant score

PNG: Piped Natural Gas

SPCB: State Pollution Control Board

TTZ: Taz Trapezium Zone

VOCs: Volatile Organic Compounds

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1

Genesis and Journey of Classification

1.1 Introduction

The notifications issued by the Ministry of Environment and Forest during 1989 for Doon Valley, Uttarakhand introduced the concept of classification of industries as red, orange, and green categories. The purpose of this classification was to facilitate decisions related to location of these industries. The criteria for classification of industries was primarily based on quantity of industrial effluent, quantity of fuel/coal, and the number of employees, and amount of waste generated. The notification included list of 129 sectors, classified under red (45), orange (35), and green (39) categories. The criteria used for Doon Valley Notification, 1989 is summarized in the **Figure I**.

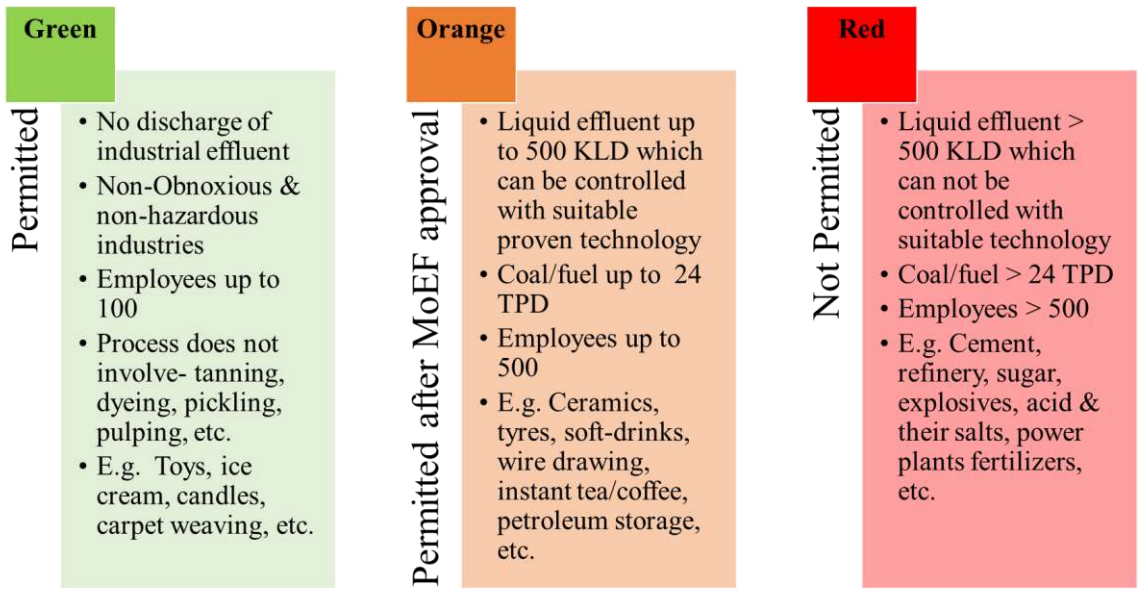

Figure I: Criteria for classification of industries in Doon Valley Notification, 1989

Subsequently, the application of this concept was extended to 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. As the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) were following different

categorization of industries, to maintain the uniformity across the country, during 2012, CPCB issued a list of 244 sectors, classified under red (85), orange (73) and green (86) categories.

In order to harmonize the criteria for categorization, during the year 2016, CPCB developed the scoring methodology to classify the industries based on the Pollution Index (PI) which was a function of water pollution, air pollution and hazardous waste generation. Based on this methodology, CPCB has classified 257 sectors under red (63), orange (91), green (65) and white (38) categories and directed SPCBs/PCCs to adopt the same. During 2016, CPCB introduced white category as a new category for such sectors which are "practically non-polluting". SPCBs/PCCs were also empowered to categorize any new/left-out sector at their own level, following the methodology prescribed by CPCB. Additionally, during 2020, CPCB also segregated the list of non-industrial operations/facilities. The overall journey of classification may be understood with the help of milestone chart shown in **Figure II**.

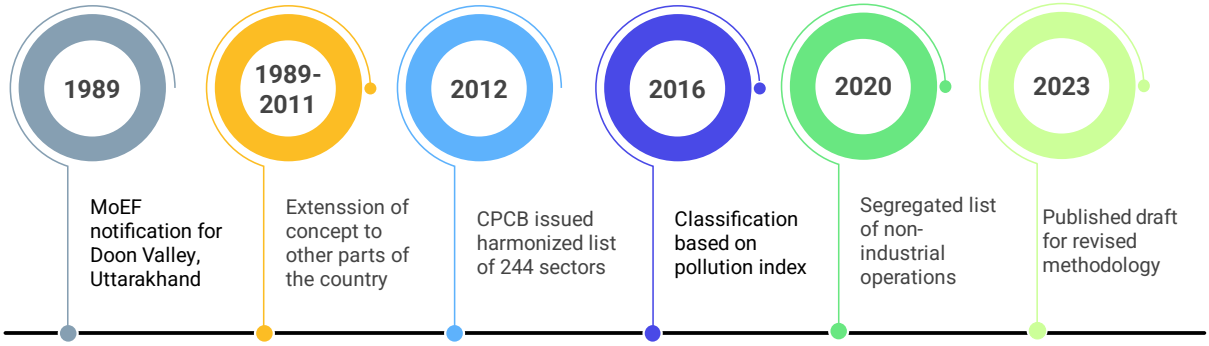

Figure II: Genisis and journey of classification of sectors

The concept of categorization is based on the "Precautionary Principle", which focuses on potential of industries to pollute the environment. 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 minimum pollutants.

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2

Modified Methodology for Classification

2.1 Need and scope for revision of methodology

Based on the experience gained over the years, a need was felt to revisit the 2016 methodology for classification of sectors considering following scope of improvement:

i. Assessment of Pollution Index:

The category of any industrial sector depends on the Pollution Index (PI), which comprises of scores of three pollutant groups i.e., air pollution, water pollution and hazardous waste. The water and air pollutants were each assigned a weight of 40%. However, the hazardous waste generation was given 20% weightage in pollution index.

As per the classification methodology of 2016, in case of absence of any pollutant groups, pollution index was normalized to 100. As a result, different formulas were required to compute pollution index.

Further, the normalization method has certain limitations while comparing pollution potential among sectors having scores for all three pollutant groups verses score only for any one/two pollutant group(s). Moreover, it was also observed that in some sectors normalization involved subjectivity based on perception.

ii. Size of operations of industrial activities:

It was observed that, there was less variation in PI score of industry based on size of operation in same sector. Limited variables/slabs were considered for the quantity of wastewater discharge and fuel consumption. It was also observed that adequate weightage in the considered variables/slabs to account the variation in size of operations of industrial activities need to introduce.

iii. Consideration to segregated industrial activities:

Although there were differences in pollution potential of integrated and standalone units of a particular sector, the classification methodology (2016) classifies the integrated or standalone units in the same sector. For example, standalone cement grinding units will have less pollution potential than integrated cement plants, but both were classified under red category.

iv. Consideration of type of fuel used:

In industrial operations requiring fuels, the amount of emissions is governed by many factors such as the type of fuel and its calorific value, combustion efficiency, emission factors, etc. Use of biomass and cleaner gaseous fuels such as Piped Natural Gas (PNG), Liquefied Petroleum Gas (LPG), Compressed Natural Gas (CNG), bio-CNG etc. have increased significantly in recent years. It was observed that adequate weightage based on type of fuel used is required.

v. Separate scoring for sewage and trade effluent:

It is desirable to have separate wastewater scoring criteria for the sectors generating trade effluent and sewage effluent, as characteristics, treatment method and impact are different for trade effluent generated from industrial sectors and sewage effluent generated from infrastructure & development sectors.

vi. Motivation to industries for progressive environmental management:

In the previous classification regime, there was no effective provision for change in category of industries based on the variation in pollution potential of a sector, even if the industries adopt cleaner technologies or switch over to cleaner raw material/cleaner fuel etc., resulting into reduction in pollution index.

2.2 Modified methodology for classification of sectors

Considering the scope of revision, CPCB prepared a draft report on "Classification of Industrial Sectors into Red, Orange, Green and White Categories: A Tool for Progressive Environmental Management". As per the draft report, a revised methodology for the classification is proposed which incorporates, water pollutant score, air pollutant score and waste generation score, based on the pollution potential of a sector on the environment. Scores out of 100 were given to each three pollutant groups and formula for calculating cumulative score based on the impact pollutant is devised. These scores are used for computation of pollution index for deciding the

category of industrial sector. The cut-offs for deciding the category were based on the quartiles of pollution indices, pollution potential of sectors, etc. The draft report was placed on CPCB website in July 2023, for comments/feedback from stakeholders.

CPCB received 161 representations, comprising more than 700 comments from various State Pollution Control Boards, research and technical institutions, industrial associations, NGOs, individual industries, and the public. The stakeholder-wise representations are shown with the help of pie-chart in **Figure III**.

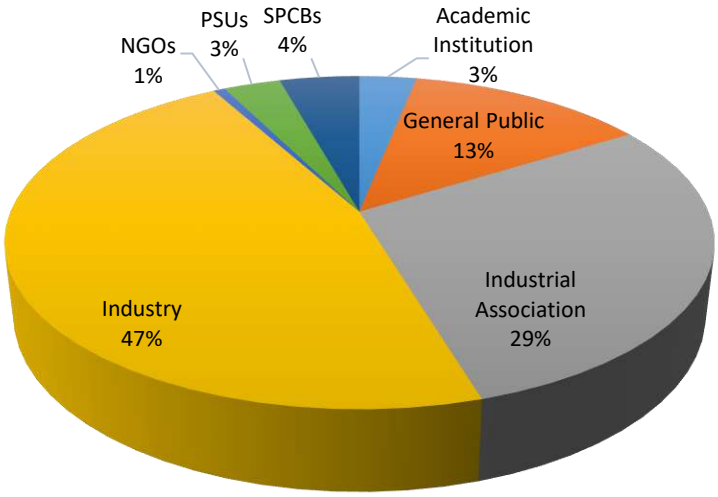

Figure III: Stakeholder-wise representations received

Subsequently, CPCB constituted a committee to critically examine and analyse the comments and to make recommendations for suitable incorporation in the final methodology and classification. After incorporating the feedback received from stakeholders, the Committee has finalized the basic methodology which can be used as a yardstick for classification of the sectors into Red, Orange, Green and White Categories.

Further, based on the stakeholders' comments, a need was felt to introduce a separate "blue category" for Essential Environmental Services (ESS) required for management of waste generated from domestic/household activities and, an incentive mechanism to promote units in a particular sector, taking measures resulting into better environmental performance. An addendum was prepared, shared and presented to all SPCBs/PCCs. The addendum was also placed in the CPCB Website on 11.07.2024 for inputs/comments. Till last date (i.e. 11.08.2024) 09 representations were received in the addendum. All representations were examined, and classification based on revised methodology is finalised.

It is worth to mention that to safeguard the environment, following the fundamental principle of classification i.e., “Precautionary Principle", scope is always available for application of mind and collective wisdom. As per the precautionary principle, when human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. Therefore, variation from methodology is possible in case of projects having high chances of damage to the environment/eco-system such as river mining, etc. or having associated accidental risk such as major accident hazards installations wherein risk is associated with industrial activities having potential in terms of operation or process, manufacturing, transportation, and storage of one or more hazardous chemicals as prescribed by the Manufacture, Storage, and Import of Hazardous Chemical Rules, 1989.

Considering the above issues, the classification methodology was modified based on the potential of three pollutant groups, namely, water pollutant, air pollutant and waste pollutant (which are hazardous/toxic/infectious/bulk in nature), which have been given scores out of 100, each. Slabs are assigned for selection of pollutant groups respectively for water, air, and waste. Score can be decided based on dominant pollutants in the pollutant groups and quantity as detailed in Table-I, Table-II and Table-III. These scores are used for computation of pollution index for deciding the category of sector. The scoring methodology is based on the pollution potential during generation and not at the end of pipe/ after treatment considering the fact that all pollutants need to be treated and disposed as per the provisions/rules notified under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 and as amended.

The details of scoring criteria for PI_W for “water pollutant,” PI_A for “air pollutant” and PI_H for “waste generating sector” are as follows:

2.2.1 Scoring criteria for Water Pollutant “PI_W”

Water pollution score consider the potential water pollution load from any sector in terms of characteristics and quantity of untreated trade effluent (wastewater). The “trade effluent” includes any liquid, gaseous or solid substance which is discharged from any premises used for carrying on any [industry, operation or process, or treatment and disposal system], other than domestic sewage.

The water pollutant score (PI_W) is the addition of three sub-scores which are based on organic content in terms of oxygen demand of wastewater (W1), potential of other pollutants (W2) and

quantum of wastewater (W3). The weightages of W1, W2 and W3 in the water pollution score are 35%, 30% and 35%, respectively.

Proportionate higher scores are assigned to the sectors generating trade effluent of high BOD and/or high COD, heavy metals/toxic compounds, and large volume of wastewater. The scores are assigned considering the potential for causing damage to the environment. It may be noted that for sectors generating industrial effluent, dominant quantity of trade effluent is considered in score W3 (W3-1 to W3-5). Whereas, for sectors generating huge volume of sewage effluent such as railway stations, STPs, residential building projects, airports etc., the separate scores W3 (W3-6 to W3-10) are assigned. The term used, "Sewage effluent" means effluent from any sewerage system or sewage disposal works and includes sullage from open drains. The scoring criteria for water polluting sectors are given in **Table-I**.

Table I: Scoring Criteria for Water Polluting Sector

Water Pollutant Group	Description	Score
Score W1: Score based on the oxygen demand of wastewater (Maximum of the following scores to be considered)		
W1-1	BOD ≥ 5,000 mg/l or COD ≥ 10,000 mg/l	35
W1-2	1000 ≤ BOD < 5,000 mg/l or 5000 ≤ COD < 10,000 mg/l	30
W1-3	500 ≤ BOD < 1,000 mg/l or 1000 ≤ COD < 5,000 mg/l	25
W1-4	100 ≤ BOD < 500 mg/l or 250 ≤ COD < 1,000 mg/l	20
W1-5	10 ≤ BOD < 100 mg/l or 50 ≤ COD < 250 mg/l	10
Score W2: Score based on other pollutants in the wastewater (Maximum of the following scores to be considered)		
W2-1	Pollutants like pesticides, heavy metals, and toxic compounds: *(Aluminium, Anionic detergents, Barium, Chloramines, Copper, Fluoride, Total residual chlorine, Iron, Manganese, Mineral oil, Phenolic compounds, Selenium, Silver, Sulphide, Cadmium, Cyanide, Lead, Zinc, Mercury, Tin, Vanadium, Antimony, Benzene, Benzo-a-pyrene, Molybdenum, Nickel, Phosphates, Polychlorinated biphenyls, Polynuclear aromatic hydrocarbons, Arsenic, Total/Hexavalent Chromium, Trichloroethane, Trichloroethylene, Adsorbable Organic Halogens (AOx), Pesticides compounds, Residual antibiotic, Radioactive materials, etc.)*	30
W2-2	Pollutants like Nitrate Nitrogen, Nitrate, Ammonical Nitrogen, Total Kjeldahl Nitrogen (TKN), Oil & grease, pH<5.5 or > 9	25
W2-3	Pollutants mainly in terms of inorganic dissolved solids and associated other impurities due to process e.g. wastewater generated from DM water rejects, boiler blowdowns, brine solution rejects, fresh-water RO rejects, etc.	20
W2-4	Pollutants mainly in terms of inorganic dissolved solids e.g. wastewater from cooling towers, cooling-re-circulation processes, etc.	15

Score W3: Score based on quantity of wastewater generated		
A. For sectors generating Industrial Trade effluent (Maximum score to be considered)		
W3-1	Wastewater ≥ 500 KLD	35
W3-2	100 KLD ≤ Wastewater < 500 KLD	30
W3-3	50 KLD ≤ Wastewater < 100 KLD	25
W3-4	10 KLD ≤ Wastewater < 50 KLD	20
W3-5	Wastewater < 10 KLD	15
B. For sectors such as STPs, building projects, etc. generating/handling only high-volume Sewage (Maximum score to be considered)		
W3-6	Sewage ≥ 5,000 KLD	35
W3-7	2,000 KLD ≤ Sewage < 5,000 KLD	30
W3-8	500 KLD ≤ Sewage < 2,000 KLD	25
W3-9	100 KLD ≤ Sewage < 500 KLD	20
W3-10	Sewage < 100 KLD	15
Water Pollutant Score (PI_W) = W1+W2+W3		

2.2.2 Scoring criteria for Air Pollutant "PI_A":

Air pollution score consider the potential air pollution load from any sector in terms of characteristics of emissions and its quantum/scale in terms of quantity of fuel. The air pollutant score is based on generation of emission. The "air pollutant" means any solid, liquid, or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The air pollution score (PI_A) is the addition of three sub-scores which are based on the type of pollutants in emissions (A1), work zone emission/fugitive emissions & odour nuisance (A2), and fuel type & quantity (A3). The weightages of A1, A2 and A3 in air pollution score are 35%, 30% and 35%, respectively.

Proportionate higher scores are assigned to the sectors generating emissions with hazardous air pollutants, process-based fugitive emissions and using solid/liquid fuels, as such pollutants have higher potential to damage the environment.

The California Air Resources Board defines fugitive emissions as "Emissions not caught by a capture system which are often due to equipment leaks, evaporative processes and windblown disturbances." The fugitive emissions from any process having acid mist, VOCs, etc. are given higher weightage (score A2=30) as compared to the fugitive emissions of inert material (score A2=25). Sectors having persistent foul odour issue, will get score A2=20. Sectors/units using solid/liquid fuel will get higher score-A3, compared to the sectors using cleaner gaseous fuel or electricity. The scoring criteria for air polluting sectors are given at **Table-II.**

Table II : Scoring criteria for air polluting sectors

Air Pollutant Group	Description	Score
Score A1: Score based on Process emissions (point source) (Maximum of the following scores to be considered)		
A1-1	Hazardous Air Pollutants (HAPs) and heavy metals: *HAPs (Phosgene, Benzene, Benzo(α)pyrene, Butadiene, Toluene Di-isocyanate, Methylene-di-phenyl Di-isocyanate, Ethylene Oxide, Ethylene Di Chloride, Acrylonitrile, Propylene Oxide), Dioxins & Furans, Asbestos, Polycyclic Aromatic Hydrocarbons (PAHs), HCN, Cd, Th, Hg, Sb, As, Pb, Co, Cr, Cu, Mn, Ni, V, etc.*	35
A1-2	Halogens, acids, and pesticides-based pollutants: *H_2S, HF, HBr, P_2O_5 as H_3PO_4, NH_3, TOC, Cl, HCl, SO_3, CH_3Cl, Total Fluoride, PM having pesticide compounds/other organic compounds, Acid mist, etc.*	30
A1-3	Pollutants due to combustion of fuel or due to process: *PM, CO_2, CO, NOx, SO_2, etc.*	25
A1-4	Volatile Organic Compounds (VOCs): *Ethyl benzene, Styrene, Toluene, Xylene, Aromatics, Propylene Glycol, Ethylene Glycol, etc.*	20
Score A2: Score based on fugitive emissions and odour nuisance (Maximum of the following scores to be considered)		
A2-1	Fugitive emissions of Particulate Matter (PM), acid mist, VOCs, etc. from process	30
A2-2	Fugitive emissions of Particulate Matter (PM), acid mist, VOCs, etc. due to storage and handling, etc.	25
A2-3	Odour nuisance, including odour due to the use of binding gums, cements, adhesives, enamels etc.	20
Score A3: Score based on quantity of fuel (Maximum of the following scores to be considered)		
	Coal or liquid fuels	
A3-1	Fuel consumption ≥ 24 TPD	35
A3-2	12 TPD ≤ Fuel consumption < 24 TPD	30
A3-3	Fuel consumption < 12 TPD	25
	Biomass-based fuels	
A3-4	Fuel consumption ≥ 48 TPD	25
A3-5	24 TPD ≤ Fuel consumption < 48 TPD	20
A3-6	Fuel consumption < 24 TPD	15
	Cleaner/gaseous fuels, such as, PNG, CNG, LPG, Compressed Biogas (CBG), propane, butane etc.	
A3-7	Fuel consumption ≥ 120 TPD	20
A3-8	60 TPD ≤ Fuel consumption < 120 TPD	15
A3-9	Fuel consumption < 60 TPD	10
A3-10	Electricity	0
Air Pollutant Score (PI_A) =A1+A2+A3		
Note: In case, any sector/unit is using more than one type of fuel, the most polluting fuel category, will be considered.		

2.2.3 Scoring criteria for Industrial Waste Generating Sector "PI_H"

Industrial waste generating sectors are considered based on the generation of hazardous waste/high volume low effect waste. As per the Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules, 2016, the "hazardous waste" means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances and shall include waste as per the Schedule I, Schedule II and Schedule III of the rule. Further, scores are also assigned to the high-volume low effect wastes such as fly ash, phosphogypsum, red mud, jarosite, slags from pyro-metallurgical operations, mine tailings and ore beneficiation rejects.

The score for waste comprises of two sub-scores H1 and H2. The H1 score is based on the different type of hazardous waste which are generated during the process, and which required to be managed/disposed through common facility OR based on the generation of high-volume low effect waste/ HW like contaminated bags/ drums etc. The H2 score is based on the total quantum of waste generated.

The desirable disposal method such as incineration, landfill after treatment, landfill etc. signifies the potency of hazardous waste. In recent time, the utilization of hazardous waste as per the Rule-9 of Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules, 2016, as alternate fuel and raw material in cement kilns, as recyclable hazardous waste etc. has increased. The classification is based on the pollution potential due to generation of such types of hazardous waste from any sector. The score for the quantum of hazardous waste is total potential of generation of such hazardous waste by any sector., Score H1: Based on potency of hazardous waste and score H2: Based on quantum of hazardous waste, are given weightage of 30% and 70%, respectively. Considering the higher risk due to amount of hazardous waste generated rather than its disposal method, more weightage is given to the quantity. Overall waste generation score in case of waste generating sector will be PI_H =H1+H2. The scoring criteria for hazardous waste generating sectors are given at **Table-III**.

A separate scoring criterion has been included for sectors generating bio-medical waste. Bio-medical waste means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in Schedule-I appended to the Bio-Medical Waste Management Rules, 2016. As any Health Care

Facilities (HCFs) generates all types of bio-medical waste (red, yellow, blue, and white) and quantities of such wastes may vary considerably based on the type of facility/location of facility (rural/urban), and other such factors. Therefore, scoring based on number of beds in a healthcare facility is considered as sole criteria for assigning waste score (H: B-1 to B-7) as tabulated in **Table-III**.

Least score of 25 is given to non-bedded healthcare facilities and maximum score of 100 is given to facilities having more than 1,000 beds. Overall waste generation score in case of bio-medical waste generating sector will be PI_H.

Table III: Scoring criteria for waste generating Sectors

Waste Pollutant Group	Description	Score
A. Score for sectors generating hazardous waste		
Score H1: Score based on the hazardous waste management/disposal method. (Maximum of the following scores to be considered)		
H1-1	Hazardous wastes which are flammable, ignitable, corrosive, oxidizing toxic, etc. and requiring disposal through incineration	30
H1-2	Hazardous wastes which are reactive, capable of yielding another material post disposal, etc. and requiring disposal in secured landfill after stabilization/treatment	25
H1-3	Hazardous wastes which are requiring direct disposal in secured landfill without stabilization	20
H1-4	High volume and low effect wastes, contaminated bags/ drums/ containers etc.	10
Score H2: Score based on quantity of hazardous waste generation. (Maximum of the following scores to be considered)		
H2-1	Hazardous Waste ≥ 5000 TPA	70
H2-2	1000 TPA ≤ Hazardous Waste < 5000 TPA	50
H2-3	200 TPA ≤ Hazardous Waste < 1000 TPA	30
H2-4	10 TPA ≤ Hazardous Waste < 200 TPA	20
H2-5	Hazardous Waste < 10 TPA	10
B. Scores for the sectors generating bio-medical waste		
B-1	No. of beds ≥ 1,000	100
B-2	500 ≤ No. of beds < 1,000	80
B-3	200 ≤ No. of beds < 500	60
B-4	50 ≤ No. of beds < 200	50
B-5	10 ≤ No. of beds < 50	40
B-6	No. of beds < 10	30
B-7	Non-bedded facility	25
For sectors generating hazardous waste PI_H =H1+H2 **For sectors generating bio-medical waste PI_H =B**		

2.3 Computation of Cumulative Pollution Index and criteria for deciding category of sector

In the revised methodology of classification (2025), all three pollutant scores due to water, air and industrial waste generation are taken into account while computing pollution index. The formula for computing cumulative pollution index (PI) is as follows:

$$PI = i_{max} + (100 - i_{max})\left(\frac{i_2 + i_3}{200}\right)$$

Where, $i_{max,}$ is the maximum score among Water (PI_W), Air (PI_A), and Waste (PI_H) pollutant scores and i_2 & i_3 are the remaining pollutant scores.

The category of the sector will be decided based on the pollution index ranges given at **Table-IV.**

Table IV: Ranges of Cumulative Pollution Index for different categories

Cumulative Pollution Index (PI)	Category of industrial sector
PI ≥ 80	Red
55 ≤ PI < 80	Orange
25 ≤ PI < 55	Green
PI < 25	White

The purpose of classification is to have uniform consent mechanism, defined routine monitoring frequency by concerned SPCB/PCC, environmental protection plans etc. Modified methodology also considers the variation in pollution potential due to various type of activities and operations in a particular sector.

The scores/pollution index/category of any two sectors may be same, however, comparing two different sectors based on the category or pollution index is not desirable as the cumulative PI is a function of air pollutant, water pollutant, and waste pollutant and the cumulative score is arithmetically relates the maximum score of one pollutant with the remaining other two pollutants. Hence, PI/category of sectors may be same but may have different impact on environment.

2.4 Blue Category Projects- Essential Environmental Services for management of environmental pollution arising from domestic/household activities

Essential Environmental Services may be defined as those facilities which are essential to control, abate and mitigate pollution generated from Domestic and Industrial activities. Such Essential environment services for Industrial Activity includes CETP, CHWTSDF, Effluent conveying system etc. and essential environment services for domestic activities includes STP, MSW etc. Both the type of EES plays a vital role in Environment Management. However, during the treatment of waste, some EES generates/handle hazardous waste/infectious waste. The EES which do not generate Hazardous Waste, and which otherwise have large littering potential can be categorised as Blue Category Projects. Further, there are past legal references wherein Hon'ble Apex court has also considered the importance and requirement of such Essential Environment Services.

Human settlements whether located in rural/urban/eco-sensitive area generate sewage, solid waste, and C&D waste, which are required to be managed to prevent adverse impact on environment and human health. Basic environment management facilities are required to be set-up to manage such waste which includes STP, C&D waste processing facility, MSW management facility like sanitary landfill, material recovery facility & waste processing units, bio-methanation, bio-composting, waste to energy, etc.

These facilities are basically essential environment services which play a vital role in protecting environment and human health. These facilities may also bring value addition by producing various by-products such as secondary raw material, compost, energy, etc. and promotes circular economy and sustainable development by converting waste into wealth. Moreover, these categories do not generate hazardous or infectious wastes.

As the role and importance of these facilities is different in nature as compared to other activities and industries in the sense that they are primarily set-up for prevention, control and abatement of soil, water and air pollution. It is more appropriate to have a separate colour category-Blue Category for essential environmental services facilizes related to environmental pollution arising from domestic/household activities. These activities are required to meet all the prescribed environmental norms/rules notified from time to time and the pollution index for such Essential Environmental Services (EES) shall continue to be calculated as per the formula and consent to operate will be governed based on the pollution index. However, the

category of the EES will be termed "Blue Category sector" and as an incentive for the essential services, additional 2 years validity for consent to operate (as per PI) will be provided.

The list of EES facilities is given at **Annexure-II**.

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3

Classification of Sectors as per Revised Methodology

3.1 Types of sectors based on their activities

The revised methodology of classification will be applicable to all industries which may have potential for generation of environmental pollutants. As per the Section 2(j) of the Industrial Disputes Act, 1947, "Industry" means any business, trade, undertaking, manufacture, or calling of employers and includes any calling, service, employment, handicraft or industrial occupation or avocation of workman", however, based on type of operational activities, the industries are divided into following four sectors:

i. Industrial Sectors
ii. Essential Environmental Services (EES)
    a. EES for Industrial Waste
    b. EES for Domestic Waste (Blue Category Sector)
iii. Service/Infrastructure Development Sectors
iv. Others/Special Category Sectors

The sectors which are involved in production of goods, products, etc. are considered under "Industrial Sectors". The sectors covered under "Essential Environmental Services (EES)" are those facilities which are essential to control, abate and mitigate pollution generated from Domestic and Industrial activities. These services are essential facilities which are required to reduce pollution load on the environment, such as sewage treatment plants, common bio-medical waste treatment facilities, construction & demolition waste processing plants, etc. Essential Environmental Services Sectors are sub classified as "EES for industrial waste" and "EES for domestic waste (Blue category sectors which do not handle or generate infectious or hazardous waste)". On the other hand, sectors which carry out service-related activities such as infrastructure projects, railways, airports, hospitals, etc. are covered under "Service/infrastructure development sectors".

"Other/special category sectors" include those projects which cannot be classified based on the scoring methodology of pollution index but require classification based on precautionary principle and considering the potential of ecological damage/ health and environment related risk, etc. Few such sectors are sand mining, hydel power plants, etc.

The revised methodology of classification, sub-categorises the main sector based on the usage of cleaner technology/cleaner production/cleaner fuel which has proven reduction in trade effluent generation, emissions, waste, etc., for better environmental management, resulting into overall reduction of pollution index compared to main sector. For example, if coffee seeds processing industries use eco-pulping technology, which generates less water pollution, the pollution index of the said sector gets reduced and category changes from orange to green. Similarly, variation in type/scale of activities in a particular sector is also considered for classification of sub-sectors.

The methodology and scores have been screened through stakeholder feedback/consultation and public opinion. Available standard literature, various documents and guidelines, inspection reports, etc. were also referred, while assessing the scores for water pollution, air pollution, and waste generation for classification of sectors. Based on the modified methodology, the list of sectors and sector specific sub-classification is given at **Annexure-I to Annexure-IV**. Summary of classified sectors is given in **Table-V**.

Table V: Number of sectors classified under different categories

Sl. No.	Type of sector	Total number of sectors/sub-sectors	Red	Orange	Green	White	Blue
1.	Industrial Sectors	**359**	**107**	**120**	**81**	**51**	-
2.	Essential Environmental Services (ESS)						
2.a.	ESS for domestic waste	**9**	**-**	**-**	-	-	**9**
2.b.	ESS for industrial waste	**9**	**9**	**-**	-	-	-
3.	Service/Infrastructure Development Sectors	**37**	**7**	**15**	**13**	**2**	-
4.	Others/Special Category Sectors	**5**	**2**	**2**	`-	**1**	-
	Total	**419**	**125**	**137**	**94**	**54**	**9**

3.2. Usage of classification of sectors

The classification of sectors may be used for the following purposes:

i. **Consent management:** SPCBs/PCCs may grant Consent to Operate (CTO) to red, orange, and green categories of industries for validity up to 5 years, 10 years, and 15 years, respectively as per existing provisions which would be later governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023/Water Act, as amended. The validity of blue category sectors will be 2 years more than the category based on PI.

ii. **Inspection frequency:** SPCBs/PCCs may prioritize their environmental surveillance programs based on the categories of sectors. SPCBs/PCCs are required to ensure inspection of red, orange, and green category of industries at least once in six-months, one-year, and two-years, respectively. Common facilities and 17 categories of industries are to be inspected at least once in every three-months.

iii. **Siting criteria:** The categorization may be used as a tool for deciding the location/siting of an industry in a particular location.

iv. **Development of cluster:** The classification will help in planning of sector specific cluster, based on scoring of various pollutants and development of adequate environment management infrastructure facility, accordingly.

v. **Sector specific plans for pollution control:** The plans for control of pollution may be prepared and implemented on priority for the sectors having higher pollution index and overall higher pollution load.

vi. **Levying environmental compensation:** Pollution index may be used for determining and levying environmental compensation on industries violating the environmental norms.

vii. **A tool for progressive environmental management:** Industrial units may adopt cleaner technologies, cleaner fuels, etc. which may result in reduction of pollution index, thus, moving to lower pollution potential category. It will provide incentives to industries in terms of less consent renewal fees, less environmental surveillance/compliance burden, more validity period for consents/authorizations, etc.

3.3 Classification of left-out/new sectors

The revised methodology of classification (2025) and list of sectors classified by CPCB is required to be adopted and implemented by all SPCBs/PCCs. In case of any new or left-out

sector, the SPCB/PCC may categorize the sector at its own level. For this purpose, a committee headed by the Member Secretary, SPCB/PCC and comprising of at least two senior cadre engineers/scientists of the SPCB/PCC (as nominated by the Member secretary of the concerned SPCB/PCC) may be constituted to examine the matter and classify the sector in accordance with the methodology prescribed by CPCB. The State Level Committee may also co-opt subject experts, industrial association representative, etc., as member, as per requirement. CPCB has also developed a tool to assess the Cumulative Pollution Index and category of any sector, which is available on CPCB website (https://cpcb.nic.in/categorization-of-industrial-sectors/).

In addition, all SPCBs/PCCs are required to submit list of all such sector classified under white category to CPCB in the prescribed format (**Annexure-V**), for notification as per provisions of Jan Vishwas (Amendment of Provisions) Act, 2023.

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4

Incentives to unit in a sector for adopting measures resulting to better environmental performance

A methodology has been strategized to provide incentives to the unit in a sector which are dedicated to reduce environmental impacts from their operations/process. The objective can be achieved by 100% treatment and reuse of wastewater generated, having complete dependency on cleaner fuel alternatives (such as PNG, LPG, compressed biogas, propane, butane, electricity etc. for meeting energy requirement), implementation & achievements of targets of sector-specific charters of CPCB/SPCB for environmental management, EPR obligations and use of cleaner process/cleaner technology to eliminate generation of toxic/hazardous pollutants.

The units fulfilling the following eligibility criteria may submit their formal proposal to the concerned SPCB/PCC for consideration:

4.1 Eligibility Criteria

- The unit should have completed at least one year of completion of production/operations with demonstrated, verifiable steps and submitted audit report from institute of repute for considering the unit for the purpose by concerned SPCB/PCC. To facilitate verification, the unit must have properly maintained logbooks/bills for production, electricity consumption, fuel, water consumption, wastewater treatment and use of treated wastewater.
- The unit should be located in conforming area with applicable Environment Clearance, Consent to Establishment (CTE) and Consent to Operate (CTO) and hazardous/bio-medical waste authorization from SPCB/PCC.
- Unit should comply with all the norms/conditions stipulated under EC, CTO and Guidelines/Rules issued by CPCB.

- In case, unit using ground water resource, it should have valid permission/NOC and also required to install electronic flowmeter.
- No penalty or legal obligation is imposed/pending against unit for violation of environmental norms. Records for last 5 years may be verified. In case establishment period of the unit is less than 5 years, the past records since the start of production may be verified.
- Unit should not be involved in any sort of accident/incident resulting into emission /discharge into the environment. Records for last 5 years may be verified.

All such units, interested in availing incentives are required to demonstrate and prove their initiatives to the Committee (to be constituted at the level of concerned SPCB/PCC), comprising of members as mentioned in **Table VI**.

Table VI: Structure of Committee to evaluate the request of units adopting measures resulting in better environmental performance

Sl. No.	Members	Role
1	Member Secretary, SPCB/PCC	Chairman
2	Subject expert from Indian Institute of Technologies (IITs) or National Institute of Technologies (NITs) or any other institute/university of repute.	Member
3	Expert from CSIR institute/laboratories, having expertise in industrial process and pollution control technologies/ environmental management	Member
4	Two officials of concerned SPCB/PCC, as nominated by the Member Secretary, SPCB/PCC	Member

4.2. Evaluation Criteria

The committee shall scrutinize the proposals based on the eligibility criteria. The basis of evaluation will be- (i) Measures taken for treatment and reuse of wastewater to reduce freshwater consumption, (ii) Use of alternative cleaner fuel to reduce emissions, and (iii) Use of cleaner technology/ cleaner production which results in reduction in pollution/hazardous waste generation (iv) Recycling units identified for EPR obligations and has fulfilled all requirement including Environmentally Sound Management Facility for recycling.

The unit is required to demonstrate the successful implementation of measures by annual submission of third-party audit report (through institute of repute) regarding performance of environmental management measures. The Committee members may also inspect unit, collect samples, and get it analysed, check logbooks, electricity/water bills, examine system feasibility through mass-balances, ensure real-time submission of environment data to SPCB/PCC server, etc. The check and balances to examine the industry claims are summarized in **Table VII.**

Table VII: Checks and balances to assess the adequacy of environment management measures

Criteria	Checks and balances
I. Wastewater Management	
Installation of wastewater recovery system resulting into treatment and 100% reuse of treated wastewater in industrial process.	• Unit must have adequate operational Effluent Treatment Plant (ETP). The freshwater requirement of the unit has shown proportionate reduction. • There should not be any flow/ponding of wastewater inside the premises or discharge outside from the premises. Further, there should not be any by-pass. • Electronic flowmeters and Pan-tilt-zoom (PTZ) camera should have been installed with connectivity for continuous transmission of data to SPCB/PCC and CPCB servers (as applicable). • Recirculation system should be clearly mapped and visible for inspection and flow meter should be installed at required locations with records. • Mass/water balance based on actual production need to be checked. The claim regarding reduction in freshwater consumption should have concurrency with the readings of flow meters, water bill, log-books, etc. • Treated wastewater should not be used for horticulture or agriculture purposes. • Sludge generated from treatment of wastewater should be managed properly as per the authorization issued by the concerned SPCB/PCC and timely submission of Form-IV as per the requirement of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
II. Air Pollution Management	
100% fuel dependency on cleaner fuels, such as- Piped Natural Gas (PNG), Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG) Liquefied Petroleum Gas (LPG), Compressed	• No other fuel (coal, pet-coke, furnace oil, etc.) should be stored/used in the unit premises. Diesel for Gensets (as an auxiliary power source) may be allowed. Preference may be given to the units using gas based Gensets. • Adequate facility for stack monitoring (port holes, zig-zag ladder etc.) should be available with provision of OCEMS (as applicable).

Biogas (CBG), propane, butane, etc.	• Use of upgraded air pollution control devices with higher efficiency for the reduction of emissions. • Adoption of cleaner technology, advanced pollution control systems etc. to control fugitive/emissions • Use of alternate cleaner raw material for generation of less pollution. • Use of renewable energy as an alternate to conventional fuel/power should be considered.
III. Waste Management	
The unit has adopted cleaner technology/ cleaner production which results in reduction in pollution/ hazardous waste generation	• Reduction in generation of pollution/waste due to adoption of cleaner technology/change in raw material etc. • Mass balance based on actual production need to be checked. There should be concurrency in generation of hazardous waste, utilization, disposal, etc. with respect to net reduction in generation.
IV. EPR Targets (for recycling facilities)	
Recycling units identified for EPR obligations and has fulfilled all requirement including Environmentally Sound Management Facility for recycling.	• Complying with the requirement of EPR obligation identified by CPCB from time to time.

4.3. Re-assessment of Pollution Index (PI)

The purpose of giving star category is to classify the unit in the sector as star performing units. The category of the unit may be re-assessed as detailed below:

A. For Industries, Service/Infrastructure facilities and Essential Environmental Services Sectors for management of waste.

The pollution index of the units in any sector which have proven reduction in trade effluent generation and/or air pollution management and/or waste management measures, can be calculated based on submission of same with the supporting documents for considering the modified score based on the same methodology.

The revised cumulative pollution index (PI) will be calculated with modified air/water/waste scores as discussed in the methodology given in previous section. If revised, cumulative PI results to change in the category of unit in the sector, the nomenclature for revised category will be as per the **Table VIII**.

Table VIII: Nomenclature for revised category

Change in category	Nomenclature of revised category
Red to Orange	Red*
Orange to Green	Orange*
Green to White	Green*

B. Essential Environmental Service Sectors for Domestic/Household Waste- "Blue Category Sectors":

Units under Blue Category are required to reduce their existing PI score by 25%, by meeting evaluation criteria/check and balances, as mentioned in **Table III** to qualify for change in category to Blue*.

4.4 Incentives to the units for better environmental management

Units which have demonstrated the successful implementation of environmental management measures and verified by the Committee, shall be eligible for the incentives, as listed in the **Table IX**.

Table IX: Incentives to units for better environmental performance

Category	Incentives
Red*	• CTO may be granted for the validity of max. 10 years. • Prescribed random environmental surveillance inspection frequency may be once a year, considering the change in category.
Orange*	• CTO may be granted for the validity of max. 15 years. • Prescribed random environmental surveillance inspection frequency may be once in two years, considering the change in category.
Green*	• CTO may be granted for the validity of max. 20 years. • Prescribed random environmental surveillance inspection frequency may be once in four years, considering the change in category and given incentives twice the original category.
Blue*	• CTO may be granted with additional 3 years validity period. • Prescribed random environmental surveillance inspection frequency may be once in 3 months.

In case of non-compliance(s) observed in future, the State Board can remove the star status and for calculation of EC, the PI of original category shall be considered.

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5 Implementation pathway/guidelines

The revised methodology and classification of sectors will be implemented in prospective manner. For this purpose, following guidelines may be referred:

i. All pending application for consideration of CTE/CTO and future such application shall be processed as per the revised methodology of classification. In case CTE granted before the revised classification, applicability of CTO will be as per new classification.

ii. New classification will be applicable to existing units at the time of renewal of CTO or within one year from the date of directions issued by CPCB regarding implementation of revised classification, whichever is earlier. The annual fees or cumulative fees for the remaining period shall be as per the revised category.

iii. SPCBs/PCCs may grant Consent to Operate (CTO) to units under red, orange, and green categories for maximum validity up to 5 years, 10 years, and 15 years, respectively as per existing provisions which would be later governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023/Water Act, as amended. SPCBs/PCCs may grant Consent to Operate (CTO) to units under Blue Category sectors with additional 2 years validity, considering their role as Essential Environmental Services for management of waste generated from domestic/household activities.

iv. Requirement of intimation/consent for white category of industries, shall be governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023//Water Act, as amended.

v. All sectors irrespective of category shall follow guidelines for pollution control, if any, issued by SPCB/PCC/CPCB time to time.

vi. Siting of units shall be only in the conforming area as per the guidelines of CPCB/SPCB/PCC. Further, as per the Section 17(1)(n) of the Water Act, 1974 and the Section 17(1)(h) of the Air Act, 1981, SPCB/PCC may also frame policies/advisory with respect to the location of any industry/operations, the carrying on of which is likely to cause air/water pollution, considering the scale/type of industries and sensitivity of area. Siting of units in eco-sensitive area will be governed by their respective notifications.

vii. The classification of sectors shall not be linked to sanction of loans/finance of bank proceedings.

viii. In the matter of Taz Trapezium Zone (TTZ), for air pollution scores of 10 and 20 (as per 2016 methodology), equivalent scores of 30 and 60 (as per 2025 methodology), respectively, may be considered for sectoral guidelines/opinion from NEERI (Ref: Order dated 08.12.2021, in the matter of M.C. Mehta v/s Union of India, Writ Petition (Civil) No.13381/1984, before Hon'ble Supreme Court).

ix. As per CPCB directions dated 12.12.2019, issued under Section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981, SPCBs/PCCs are required to ensure inspection of red, orange, and green category of industries at least once in six-months, one-year, and two-years, respectively. Common waste treatment facilities and 17 categories of industries are to be inspected at least once in every three-months. (Ref: Order dated 05.11.2019, in the matter of Shailesh Singh v/s State of Haryana & Ors., OA No.639/2018, before Hon'ble National Green Tribunal, Principal Bench).

x. The sectors which are classified under white or green category and if such sectors have installed Genset(s) of higher capacity which are classified under orange/green category, then such sector will be considered under higher category.

xi. All Industrial units are encouraged to adopt measures such as cleaner technology/cleaner production, cleaner raw material, cleaner fuel etc., for better environmental management. If such measures result into overall reduction of pollution

index, request regarding change in category of such sectors/units may be made to concerned SPCB/PCC as detailed under Section 8 of this report.

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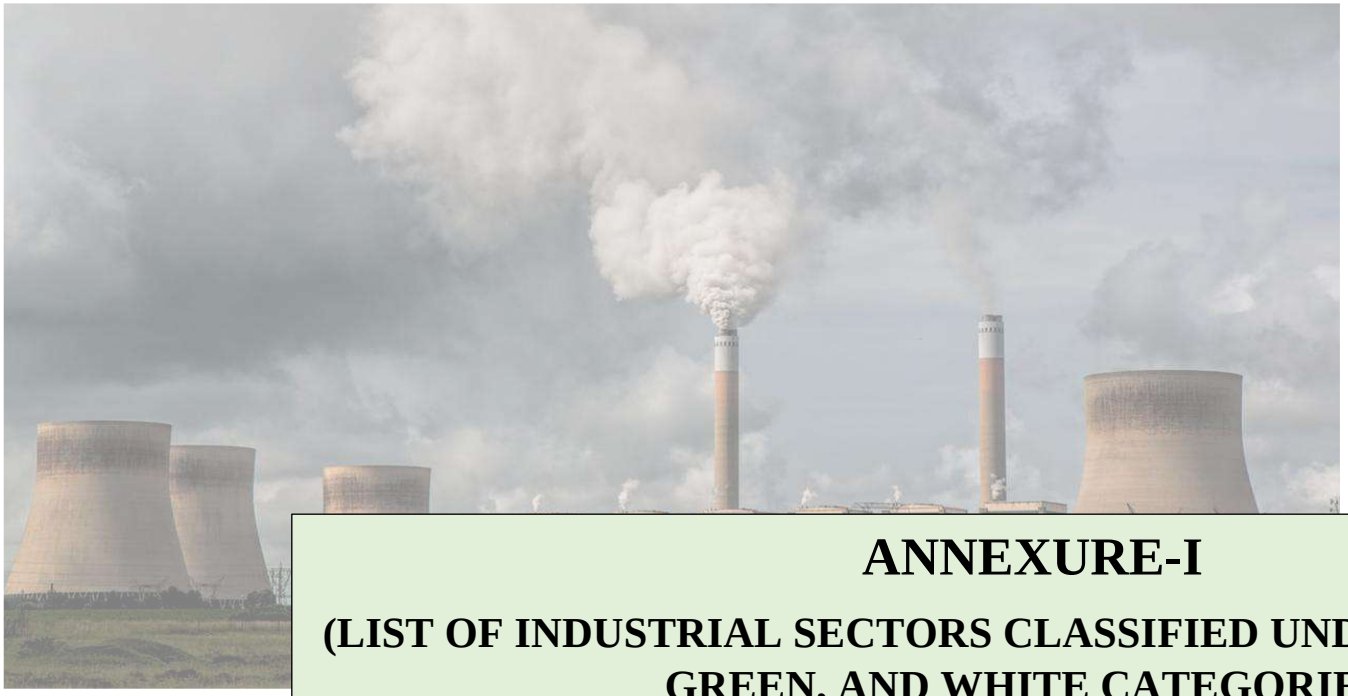
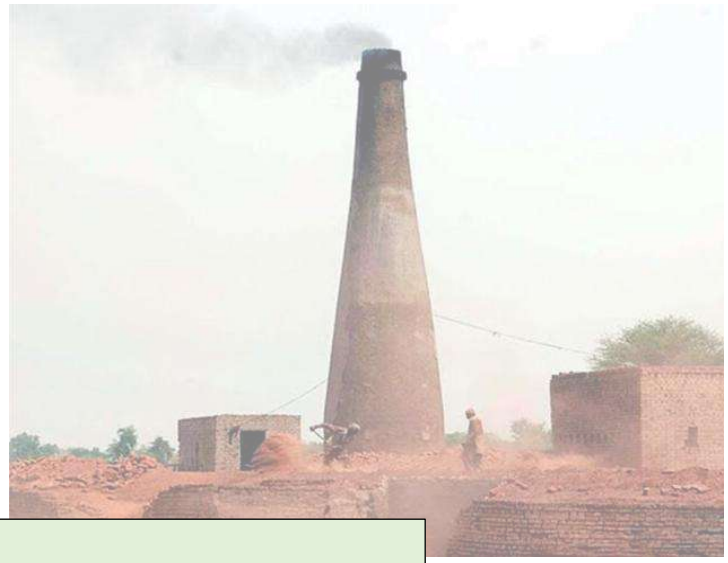




ANNEXURE-I

(LIST OF INDUSTRIAL SECTORS CLASSIFIED UNDER RED, ORANGE, GREEN, AND WHITE CATEGORIES)

LIST OF INDUSTRIAL SECTORS

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
	~A~															
1	Manufacturing of **Automobiles** (integrated facilities)	20	30	25	**75**	0	25	0	**25**	25	20	**45**	83.8	Red	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 or may have stand-alone units. In such cases, after thorough inspection of such units by concerned SPCB, re-categorization of the industry shall be made accordingly.	IPC-V
2	**Asbestos** and asbestos based industries	10	30	25	**65**	35	30	30	**95**	25	30	**55**	98	Red	Asbestos is carcinogenic and banned in many countries.	IPC-II
3	**Almirah**, Grill Manufacturing (Dry Mechanical Process)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
	~B~															
4.0	**BAKERY**, CONFECTIONERY AND SWEETS PRODUCTS															
4.1	Bakery, confectionery, sweets with production capacity ≥ 1 TPD	25	0	20	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
4.2	Bakery, confectionery, sweets with production capacity ≥ 1 TPD. (using cleaner/gaseous fuel)	25	0	20	**45**	25	0	10	**35**	0	0	**0**	54.6	Green		IPC-III
5.0	**BRICK** MANUFACTURING															
5.1	Brick kilns using coal as fuel	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
5.2	Brick kilns using biomass as fuel	0	0	0	**0**	25	25	15	**65**	0	0	**0**	65	Orange		IPC-V
5.3	Tunnel brick kilns (gas fired)	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
6.0	MANUFACTURING OF AUTOCLAVED AERATED CONCRETE (AAC) **BRICKS/BLOCKS.**															
6.1	AAC bricks/blocks manufacturing using coal as fuel (12 TPD and above)	0	0	0	**0**	25	25	30	**80**	0	0	**0**	80	Red		IPC-V
6.2	AAC bricks/blocks manufacturing using coal as fuel (less than 12 TPD)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
6.3	AAC bricks/blocks manufacturing using biomass as fuel	0	0	0	**0**	25	25	20	**70**	0	0	**0**	70	Orange		IPC-V
6.4	AAC bricks/blocks manufacturing using gas as fuel	0	0	0	**0**	25	25	15	**65**	0	0	**0**	65	Orange		IPC-V
7.0	FLY ASH **BRICKS / BLOCK** MANUFACTURING															
7.1	Fly ash bricks/ block manufacturing (with boiler)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
7.2	Fly ash bricks/ block manufacturing (without boiler)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
8.0	MANUFACTURING OF NON-ALCOHOLIC **BEVERAGES**															
8.1	Wastewater generation ≥ 100 KLD	25	20	30	**75**	25	0	25	**50**	0	0	**0**	81.3	Red		IPC-III
8.2	Wastewater generation < 100 KLD	25	20	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
9.0	**BATTERY** MANUFACTURING															
9.1	Lead-acid **Battery** manufacturing (excluding assembling and charging of lead acid **Battery** in micro-scale)	0	30	20	**50**	35	30	25	**90**	25	10	**35**	94.3	Red		IPC-V
9.2	Dry cell **Battery** (excluding manufacturing of electrodes) and assembling & charging of acid lead battery on micro scale	0	30	15	**45**	25	25	10	**60**	25	10	**35**	76	Orange		IPC-V
9.3	**Battery** manufacturing without boiler (excluding lead acid battery)	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		IPC-V
10	**Briquette** manufacturing (coal/biomass/coke)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green	The process involves mixing, mechanized compression and drying.	IPC-II
11	Assembly of **Bicycles** , **Baby** carriages and other small non motorizing vehicles	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
12	**Bailing** (hydraulic press) of waste papers	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
13	**Bio fertilizer** and bio-pesticides without using inorganic chemicals	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
14	**Block** making of printing without foundry (excluding wooden block making)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
15	Flavoured **Betel** nuts production/ grinding (completely dry mechanical operations)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
16	Manufacturing of shoe **Brush** and wire **Brush**	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
	~C~															
17.0	MANUFACTURING OF INDUSTRIAL **CARBON** INCLUDING ELECTRODES AND GRAPHITE BLOCKS, ACTIVATED **CARBON**, **CARBON BLACK**															
17.1	Carbon black manufacturing	20	15	20	**55**	25	30	30	**85**	30	20	**50**	92.9	Red		IPC-I
17.2	Industrial carbon including electrodes & graphite blocks and calcined pet coke	20	15	20	**55**	25	25	25	**75**	30	10	**40**	86.9	Red		IPC-II
17.3	Activated carbon manufacturing (with steam activation)	20	15	20	**55**	25	25	15	**65**	0	0	**0**	74.6	Orange		IPC-V
18.0	INORGANIC **CHEMICALS**															
18.1	Basic inorganic chemicals and electro chemicals and its derivatives including manufacturing of acid	10	30	25	**65**	30	30	20	**80**	20	20	**40**	90.5	Red		IPC-I
18.2	Phosphorous and its compounds, including phosphorous rock processing	20	30	20	**70**	35	25	10	**70**	10	30	**40**	86.5	Red		IPC-I
18.3	Chlorates, per-chlorates & peroxides	20	30	20	**70**	30	20	25	**75**	20	20	**40**	88.8	Red		IPC-I
18.4	Chlorine, fluorine, bromine, iodine, and their compounds	10	30	25	**65**	35	20	10	**65**	20	20	**40**	83.4	Red		IPC-I
19	Coke oven plant, coal liquefaction, coal tar distillation and fuel gas-making	30	30	30	**90**	25	30	35	**90**	25	50	**75**	98.3	Red		IPC-II
20.0	**CEMENT** PLANTS															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
20.1	With co-processing with CPP (Captive Power Plant)	20	25	35	**80**	35	30	35	**100**	10	50	**60**	100	Red		IPC-II
20.2	With co-processing without CPP	20	0	20	**40**	35	30	35	**100**	30	20	**50**	100	Red		IPC-II
20.3	Without co-processing with CPP	10	25	35	**70**	35	30	35	**100**	10	50	**60**	100	Red		IPC-II
20.4	Without co-processing without CPP	0	0	0	**0**	25	30	35	**90**	30	10	**40**	92	Red		IPC-II
20.5	Stand-alone grinding units with CPP	20	25	35	**80**	25	30	35	**90**	10	50	**60**	97	Red		IPC-II
20.6	Stand-alone grinding units without CPP	0	0	0	**0**	25	30	0	**55**	30	10	**40**	64	Orange		IPC-II
20.7	Bulk terminals for storage and packaging of cement	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-II
21.0	**CHLOR** ALKALI															
21.1	Chlor alkali	10	20	25	**55**	30	25	25	**80**	20	20	**40**	89.5	Red		IPC-I
21.2	Chlor alkali using washed salt	10	20	15	**45**	30	25	25	**80**	20	10	**30**	87.5	Red		IPC-I
21.3	Chlor alkali using cleaner/gaseous fuel	10	20	25	**55**	30	25	10	**65**	20	20	**40**	81.6	Red		IPC-I
21.4	Chlor alkali using cleaner/gaseous fuel and washed salt	10	20	15	**45**	30	25	10	**65**	20	10	**30**	78.1	Orange		IPC-I
22	Manufacturing of **Compact** disc **Computer** (CD/DVD) / cassette manufacturing / reel manufacturing	0	15	15	**30**	30	0	0	**30**	20	10	**30**	51	Green		IPC-V
23.0	MANUFACTURING OF **COIR/COIR** PITH AND **COIR** PRODUCTS															
23.1	Coir bleaching and dyeing/printing units	25	0	25	**50**	25	25	20	**70**	0	0	**0**	77.5	Orange		IPC-V
23.2	Coir fibre/pith processing units generating effluent	25	0	20	**45**	0	25	0	**25**	0	0	**0**	51.9	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
23.3	Coir fibre/pith processing and/or Manufacturing of coir products from coir (only dry process)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
24.0	**CERAMICS**															
24.1	Ceramics/ Glass /Earthen potteries and tile manufacturing using coal/oil fired kilns (fuel consumption: 12 TPD and above)	0	0	0	**0**	25	25	30	**80**	0	0	**0**	80	Red		IPC-V
24.2	Ceramics/ Glass /Earthen potteries and tile manufacturing using coal/oil fired kilns (fuel consumption: less than 12 TPD)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
24.3	Ceramics/ Glass /Earthen potteries and tile manufacturing (using gas fired kilns)/tunnel kiln	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
24.4	Ceramics/ Glass /Earthen potteries and tile manufacturing (using only electrical kiln)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
25	**Coal Washeries**	20	25	30	**75**	0	25	0	**25**	0	0	**0**	78.1	Orange		IPC-II
26	Liquid floor **Cleaner**, black phenyl, liquid soap, glycerol mono-stearate manufacturing	25	25	15	**65**	0	20	0	**20**	0	0	**0**	68.5	Orange		IPC-V
27	Phenyl/toilet **Cleaner** formulation and bottling	10	0	15	**25**	0	20	0	**20**	0	0	**0**	32.5	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
28	**Cashew** nut processing	20	0	15	**35**	25	20	15	**60**	0	0	**0**	67	Orange		IPC-III
29.0	**COFFEE** SEEDS PROCESSING INDUSTRY															
29.1	Coffee seeds processing (wet process)	35	0	20	**55**	25	0	15	**40**	0	0	**0**	64	Orange		IPC-III
29.2	Coffee seeds processing with eco-pulper	20	0	15	**35**	25	0	15	**40**	0	0	**0**	50.5	Green		IPC-III
30	Manufacturing of **Candy**	10	0	15	**25**	0	0	0	**0**	0	0	**0**	25	Green		IPC-V
31	**Cardboard** or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
32	Manufacturing of precast **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)	0	0	15	**15**	0	25	0	**25**	0	0	**0**	30.6	Green		IPC-V
33	Manufacturing of **Ceramic Colour** by mixing & blending only (not using boiler and wastewater recycling process)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
34.0	**CHILLING** PLANT, COLD STORAGE AND ICE-MAKING															
34.1	Chilling plant	20	15	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-IV
34.2	Cold storage	0	15	15	**30**	0	0	0	**0**	0	0	**0**	30	Green		IPC-V
34.3	Ice Making	0	20	15	**35**	0	0	0	**0**	0	0	**0**	35	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
35	Decoration of **Ceramic Cup**s and plates by electric furnace	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
36	Ready mix **Cement Concrete**	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
37	**CO2** recovery plant	0	0	0	**0**	0	0	0	**0**	20	10	**30**	30	Green	Exhausted molecular sieves are generated as hazardous waste.	IPC-V
38	Assembly of air **Coolers/Conditioners**, repairing and servicing	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
39	**Chalk** making from plaster of Paris (only casting without boilers etc.(sun drying / electrical oven)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
40	Standalone manufacturing of **Concrete** admixtures up to 1000 MT per Month capacity by physical mixing (without boiler and reactor and no generation of wastewater)	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White	The sector may become green category if it generates wastewater. The unit needs to be re-classified as per the methodology in case the capacity exceeds 1000 MT per Month.	IPC-V
41	Used **Cooking** oil (UCO) collection centers	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
								~D~								
42.0	**DYES, DYE** INTERMEDIATES AND PIGMENT PRODUCTIONS															
42.1	Dyes, Dye Intermediates and Pigments produced by chemical synthesis	35	30	25	**90**	30	20	25	**75**	30	20	**50**	96.3	Red		IPC-I
42.2	Natural Dye and Pigments requiring acidic/ alkaline/ solvent extraction	30	30	20	**80**	25	20	25	**70**	20	10	**30**	90	Red		IPC-I
42.3	Natural Dye and Pigments not require acidic/ alkaline/ solvent extraction	30	20	20	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-I
43.0	SYNTHETIC **DETERGENT** AND SOAPS															
43.1	Synthetic detergents and soaps (wastewater generation ≥ 100 KLD)	20	20	30	**70**	25	0	25	**50**	25	10	**35**	82.8	Red		IPC-I
43.2	Synthetic detergents and soaps (wastewater generation < 100 KLD)	20	20	25	**65**	25	0	25	**50**	25	10	**35**	79.9	Orange		IPC-I
43.3	Synthetic detergents and soaps (only formulation)	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-I
43.4	Soap manufacturing (handmade -without steam boiling / boiler)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	DISTILLERIES AND FERMENTATION SECTORS															
44.0	**DISTILLERIES** AND FERMENTATION INDUSTRIES															
44.1	Distillery (Molasses based)	35	25	35	**95**	25	25	35	**85**	0	0	**0**	97.1	Red		IPC-III
44.2	Distillery (Grain based)	35	25	30	**90**	25	25	25	**75**	0	0	**0**	93.8	Red		IPC-III
44.3	Distillery (Grain based) with Distiller's Dried Grains with Soluble (DDGS) as by-product	25	25	20	**70**	25	25	25	**75**	0	0	**0**	83.8	Red		IPC-III
44.4	Standalone yeast manufacturing units	35	25	35	**95**	25	20	25	**70**	0	0	**0**	96.8	Red		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
44.5	Breweries and malteries industry (with fermentation)- Wastewater generation ≥ 100 KLD	30	15	30	**75**	25	0	25	**50**	0	0	**0**	81.3	Red		IPC-III
44.6	Breweries and malteries industry (with fermentation)- Wastewater generation < 100 KLD	30	15	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III
44.7	Potable alcohol by blending, bottling of alcohol products	20	0	25	**45**	0	0	0	**0**	0	0	**0**	45	Green		IPC-III
45	**Diesel** pump repairing and servicing (complete mechanical dry process)	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White		IPC-V
~E~																
46	Manufacturing of **Explosives**, detonators, fuses, etc.	25	30	15	**70**	0	30	0	**30**	30	10	**40**	80.5	Red	Explosives manufacture contribute to release of hazardous pollutants, including generation of other toxic chemicals. Accident/safety hazard is also associated with such sector during manufacturing and usages.	IPC-I
47	Manufacturing of coated **Electrode**	0	15	15	**30**	0	25	0	**25**	0	0	**0**	38.8	Green	Process involves preparation of core wire / rod, preparation of dry mix, preparation of wet mix, application of coating by extrusion, baking of coated electrodes.	IPC-V
48	**Emery** powder (fine dust of sand) manufacturing	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green	Fugitive emissions from grinding operations.	IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
49	**Electric** lamp (bulb) and CFL manufacturing by assembling only	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
50	**Electrical** and electronic item assembling (completely dry process)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
51	**Engineering** and fabrication units (dry process without any heat treatment / metal surface finishing operations / painting)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~F~															
52.0	**FIBRE** GLASS (FIBRE REINFORCED PLASTIC) PRODUCTION															
52.1	Fibre glass (containing lead) production and processing (excluding moulding)	0	0	0	**0**	35	0	25	**60**	25	20	**45**	69	Orange		IPC-V
52.2	Fibre glass (without lead) production and processing (excluding moulding)	0	0	0	**0**	30	0	25	**55**	25	20	**45**	65.1	Orange	The use of styrene in most methods of fibre glass production causes hazardous air pollution that is harmful to breathe at excessive levels.	IPC-V
53	Manufacturing of **Firecrackers** including improved crackers/green crackers, etc.	0	0	0	**0**	35	30	0	**65**	30	10	**40**	72	Orange	Various hazardous chemicals are used in the manufacturing process. Accident/safety hazard is also associated with such sector during manufacturing and usages.	IPC-V
54.0	SYNTHETIC **FIBRES** MANUFACTURING															
54.1	Synthetic fibres-PSF & PFY, generated from petrochemical	35	30	35	**100**	30	25	35	**90**	30	20	**50**	100	Red		IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
54.2	Synthetic fibres including rayon, tyre cord, viscose filament yarn/staple fibre, acrylic fibres	25	20	25	**70**	30	20	25	**75**	20	10	**30**	87.5	Red		IPC-I
54.3	Synthetic fibres including rayon, tyre cord, viscose filament yarn/staple fibre, acrylic fibres using cleaner/gaseous fuel	25	20	25	**70**	30	20	10	**60**	20	10	**30**	83.5	Red		IPC-I
55.0	**FERTILIZERS** PRODUCTION															
55.1	Fertilizers (Urea)	10	30	35	**75**	30	30	20	**80**	20	30	**50**	92.5	Red		IPC-I
55.2	Fertilizers (Calcium Ammonium Nitrate/Ammonium Nitrate)	10	30	25	**65**	30	25	25	**80**	20	20	**40**	90.5	Red		IPC-I
55.3	Fertilizers (NPK)	10	30	25	**65**	30	25	25	**80**	20	20	**40**	90.5	Red		IPC-I
55.4	Fertilizers (Straight Phosphatic Fertilizers)	10	30	25	**65**	30	25	25	**80**	20	20	**40**	90.5	Red		IPC-I
55.5	Fertilizer (granulation /formulation / blending) generating wastewater through floor washings, cooling towers etc.	10	30	15	**55**	30	30	0	**60**	10	10	**20**	75	Orange		IPC-I
55.6	Fertilizer (granulation /formulation / blending) not generating wastewater	0	0	0	**0**	30	30	0	**60**	10	10	**20**	64	Orange		IPC-I
56.0	**FOOD** AND **FOOD PROCESSING** INCLUDING FRUITS AND VEGETABLE PROCESSING															
56.1	Wastewater generation ≥ 10 KLD	25	0	25	**50**	25	0	25	**50**	0	0	**0**	62.5	Orange		IPC-III
56.2	Wastewater generation < 10 KLD (without boiler)	25	0	15	**40**	0	0	0	**0**	0	0	**0**	40	Green		IPC-III
57.0	**FISH** FEED, POULTRY FEED AND CATTLE FEED															
57.1	Fish feed, poultry feed and cattle feed (with boiler)	0	20	15	**35**	25	25	25	**75**	0	0	**0**	79.4	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
57.2	Fish feed, poultry feed and cattle feed (without boiler)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
58	**Fish** processing and packing (excluding chilling of fishes)	25	25	20	**70**	0	20	0	**20**	0	0	**0**	73	Orange		IPC-IV
59.0	MANUFACTURING OF MODULAR WOODEN **FURNITURE**															
59.1	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)	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
59.2	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 (Without boiler)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
60.0	CARPENTRY & WOODEN **FURNITURE** MANUFACTURING															
60.1	Carpentry & wooden furniture manufacturing with spray painting (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
60.2	Carpentry & wooden furniture manufacturing without spray painting (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
61	**Foam** manufacturing	0	0	0	**0**	35	0	0	**35**	20	10	**30**	44.8	Green	Emissions of VOCs and HAPs. Raw materials are polyurethane, latex etc.	IPC-V
62	**Flour** mills (dry process)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green	Separate classification for domestic flour mills may not require.	IPC-V
63.0	STEEL **FURNITURE** INDUSTRY (Obnoxious gases from welding.)															
63.1	Steel furniture with spray painting	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
63.2	Steel furniture without spray painting	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~G~															
64.0	MANUFACTURING OF **GLUE** AND **GELATIN**															
64.1	Manufacturing of glue and gelatin using coal/liquid fuel	25	20	15	**60**	25	20	25	**70**	10	10	**20**	82	Red		IPC-I
64.2	Manufacturing of glue and gelatin by using biomass/cleaner fuel	25	20	15	**60**	25	20	15	**60**	10	10	**20**	76	Orange		IPC-I
65.0	MANUFACTURING OF **GLASS** (INCLUDING PRINTING OR ETCHING OF **GLASS** SHEET USING HYDROFLUORIC ACID)															
65.1	Manufacturing of glass (Oil/coal fired)	0	15	15	**30**	25	25	25	**75**	0	0	**0**	78.8	Orange		IPC-V
65.2	Manufacturing of glass (gas fired)	0	15	15	**30**	25	25	10	**60**	0	0	**0**	66	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
66	Producer **Gas** plant using conventional coal **Gasification**	20	25	15	**60**	25	0	25	**50**	30	10	**40**	78	Orange		IPC-V
67.0	COMPRESSED **BIOGAS** (CBG)/BIO-CNG PLANTS															
67.1	CBG plants based on Municipal Solid Waste (MSW) as feed	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82	Red		UPC-II
67.2	CBG plants based on process waste (industrial/ process liquid effluent & solid waste like press mud, organic sludge, molasses, etc.) as feed	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82	Red		IPC-III
67.3	CBG plants based on crop residue (paddy straw /wheat straw /corn sweet sorghum/ Napier grass, etc.) as feed	30	25	20	**75**	0	20	0	**20**	0	0	**0**	77.5	Orange		IPC-III
67.4	CBG plants based on animal waste (dairy farms, poultry farms, and other animal waste) as feed	30	25	20	**75**	0	20	0	**20**	0	0	**0**	77.5	Orange		IPC-III
67.5	CBG plants producing Fermented Organic Manure (FOM) & Liquid Fermented Organic Manure (LFOM) as by-products	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White	CBG plants producing FOM & LFOM as by-products in conformity with requirements of Gazette Notification No. 2051 dated 14.07.2020 & No. 1972 dated 01.06.2021, respectively, and utilizing entire FOM & LFOM as a fertilizer or manure on land and also not discharging any waste-water, to be considered under White category, subject to verification by SPCB on case-to-case basis.	IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
68.0	STANDALONE PRODUCTION OF **HYDROGEN** AND/OR **AMMONIA** (WITHOUT CAPTIVE POWER PLANT USING FOSSIL FUEL)															
68.1	Integrated unit for production of Ammonia through Hydrogen generated by pyrolysis/gasification	20	25	20	**65**	20	25	25	**70**	30	20	**50**	87.3	Red	i. Pyrolysis of biomass will generate syn gas and other condensable gases having hydrocarbons and other impurities. ii. Purification of gas will generate wastewater having high organic content and tarry residue as hazardous waste. iii. The process will generate fugitive emissions and due to pyrolysis operation.	IPC-I
68.2	Integrated unit for production of ammonia through Hydrogen generated by electrolysis using renewable energy (capacity ≥ 15 TPD)	10	25	35	**70**	0	20	0	**20**	30	20	**50**	80.5	Red	i. Ammonia manufacturing process (Haber process) and associated safety hazards remain same as per the chemical properties of ammonia. ii. Wastewater generation due to the production of hydrogen through electrolysis and condensation of ammonia, other scrubbed liquid etc. iii.Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
68.3	Integrated unit for production of Ammonia through hydrogen generated by electrolysis using renewable energy (Capacity < 15 TPD)	10	25	20	**55**	0	20	0	**20**	30	10	**40**	68.5	Orange	i. Ammonia manufacturing process (Haber process) and associated safety hazards remains same as per the chemical properties of ammonia. ii. Wastewater generation due to production of hydrogen through electrolysis and condensation of ammonia, other scrubbed liquid etc. iii.Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I
68.4	Hydrogen production through pyrolysis/gasification	20	25	20	**65**	20	25	25	**70**	30	10	**40**	85.8	Red	i. Pyrolysis of biomass will generate syn gas and other condensable gases having hydrocarbons and other impurities. ii. Purification of gas will generate wastewater having high organic content and tarry residue as hazardous waste. iii.The process will generate fugitive emissions and due to pyrolysis operation.	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
68.5	Hydrogen production through electrolysis using raw/seawater and renewable energy (capacity ≥ 2.5 TPD)	0	20	35	**55**	0	0	0	**0**	30	10	**40**	64.0	Orange	i. Type of electrolysers may include Alkaline Water Electrolyser (AWE), Proton Exchange Membrane (PEM), Solid Oxide Electrolyser Cell (SOEC) and Anion Exchange Membrane (AEM), etc. ii. Generation of DM reject, cooling tower blowdown, draining of alkaline/electrolyser water during maintenance, etc. as wastewater. iii. Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I
68.6	Hydrogen production through electrolysis using raw/sea water and renewable energy (capacity < 2.5 TPD)	0	20	20	**40**	0	0	0	**0**	30	10	**40**	52.0	Green	i. Type of electrolysers may include Alkaline Water Electrolyser (AWE), Proton Exchange Membrane (PEM), Solid Oxide Electrolyser Cell (SOEC) and Anion Exchange Membrane (AEM), etc. ii. Generation of DM reject, cooling tower blowdown, draining of alkaline/electrolyser water during maintenance, etc. as wastewater. iii. Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I
68.7	Hydrogen production through electrolysis (using	0	0	0	**0**	0	0	0	**0**	0	10	**10**	10.0	White	i. DM water as feed water for electrolyser and cooling/chilling	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
	renewable energy) on BOO/BOOT/BOT, mode etc., located in the premises of end user industry and directly using de-mineralized water & other utilities (cooling tower, ETP, etc.) sourced from end user industry														water requirement to be met by the end user industry. ii. Wastewater and other waste generated during O&M shall also be managed by the end user industry.	
69	**Glue** from starch (physical mixing) with Gas/ electrically operated oven /boiler.	0	0	0	**0**	25	0	10	**35**	0	0	**0**	35	Green		IPC-V
70	**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)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
71	Compressed oxygen **Gas** from crude liquid oxygen (without use of any solvents and by maintaining pressure & temperature only for separation of other **Gases**)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
72	**Glass** and ampules and vials making from **Glass** tubes	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
73	**Ground** nut decorticating	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
74	**Medical Oxygen**	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White	The sector may become green category if it generates wastewater	IPC-V
	~H~															
75.0	**HOT** MIX PLANTS															
75.1	Hot mix plants using oil as fuel	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
75.2	Hot mix plants using gaseous as fuel	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
76	**Hazardous** waste pre-processing/processing facility including spent acid processing, spent solvent recovery, etc.	25	30	15	**70**	25	25	15	**65**	30	20	**50**	87.3	Red		WM-II
77	**Handloom**/ carpet weaving (without dying and bleaching operation)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~I~															
78	**Ice** cream manufacturing units	25	25	20	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-IV
79	Printing **Ink** Manufacturing	20	30	15	**65**	0	20	10	**30**	30	10	**40**	77.3	Orange	In the process pigments, binders and solvents are used. VOCs are generated.	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
80	Manufacturing of scientific and mathematical **Instrument** (assembling only)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
~J~																
81.0	**JUTE** PROCESSING															
81.1	Jute processing (with dyeing / with boiler)	25	20	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III
81.2	Jute processing (without dyeing / without boiler)	20	0	20	**40**	0	0	0	**0**	0	0	**0**	40	Green		IPC-III
81.3	Manufacturing of products from jute (without dyeing/ without boiler)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-III
~L~																
82	**Lime** manufacturing (using lime kiln)	0	0	0	**0**	25	0	30	**55**	0	0	**0**	55	Orange		IPC-V
83	**Leather** foot wear and **Leather** products (excluding tanning and hide processing)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White	Fumes due to use of adhesives / gums.	IPC-IV
84	Manufacturing of optical **Lenses** (using electrical furnace)	0	20	15	**35**	0	0	0	**0**	0	0	**0**	35	Green		IPC-V
85	**Leather** cutting and stitching (more than 10 machine and using motor)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
~M~																

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
86	**Mobile** towers using genset(s)	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green	i. The used oil/waste oil generated during repair and maintenance need to be disposed through authorized hazardous waste recycler by service provider/OEM. ii. Order dated 24.08.2017 in the related matter with OA No. 83(THC) OF 2012 (Bharti Infratel Ltd.) may be referred for issuance of composite consent in case of mobile towers.	UPC-I
87.0	**MILK** PROCESSES AND DAIRY PRODUCTS															
87.1	Milk processes and dairy products (integrated project)	30	25	30	**85**	25	20	30	**75**	0	0	**0**	90.6	Red		IPC-IV
87.2	Dairy and dairy products (Small scale units), using coal/biomass as fuel (Wastewater generation ≥ 100 KLD)	25	25	30	**80**	25	0	25	**50**	0	0	**0**	85	Red		IPC-IV
87.3	Dairy and dairy products (Small scale units), using coal/biomass as fuel (Wastewater generation < 100 KLD)	25	25	20	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-IV
87.4	Dairy and dairy products, (Small scale units), using PNG as fuel	25	25	20	**70**	0	0	10	**10**	0	0	**0**	71.5	Orange		IPC-IV
88.0	**MINING** AND ORE BENEFICIATION															
88.1	Open-cast coal mining	10	25	35	**70**	25	30	35	**90**	10	70	**80**	97.5	Red		IPC-II
88.2	Underground coal mining	0	25	35	**60**	25	30	35	**90**	0	0	**0**	93	Red		IPC-II
88.3	Mining of major minerals and ore beneficiation	20	30	35	**85**	25	30	35	**90**	25	70	**95**	99.4	Red	Includes captive limestone mining.	IPC-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
88.4	Mining of minor minerals (except Sand/riverbed material mining)	10	0	20	**30**	25	25	25	**75**	0	0	**0**	78.8	Orange		IPC-II
88.5	Grinding, processing, and screening of minor minerals	0	0	0	**0**	25	30	0	**55**	0	0	**0**	55	Orange		IPC-II
89	Manufacturing of **Mirror** from sheet glass	0	0	0	**0**	30	20	0	**50**	25	10	**35**	58.8	Orange		IPC-V
90	**Mineral** processing, industries involving ore sintering, pelletisating, grinding & pulverization	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-II
91	**Malteries** (without fermentation)	30	15	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III
92	Manufacturing of **Mosquito** repellent & coil	0	0	0	**0**	30	0	25	**55**	0	0	**0**	55	Orange	Toxic fumes may be released.	IPC-V
93	Organic **Manure** (physical mixing)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
94	Packing of powdered **Milk**	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
METALS AND METALLURGICAL SECTORS																
95.0	**IRON & STEEL** (PRIMARY PROCESSING FROM ORE, INTEGRATED STEEL PLANTS AND SPONGE IRON UNITS)															
95.1	Integrated iron and steel plants	25	30	35	**90**	25	30	35	**90**	25	50	**75**	98.3	Red		IPC-II
95.2	Stand-alone sintering/palletisation	0	0	0	**0**	25	30	35	**90**	0	0	**0**	90	Red		IPC-II
95.3	Sponge iron with CPP (Captive Power Plant)	20	25	35	**80**	25	30	35	**90**	10	50	**60**	97	Red		IPC-II
95.4	Sponge iron without CPP	20	15	30	**65**	25	30	35	**90**	10	50	**60**	96.3	Red		IPC-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
95.5	Stand-alone coke oven gas plants	25	30	30	**85**	25	30	35	**90**	25	50	**75**	98	Red		IPC-II
96.0	**ALUMINIUM** PROCESSING															
96.1	Aluminium Refinery	10	30	35	**75**	25	25	35	**85**	10	70	**80**	96.6	Red		IPC-II
96.2	Aluminium Smelter	10	30	35	**75**	30	25	35	**90**	25	70	**95**	99.1	Red		IPC-II
97	**Copper Smelter**	10	30	35	**75**	30	25	35	**90**	10	70	**80**	97.8	Red		IPC-II
98	**Zinc smelter**	10	30	35	**75**	30	25	35	**90**	10	70	**80**	97.8	Red		IPC-II
99.0	**FERROUS AND NON-FERROUS METAL** SECONDARY PROCESSING/REPROCESSING UNITS INVOLVING DIFFERENT FURNACES THROUGH MELTING, REFINING, CASTING, ALLOY-MAKING															
99.1	All Ferrous and Non-ferrous metal secondary processing/reprocessing units involving different furnaces through melting, refining, casting, alloy-making (using coal/liquid fuels)	0	15	15	**30**	25	25	25	**75**	25	10	**35**	83.1	Red		IPC-V
99.2	Ferrous and Non-ferrous metal (excluding lead, nickel, and manganese) secondary processing/reprocessing units involving different furnaces through melting, refining, casting, alloy-making (using cleaner fuels/electricity)	0	15	15	**30**	25	25	10	**60**	10	10	**20**	70	Orange		IPC-V
100	Aluminium & copper extraction from scrap using an oil-fired furnace (dry process only)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
101.0	INDUSTRY OR PROCESS INVOLVING **METAL** SURFACE TREATMENT OR PROCESS/HEAT TREATMENT															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
101.1	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	25	30	20	**75**	30	25	0	**55**	25	30	**55**	88.8	Red		IPC-V
101.2	Plasma electrolytic polishing (electroplating)	25	30	15	**70**	30	25	0	**55**	0	0	**0**	78.3	Orange		IPC-V
101.3	Heat treatment using furnace (without cyaniding)	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-V
101.4	Heat treatment with any of the new technology like ultrasound probe, induction hardening, ionization beam, gas carburizing etc.	0	15	15	**30**	0	25	0	**25**	0	0	**0**	38.8	Green		IPC-V
102.0	FORGING OF **FERROUS AND NON- FERROUS METALS**															
102.1	Forging of ferrous and non-ferrous metals using liquid fuel	0	0	0	**0**	25	25	20	**70**	30	10	**40**	76	Orange		IPC-V
102.2	Forging of ferrous and non-ferrous metals using gaseous fuel	0	0	0	**0**	25	25	10	**60**	30	10	**40**	68	Orange		IPC-V
102.3	Forging of ferrous and non-ferrous metals using electricity	0	0	0	**0**	25	25	0	**50**	30	10	**40**	60	Orange		IPC-V
102.4	Forging of ferrous and non-ferrous metals (cold forging, without any heat treatment)	0	0	0	**0**	0	0	0	**0**	30	10	**40**	40	Green		IPC-V
103.0	ROLLING **MILLS**															
103.1	Rolling and pickling	25	30	15	**70**	25	30	25	**80**	25	10	**35**	90.5	Red		IPC-V
103.2	Rolling mills (oil and coal fired)	0	15	15	**30**	25	0	25	**50**	0	0	**0**	57.5	Orange		IPC-V
103.3	Rolling mills (gas fired)	0	15	15	**30**	25	0	10	**35**	0	0	**0**	44.8	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
103.4	Cold rolling mill (without heat treatment)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
104.0	**FOUNDRY OPERATIONS**															
104.1	Cupola furnace	**0**	**0**	**0**	**0**	25	25	25	**75**	10	10	20	77.5	Orange		IPC-V
104.2	Induction furnace/arc furnace	0	0	0	**0**	25	30	0	**55**	10	10	**20**	59.5	Orange		IPC-V
105.0	**WIRE** DRAWING AND **WIRE** NETTING															
105.1	Wire drawing and wire netting (with pickling)	25	30	15	**70**	30	25	0	**55**	10	10	**20**	81.3	Red		IPC-V
105.2	Wire drawing and wire netting (without pickling and with heat treatment)	0	0	0	**0**	25	0	20	**45**	10	10	**20**	50.5	Green		IPC-V
105.3	Wire drawing and wire netting (without pickling and without heat treatment)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
106	**Die-casting** /extrusion process only	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-V
107	Manufacturing of aluminium utensils from aluminium circles pressing/ Brass and bell **Metal** utensils manufacturing from circles (dry mechanical operation only)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green	Emissions during buffing	IPC-V
108	Manufacturing of **Metal** caps containers etc	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
~N~																
109	Formulation/palletisation of camphor tablets, **Naphthalene** balls from camphor/ naphthalene powders.	0	0	0	**0**	35	20	0	**55**	0	0	**0**	55	Orange	Emissions of benzene, hydrocarbons etc. are expected.	IPC-V
110	Organic and inorganic **Nutrients** by physical mixing (without boiler and without any reactor)	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White	The sector may become green category if it generates wastewater	IPC-V
111.0	**ORGANIC** CHEMICALS INCLUDING HALOGENATED HYDROCARBONS															
111.1	Organic chemicals including halogenated hydrocarbons (using solid/liquid fuel)	30	30	25	**85**	35	0	30	**65**	30	20	**50**	93.6	Red		IPC-I
111.2	Organic chemicals including halogenated hydrocarbons (using cleaner fuel)	30	30	25	**85**	35	0	10	**45**	30	20	**50**	92.1	Red		IPC-I
112	**Oil** and gas extraction (offshore & onshore extraction through drilling wells), Coal Bed Methane (CBM) drilling and shale gas, including group gathering stations (GGS), etc.	25	30	15	**70**	20	25	0	**45**	30	10	**40**	82.8	Red		IPC-I
113.0	EDIBLE **OIL** MILLS															
113.1	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils	25	25	20	**70**	25	0	20	**45**	0	0	**0**	76.8	Orange		IPC-III
113.2	Oil mills Ghani and extraction without boiler (no refining/ hydrogenation)	10	25	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
	~P~															
114.0	**POWER** GENERATION PLANTS															
114.1	Power plants based on coal	0	15	35	**50**	35	25	35	**95**	10	70	**80**	98.3	Red		IPC-II
114.2	Power plants based on liquid fuels	0	15	35	**50**	25	25	35	**85**	30	20	**50**	92.5	Red		IPC-II
114.3	Biomass-based power plants	0	15	30	**45**	25	25	25	**75**	10	50	**60**	88.1	Red		IPC-II
114.4	Nuclear energy-based power plants (> 220 MW)	0	30	35	**65**	25	0	25	**50**	25	20	**45**	81.6	Red	Overall safety aspects related with radioactivity is regulated by Atomic Energy Regulatory Board (AERB).	IPC-II
114.5	Nuclear energy-based power plants (up to 220 MW)	0	30	35	**65**	25	0	25	**50**	25	10	**35**	79.9	Orange	Overall safety aspects related with radioactivity is regulated by Atomic Energy Regulatory Board (AERB).	IPC-II
114.6	Gas-based power plants	0	15	35	**50**	25	0	20	**45**	0	0	**0**	61.3	Orange		IPC-II
115.0	**PULP & PAPER** (AGRO & WOOD)															
115.1	Manufacturing of bleached chemical pulp, papers, and paperboards	30	30	35	**95**	30	0	35	**65**	30	30	**60**	98.1	Red		IPC-III
115.2	Unbleached or Totally Chlorine Free (TCF) bleaching for manufacturing of chemical pulp, papers, and paperboards	30	20	35	**85**	30	0	35	**65**	10	30	**40**	92.9	Red		IPC-III
115.3	Bleached grades of chemical pulp, paper, and paperboard having Totally Chlorine Free (TCF) bleaching	30	20	35	**85**	30	0	35	**65**	10	30	**40**	92.9	Red		IPC-III
116.0	**PULP AND PAPER** (RECYCLED FIBRE/WASTE PAPER BASED)															
116.1	Pulp & Paper (With bleaching)	30	15	35	**80**	25	0	25	**50**	10	30	**40**	89	Red		IPC-III
116.2	Pulp & Paper (Without bleaching, capacity ≥15 TPD)	25	15	35	**75**	25	0	25	**50**	10	30	**40**	86.3	Red		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
116.3	Pulp & Paper (Without bleaching; plant capacity <15 TPD)	25	15	20	**60**	25	0	25	**50**	10	10	**20**	74	Orange		IPC-III
117.0	MANUFACTURING OF **PAINTS**, VARNISHES (The process may cause considerable emissions of volatile organic compounds (VOC).)															
117.1	Manufacturing of solvent-based paints/varnish	35	30	20	**85**	25	20	25	**70**	25	30	**55**	94.4	Red		IPC-I
117.2	Manufacturing of water-based paints	25	30	20	**75**	25	20	25	**70**	20	20	**40**	88.8	Red		IPC-I
117.3	Manufacturing of powder coatings	0	15	15	**30**	20	30	25	**75**	10	20	**30**	82.5	Red		IPC-I
117.4	Manufacturing of paint and varnishes (only blending and mixing)	20	30	15	**65**	0	20	0	**20**	30	20	**50**	77.3	Orange		IPC-I
118.0	**PESTICIDE** INDUSTRIES															
118.1	Pesticide technical (organic chemicals based)	30	30	20	**80**	30	25	25	**80**	30	30	**60**	94	Red		IPC-I
118.2	Pesticide technical (inorganic chemicals based like Zinc Phosphide and Aluminium Phosphide)	20	30	20	**70**	30	25	25	**80**	20	20	**40**	91	Red		IPC-I
118.3	Pesticide formulation industries (Liquid formulation only) having boiler/thermopack	20	30	20	**70**	25	20	25	**70**	20	20	**40**	86.5	Red		IPC-I
118.4	Pesticide formulation industries (Liquid formulation only) without having boiler/thermopack	20	30	20	**70**	0	20	0	**20**	20	20	**40**	79	Orange	Considering that dry formulation industries can also generate effluent because of equipment cleaning, the water pollution score is given	IPC-I
118.5	Pesticide formulation industries (having both liquid and dry formulation or dry formulation only) without having boiler / thermopack	20	30	20	**70**	30	20	0	**50**	20	20	**40**	83.5	Red	Considering that dry formulation industries can also generate effluent because of equipment cleaning, the water pollution score is given	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
118.6	Pesticide formulation industries (having both liquid and dry formulation or dry formulation only) having boiler / thermopack	20	30	20	**70**	30	20	25	**75**	20	20	**40**	88.8	Red	Considering that dry formulation industries can also generate effluent because of equipment cleaning, the water pollution score is given	IPC-I
119	**Photographic** film and its chemicals	20	20	15	**55**	30	0	25	**55**	20	10	**30**	74.1	Orange	Silver salts and other chemicals are used	IPC-I
120	**Petroleum** oil refineries	35	30	30	**95**	35	20	35	**90**	20	20	**40**	98.3	Red		IPC-I
121.0	**PETROCHEMICALS**															
121.1	Petrochemicals (Naphtha cracker.)	30	30	30	**90**	35	25	35	**95**	30	20	**50**	98.5	Red		IPC-I
121.2	Petrochemicals (Gas cracker)	30	30	30	**90**	35	25	25	**85**	30	20	**50**	96.8	Red		IPC-I
121.3	Petrochemicals (without cracker)	25	30	20	**75**	25	25	15	**65**	20	20	**40**	88.1	Red		IPC-I
121.4	Petrochemicals (without cracker and using cleaner/gaseous fuel)	25	30	20	**75**	25	25	10	**60**	20	20	**40**	87.5	Red		IPC-I
122.0	MANUFACTURING OF LUBRICATING OILS, GREASE AND **PETROLEUM**-BASED PRODUCTS															
122.1	Manufacturing of lubricating oils, grease, and petroleum-based products	20	15	15	**50**	25	20	10	**55**	30	10	**40**	75.3	Orange	Such unit uses distillation columns/ boilers etc	IPC-I
122.2	Manufacturing of lubricating oils, grease, and petroleum-based products (only blending)	0	0	0	**0**	0	25	0	**25**	10	10	**20**	32.5	Green		IPC-I
123.0	**PHARMACEUTICAL** INDUSTRY															
123.1	Pharmaceuticals manufacturing	35	30	30	**95**	35	25	35	**95**	30	20	**50**	98.6	Red		IPC-I
123.2	Pharmaceuticals manufacturing using cleaner/gaseous fuel	35	30	30	**95**	35	25	10	**70**	30	20	**50**	98	Red		IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
123.3	Pharmaceuticals (Formulation)	20	15	15	**50**	25	0	25	**50**	30	10	**40**	72.5	Orange		IPC-I
123.4	Pharmaceuticals (Formulation) using cleaner/gaseous fuel	20	15	15	**50**	25	0	10	**35**	30	10	**40**	68.8	Orange		IPC-I
123.5	Vaccine manufacturing	20	15	15	**50**	25	0	35	**60**	30	10	**40**	78	Orange		IPC-I
123.6	Vaccine manufacturing using cleaner/gaseous fuel	20	15	15	**50**	25	0	10	**35**	30	10	**40**	68.8	Orange		IPC-I
123.7	Pharmaceutical R&D facilities	20	15	15	**50**	25	0	25	**50**	30	10	**40**	72.5	Orange		IPC-I
123.8	Ayurvedic or Unani medicines manufacturing	20	15	15	**50**	25	0	25	**50**	30	10	**40**	72.5	Orange		IPC-I
123.9	Ayurvedic or unani medicines manufacturing using cleaner fuel	20	15	15	**50**	25	0	10	**35**	0	0	**0**	58.8	Orange		IPC-I
123.10	Ayurvedic or unani medicines manufacturing (Without boiler)	20	15	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-I
124	Digital **Printing** on flex /vinyl, PVC etc. (more than 5 machines)	0	0	0	**0**	20	0	0	**20**	30	10	**40**	46	Green		IPC-V
125	Spray **Painting**, Paint baking, Paint shipping	0	0	0	**0**	0	25	0	**25**	30	10	**40**	47.5	Green	Emissions in the form of VOCs and HC are generated.	IPC-V
126	**Plywood**/board manufacturing (including Veneer and laminate) with biomass fired boiler / thermic fluid heater (without resin plant)	20	20	15	**55**	25	20	25	**70**	0	0	**0**	78.3	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
127	**Printing** press (newspaper, books, magazines, etc./ Gravure printing	20	0	15	**35**	20	0	0	**20**	30	10	**40**	56.5	Orange		IPC-V
128	Manufacturing of bi-axially oriented **Polypropylene** (PP) film along with metalizing operations	0	15	15	**30**	0	0	0	**0**	0	0	**0**	30	Green	Mainly extrusion process involving	IPC-V
129	**Pulse**/Dal Mills	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
130	Insulation and other coated **Papers** (excluding paper or pipe manufacturing)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
131	**Packaging** materials manufacturing from non-asbestos fibre, vegetable fibre yarn	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
132	**Polythene** and plastic processed products manufacturing (virgin/compostable plastic)	0	15	15	**30**	0	20	0	**20**	0	0	**0**	37	Green		IPC-V
133	**Poultry**, piggery, and hatchery	0	0	0	**0**	30	20	0	**50**	0	0	**0**	50	Green		IPC-V
134	**Puffed** rice (muri) (using gas)	0	0	0	**0**	25	0	10	**35**	0	0	**0**	35	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
135	Biscuits trays etc from rolled **PVC** sheet (using automatic vacuum forming machines)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
136	Fountain **Pen** manufacturing by assembling only	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
137	Glass **Putty** and sealant (by mixing with machine only)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
138	Manufacturing of **Paper** Pins, U-clips, etc.	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
139	Solar **Power** generation through solar photovoltaic cell and wind power	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~R~															
140	Synthetic **Rubber** excluding molding	20	15	15	**50**	20	0	25	**45**	20	10	**30**	68.8	Orange	Most synthetic rubber is created from two materials, styrene, and butadiene.	IPC-I
141.0	**REFRACTORIES**															
141.1	Refractories based on coal/liquid fuel (fuel consumption: 12 TPD and above)	0	0	0	**0**	25	25	30	**80**	0	0	**0**	80	Red		IPC-V
141.2	Refractories based on coal/liquid fuel (fuel consumption: less than 12 TPD)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
141.3	Refractories based on cleaner fuels	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
142.0	**RUBBER** PRODUCTS MANUFACTURING															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
142.1	Tyre and tube manufacturing	0	15	15	**30**	25	25	25	**75**	0	0	**0**	78.8	Orange		IPC-V
142.2	Tyres and tubes vulcanization/ hot retreading	0	15	15	**30**	25	20	10	**55**	0	0	**0**	61.8	Orange	Emissions of PM, VOCs and obnoxious odour are generated.	IPC-V
142.3	Rubber goods industry (with solid fuel/oil-based boiler)	0	15	15	**30**	25	0	25	**50**	0	0	**0**	57.5	Orange		IPC-V
142.4	Rubber goods industry (with gas-based boiler)	0	15	15	**30**	25	0	10	**35**	0	0	**0**	44.8	Green		IPC-V
143.0	SYNTHETIC **RESINS**															
143.1	Synthetic resins manufacturing	20	15	15	**50**	25	20	25	**70**	20	10	**30**	82	Red		IPC-I
143.2	Synthetic resins manufacturing (using only gaseous fuel)	20	15	15	**50**	25	20	10	**55**	20	10	**30**	73	Orange		IPC-I
144	Blending of melamine **Resins** & different powder, additives by physical mixing, including phenolic resin (without boiler)	0	15	15	**30**	0	30	0	**30**	20	10	**30**	51	Green		IPC-I
145.0	**RICE** MILLS															
145.1	Parboiled rice mill (with soaking and steam/drier)	25	0	20	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange		IPC-V
145.2	Raw rice mill (Without soaking and steam/drier)/ hullers)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
146	**Repairing** of electric motors and generators (dry mechanical process)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
147	Manufacturing of plastic or cotton **Rope**	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
148	Tyre **Retraders**	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		WM-III
RECYCLING AND REPROCESSING SECTOR																
149.0	INDUSTRIES ENGAGED IN **RECYCLING/REPROCESSING/ RECOVERY/REUSE** OF HAZARDOUS WASTE UNDER SCHEDULE IV OF H&OW(M & TBM) RULES, 2016 - ITEMS, NAMELY, SPENT CATALYSTS CONTAINING NICKEL, CADMIUM, ZINC, COPPER, ARSENIC, VANADIUM, AND COBALT, INCLUDING DRY BATTERY (EXCEPT LEAD), AND CLEARED METAL CATALYST.															
149.1	Hydro & pyro metallurgy	0	30	15	**45**	35	25	25	**85**	25	10	**35**	91	Red		WM-II
149.2	Hydro & pyro metallurgy (using cleaner/gaseous fuels & without crushing of materials)	0	30	15	**45**	35	25	10	**70**	25	10	**35**	82	Red		WM-II
149.3	Pyro metallurgy (using coal/liquid fuels)	0	0	0	**0**	35	25	25	**85**	20	10	**30**	87.3	Red		WM-II
149.4	Pyro metallurgy (using cleaner/gaseous fuels)	0	0	0	**0**	35	25	10	**70**	20	10	**30**	74.5	Orange		WM-II
149.5	Hydro metallurgy	0	30	15	**45**	30	25	0	**55**	25	10	**35**	73	Orange		WM-II
150.0	E-WASTE DISMANTLING / **RECYCLING**															
150.1	Industry engaged in recycling of e-waste generated from the electrical and electronic Equipment (EEE) listed in the E-Waste (Management) Rules 2022 using pyro/ hydro/ electro-metallurgical processing and recycling of plastic separated from Waste EEE	30	30	20	**80**	35	25	15	**75**	25	20	**45**	92	Red		WM-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
150.2	Industry engaged in recycling of e-waste generated from the electrical and electronic equipment (EEE) listed in the E-Waste (Management) Rules 2022 (PCB processing limited to only mechanical processing and separation without pyro/ hydro/ electro-metallurgical processing), production of Al, Cu, and other metals from non-PCB sources and/or recycling of plastic separated from Waste EEE.	0	15	15	**30**	20	25	15	**60**	25	10	**35**	73	Orange		WM-III
150.3	Industry engaged in dismantling (only) of e-waste, generated from the electrical and electronic equipment (EEE) listed in the E-Waste (Management) Rules 2022	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		WM-III
150.4	E-waste refurbishing centres	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		WM-III
151.0	INDUSTRIES ENGAGED IN **RECYCLING/REPROCESSING/ RECOVERY/REUSE** OF HAZARDOUS WASTE (Items as per Schedule IV of H&OW(M & TBM) Rules, 2016.)															
151.1	Lead Recycling (Lead Acid Batteries with Acids; Lead Scrap Recycling) Rotary Furnace/ Pit Furnace (Mandir/Canopy Bhatti)	0	30	20	**50**	35	30	25	**90**	20	20	**40**	94.5	Red	This also includes 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.”	WM-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
151.2	Lead Recycling (Drained Lead Acid Batteries; Lead Scrap Recycling) Rotary Furnace/Mandir Bhatti on Cleaner Fuel	0	30	15	**45**	35	30	10	**75**	20	10	**30**	84.4	Red	This also includes, 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."	WM-II
151.3	Isolated storages (as defined under Manufacture, Storage, and Import of Hazardous Chemicals Rules, 1989 as amended)	10	25	15	**50**	20	25	0	**45**	30	10	**40**	71.3	Orange		IPC-I
151.4	Paint and ink sludge / residues recycling	20	25	15	**60**	0	20	0	**20**	30	10	**40**	72	Orange		WM-II
151.5	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste, excluding lead, paint, and ink sludge	0	30	15	**45**	35	0	25	**60**	20	10	**30**	75	Orange	This includes items namely - Brass Dross, Copper Dross, Copper Oxide Mill Scale, Copper everts, Cake & Residues, Waste Copper and copper alloys in 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 form.	WM-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
151.6	Refining of used oil by hydro-treating/using solvent extraction	10	25	25	**60**	25	0	25	**50**	20	20	**40**	78	Orange		WM-II
151.7	Refining of used oil by using thin film evaporation/vacuum distillation with clay treatment	10	25	15	**50**	25	0	15	**40**	20	10	**30**	67.5	Orange		WM-II
151.8	Recycling / reprocessing of waste oil	20	25	15	**60**	25	0	15	**40**	20	10	**30**	74	Orange		WM-II
152.0	**RECYCLING** OF PLASTIC WASTE															
152.1	Manufacturing of flakes/staple fibre/strip from the recycling of PET bottles	20	15	25	**60**	0	20	0	**20**	0	0	**0**	64	Orange		IPC-I
152.2	Plastic waste processing (manufacturing of flakes/granules)	20	15	15	**50**	0	20	0	**20**	0	0	**0**	55	Orange	Process using In-built heaters.Washwater and fugitive emission.	UPC-II
153.0	SCRAPING FACILITIES FOR **RECYCLING** END-OF-LIFE VEHICLES, WAGONS, AND COACHES															
153.1	Collection, Depollution and Dismantling Centers (Without shredding)	0	30	15	**45**	0	30	0	**30**	25	10	**35**	62.9	Orange		WM-II
153.2	Collection, Depollution, Dismantling and shredding Centers	0	30	15	**45**	0	30	0	**30**	25	10	**35**	62.9	Orange		WM-II
153.3	Common Shredders (Standalone)	0	0	0	**0**	0	30	0	**30**	25	10	**35**	44.8	Green		WM-II
153.4	Collection Centers (Without depollution, dismantling and shredding)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		WM-II
	~S~															
154	**Sugar** (excluding khandsari/jaggery)	30	25	35	**90**	25	0	25	**50**	30	10	**40**	94.5	Red	Generates large volume of wastewater.	IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
155	**Ship** breaking industries	0	0	0	**0**	0	30	0	**30**	30	20	**50**	57.5	Orange	Ship breaking releases a large number of pollutants, including toxic waste, used/waste oil, poly-chlorinated biphenyls, and heavy metals.	WM-III
156	**Slaughterhouse** / **Slaughterhouse** (with rendering plant)/ integrated slaughtering unit, meat processing units, bone mill, processing of animal horns, hoofs and other body parts	30	25	30	**85**	25	20	25	**70**	0	0	**0**	90.3	Red		IPC-IV
157	Manufacturing of **Silica** gel	10	25	20	**55**	30	0	20	**50**	25	10	**35**	74.1	Orange		IPC-I
158	Manufacturing of Iodized **Salt** from Crude / Raw Salt	10	20	15	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange	Process may involve boiling in evaporators (multiple effect evaporators), centrifuging, iodization, mixing, etc.	IPC-V
159	Manufacturing of **Starch** / Sago / Sorbitol	20	25	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III
160	**Stone** crushers	0	0	0	**0**	25	30	0	**55**	0	0	**0**	55	Orange		IPC-V
161	**Stone** crushing/grinding/washing & screening of riverbed material(s)	10	0	25	**35**	25	30	0	**55**	0	0	**0**	62.9	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
162.0	MANUFACTURING OF **SURGICAL** AND MEDICAL PRODUCTS															
162.1	Manufacturing of **Surgical** and medical products	10	25	15	**50**	25	0	10	**35**	0	0	**0**	58.8	Orange		IPC-V
162.2	Surgical and medical products assembled only (with effluent-generating processes)	10	25	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-V
162.3	Surgical and medical products assembled only (without effluent-generating processes)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
163.0	**SEMICONDUCTOR** MANUFACTURING INDUSTRIES i. Toxic wastewater is generated due to presence of Hydrofluoric acid (HF), Mixed Nitric HF (HF + HNO3), Phosphoric acid, Sulphuric acid (H2SO4), Hydrogen Peroxide, Isopropyl alcohol (IPA) / Methanol (Methanol Only), Stripper EKC-265 /ACT N396 (ACT N396 Only), BHF – 63 U, Choline etchant, etc. ii. The air pollutants which are being emitted during the manufacturing process are SiH4, PH3, B2H6, HF, HBr, DCS, NF3, SF6, BCl3, Cl2, HCL, NH3, C2F6, CHF3, CF4, C4F8, C2F6 etc. iii. Process waste, used oil etc. are generated as hazardous waste.)															
163.1	Semiconductor fabs manufacturing	25	30	35	**90**	35	30	0	**65**	25	10	**35**	95	Red		WM-III
163.2	Display fabs manufacturing	25	30	35	**90**	25	30	0	**55**	25	10	**35**	94.5	Red		WM-III
163.3	Sensor fabs manufacturing/ Compound semiconductors/ silicon photonics	25	30	35	**90**	25	30	0	**55**	25	10	**35**	94.5	Red		WM-III
163.4	Semiconductor Assembly, Testing, Marking and Packaging Facility (ATMP)	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		WM-III
164	**Saw** mills	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
165	**Spice** grinding	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
166	Cutting, **Sizing** and polishing of marble, granite and other stones	10	0	20	**30**	0	30	0	**30**	0	0	**0**	40.5	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
167	Manufacturing of **Solar** module/ non-conventional energy apparatus	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~T~															
168.0	**TANNERIES**															
168.1	Tanneries (Raw to finish)	35	30	25	**90**	0	20	0	**20**	25	30	**55**	93.8	Red		IPC-IV
168.2	Tanneries (Raw to wet blue)	35	30	25	**90**	0	20	0	**20**	25	30	**55**	93.8	Red		IPC-IV
168.3	Tanneries (Wet blue to finish)	35	30	20	**85**	0	20	0	**20**	25	30	**55**	90.6	Red		IPC-IV
168.4	Vegetable tanning	20	25	25	**70**	0	20	0	**20**	20	10	**30**	77.5	Orange		IPC-IV
169.0	MANUFACTURING OF **TOOTH** POWDER, TOOTHPASTE, TALCUM POWDER AND OTHER COSMETIC ITEMS															
169.1	Manufacturing of toothpaste and other cosmetic items	20	25	20	**65**	25	0	25	**50**	0	0	**0**	73.8	Orange		IPC-V
169.2	Manufacturing of tooth powder, talcum powder	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
170.0	**THERMOMETER** MANUFACTURING															
170.1	Glass (mercury based) thermometer manufacturing	10	30	15	**55**	25	0	10	**35**	25	10	**35**	70.8	Orange	Process involves making of 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.	IPC-V
170.2	Digital thermometer manufacturing	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
171	Manufacturing of **Teflon**-based products	10	0	15	**25**	25	25	25	**75**	0	0	**0**	78.1	Orange	Due to spraying applications, emissions (HC) are generated	IPC-V
172	**Thermocol** manufacturing (with boiler)	0	20	15	**35**	25	0	25	**50**	0	0	**0**	58.8	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
173.0	MANUFACTURING OF **TOBACCO** PRODUCTS INCLUDING CIGARETTES AND TOBACCO PROCESSES															
173.1	Manufacturing of tobacco products including cigarettes and tobacco processes (with boiler)	20	0	15	**35**	25	20	25	**70**	0	0	**0**	75.3	Orange		IPC-III
173.2	Manufacturing of tobacco products including cigarettes and tobacco processes (without boiler)	20	0	15	**35**	0	20	0	**20**	0	0	**0**	41.5	Green		IPC-III
174	**Transformer** repairing/ manufacturing (dry process only)	0	0	0	**0**	0	25	0	**25**	30	10	**40**	47.5	Green		IPC-V
175	**Tyre** Pyrolysis Oil Industries-Applicable for advanced batch automated process / continuous TPO units	10	0	15	**25**	25	25	25	**75**	0	0	**0**	78.1	Orange		WM-III
176	**Tamarind** powder manufacturing	10	15	15	**40**	25	0	10	**35**	0	0	**0**	50.5	Green	Dried tamarind fruits are cleaned, soaked, and boiled in steam jacketed kettle. Then pulp is extracted in pulper and dried in drum type drier.	IPC-V
177.0	**TEA** PROCESSING AND BLENDING															
177.1	Tea processing (with boiler)	10	0	15	**25**	25	0	25	**50**	0	0	**0**	56.3	Orange		IPC-III
177.2	Tea processing (without boiler)	10	0	15	**25**	0	0	0	**0**	0	0	**0**	25	Green		IPC-III
177.3	Blending and packing of tea	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
TEXTILE SECTOR																
178.0	**TEXTILE** INDUSTRY															
178.1	Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing, and colouring, including the garment and apparel manufacturing industry	30	30	30	**90**	25	0	35	**60**	30	20	**50**	95.5	Red		IPC-III
178.2	Yarn to grey fabric manufacturing with water jet machines	20	25	25	**70**	0	0	0	**0**	0	0	**0**	70	Orange		IPC-III
178.3	Garment and apparel manufacturing industry including Doubling / Reeling / TFO-Two for one unit (dry process)-with boiler	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-III
178.4	Garment and apparel manufacturing industry including Doubling / Reeling / TFO-Two for one unit (dry process)-without boiler	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-III
179.0	**SAREE/FABRIC PRINTING** BY SCREEN / WOODEN BLOCK /HAND BLOCK															
179.1	Saree/fabric printing by screen / wooden block/hand block	25	0	25	**50**	25	0	20	**45**	30	10	**40**	71.3	Orange		IPC-III
179.2	Hand block printing without effluent generation	0	0	0	**0**	25	0	20	**45**	0	0	**0**	45	Green		IPC-III
180.0	**TEXTILE** SPINNING**,** SIZING AND WEAVING MILLS															
180.1	Textile spinning, sizing and weaving mills (wastewater generation≥ 10 KLD)	10	20	20	**50**	25	0	15	**40**	0	0	**0**	60	Orange		IPC-III
180.2	Textile spinning, sizing and weaving mills (wastewater generation <10 KLD)	10	20	15	**45**	25	0	10	**35**	0	0	**0**	54.6	Green		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
181	**Power looms** (without dye and bleaching)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-III
182.0	REPROCESSING OF WASTE **TEXTILE** FABRIC															
182.1	Integrated facility for reprocessing of waste textile fabric (including washing, bleaching, dyeing etc.)	30	30	20	**80**	25	25	15	**65**	0	0	**0**	86.5	Red		IPC-III
182.2	Reprocessing of waste textile fabric (dry process)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-III
183	**Cotton and woollen Hosiers** making (Dry process only without any dying / washing operation)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~W~															
184	Seasoning of **Wood** in steam heated chamber	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-V
185	Pulverization of bamboo and scrap **Wood**	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
186	Distilled **Water** (without boiler) with electricity as source of heat	0	20	20	**40**	0	0	0	**0**	0	0	**0**	40	Green		IPC-V
187	Purification of **Water** and packaging (mineralized/non-mineralized water)	0	20	25	**45**	0	0	0	**0**	0	0	**0**	45	Green	RO Rejects.	IPC-V

ANNEXURE-II

(LIST OF ESSENTIAL ENVIRONMENTAL SERVICES)

LIST OF ESSENTIAL ENVIRONMENTAL SERVICES

i. Essential Environmental Services for Industrial Waste Management

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**COMMON EFFLUENT TREATMENT PLANT (CETP)**															
1.1	CETP having MEE/spray drier	30	30	35	**95**	25	0	25	**50**	25	50	**75**	98.1	Red		IPC-VII
1.2	CETP (without having MEE/spray drier), Common MEE/common spray driers	25	30	30	**85**	0	0	0	**0**	25	30	**55**	89.1	Red		IPC-VII
1.3	Common Sewage-Effluent Treatment Plant (CSETP)	25	30	30	**85**	0	0	0	**0**	25	20	**45**	88.4	Red		WQM-I & IPC-VII
2.0	Effluent conveyance projects	20	30	35	**85**	0	0	0	**0**	25	10	**35**	87.6	Red	Such projects during O&M operation will generate deposited sludge, spillage etc. in addition regular operation of handling of effluent and its disposal.	IPC-VII
3.0	**COMMON HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITY**															
3.1	Integrated facility (Secured landfill and incinerator)	35	30	15	**80**	25	25	15	**65**	30	70	**100**	100.0	Red		WM-II
3.2	Only secured landfill	35	30	15	**80**	0	25	0	**25**	25	70	**95**	97.6	Red		WM-II
3.3	Only incinerator	35	30	15	**80**	25	25	15	**65**	30	70	**100**	100.0	Red		WM-II
4.0	**COMMON BIO-MEDICAL WASTE TREATMENT FACILITY (CBWTF)**															
4.1	CBWTF	20	25	20	**65**	35	20	25	**80**	20	20	**40**	90.5	Red		WM-I
4.2	CBWTF using cleaner/gaseous fuel	20	25	20	**65**	35	20	10	**65**	20	20	**40**	83.4	Red		WM-I

ii. LIST OF BLUE CATEGORY SECTORS- Essential Environmental Services for Domestic/Household Activities:

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**MUNICIPAL SOLID WASTE MANAGEMENT FACILITY**															
1.1	Municipal Solid Waste Management Facility (Sanitary landfill/ Integrated Sanitary landfill with material recycling facility/ refused derived fuel, etc.)	35	30	15	**80**	35	25	0	**60**	0	0	**0**	86.0	Blue		UPC-II
1.2	Waste to energy power plants	0	15	30	**45**	35	25	35	**95**	10	50	**60**	97.6	Blue		UPC-II
1.3	Bio-mining of legacy waste projects	35	30	25	**90**	35	25	0	**60**	0	0	**0**	93.0	Blue		UPC-II
1.4	Municipal Solid Waste Bio-methanation plant (Quantity of MSW ≥ 5 TPD)	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82.0	Blue		UPC-II
1.5	Municipal Solid Waste Composting Facility (Quantity of MSW ≥ 5 TPD)	30	25	15	**70**	0	30	0	**30**	0	0	**0**	74.5	Blue		UPC-II
1.6	Municipal Solid Waste Material Recovery Facility (Quantity of MSW ≥ 5 TPD)	20	25	15	**60**	0	30	0	**30**	0	0	**0**	66.0	Blue		UPC-II
2.0	Construction and Demolition (C&D) Waste Processing Plants	10	0	15	**25**	25	25	0	**50**	0	0	**0**	56.3	Blue	Wastewater of high TDS of inorganic nature is generated.	UPC-I
3.0	**SEWAGE TREATMENT PLANT**															
3.1	Sewage Treatment Plant (5 MLD and above)	20	0	35	**55**	0	20	0	**20**	0	0	**0**	59.5	Blue		WQM-I
3.2	Sewage Treatment Plant (less than 5 MLD)	20	0	25	**45**	0	20	0	**20**	0	0	**0**	50.5	Blue		WQM-I

ANNEXURE-III

(LIST OF SERVICE/INFRASTRUCTURE DEVELOPMENT SECTORS CLASSIFIED UNDER RED, ORANGE, GREEN, AND WHITE CATEGORIES)

SERVICE/INFRASTRUCTURE DEVELOPMENT SECTORS

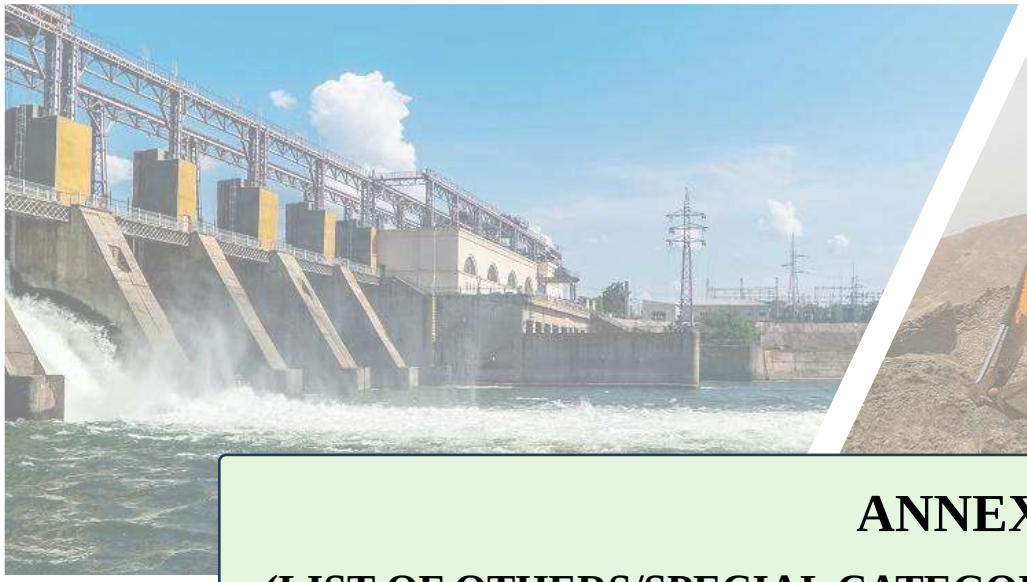
S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**STANDALONE GENERATOR SET** (Genset) (i. Standalone genset(s) of total capacity less than 1000 KVA may not require additional classification. The used oil/waste oil generated during repair and maintenance need to be disposed through authorized hazardous waste recycler by service provider/OEM. ii. Projects such data centers etc. having pollution potential due to gensets only, may be classified based on the capacity and fuel used.)															
1.1	Genset(s) of total capacity ≥ 1 MVA, using liquid fuel	0	0	0	**0**	25	0	25	**50**	30	10	**40**	60.0	Orange		UPC-I
1.2	Genset(s) of total capacity ≥ 1 MVA, using cleaner/gaseous fuel	0	0	0	**0**	25	0	10	**35**	30	10	**40**	50.5	Green		UPC-I
2.0	Airports	20	0	35	**55**	25	0	25	**50**	30	10	**40**	75.3	Orange	Airports generates mainly domestic sewage as wastewater. Emissions and generation of hazardous waste due to overall operations in airport are considered.	UPC-I
3.0	**HEALTH CARE FACILITIES (HCFS) (AS DEFINED UNDER BIO-MEDICAL WASTE MANAGEMENT RULES, 2016)** (Sectors generates bio-medical waste. As per methodology scores assigned to H.)															
3.1	HCFs with captive incinerator, irrespective of number of beds	20	0	15	**35**	35	20	25	**80**			**50**	88.5	Red		WM-I
3.2	more than 1000 bedded HCFs	20	0	35	**55**	0	0	0	**0**			**100**	100.0	Red		WM-I
3.3	501 to 1,000 bedded HCFs	20	0	30	**50**	0	0	0	**0**			**80**	85.0	Red		WM-I
3.4	201 to 500 bedded HCFs	20	0	30	**50**	0	0	0	**0**			**60**	70.0	Orange		WM-I
3.5	51 to 200 bedded HCFs	20	0	20	**40**	0	0	0	**0**			**50**	60.0	Orange		WM-I
3.6	11 to 50 bedded HCFs	20	0	20	**40**	0	0	0	**0**			**40**	52.0	Green		WM-I
3.7	Up to 10 bedded HCFs	20	0	15	**35**	0	0	0	**0**			**30**	44.8	Green		WM-I
3.8	Non-bedded HCFs	0	0	0	**0**	0	0	0	**0**			**25**	25.0	Green		WM-I
4.0	**HOTELS/BANQUET HALLS HAVING ROOM FACILITY**															
4.1	Hotels (above 3 star) or having 100 & above rooms	20	25	30	**75**	25	0	25	**50**	0	0	**0**	81.3	Red		UPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
4.2	Hotels (above 3 star) or having 100 & above rooms (based on cleaner /gaseous fuel)	20	25	30	**75**	25	0	10	**35**	0	0	**0**	79.4	Orange		UPC-I
4.3	Hotels (up to 3 star) or having more than 20 rooms but less than 100 rooms.	20	25	20	**65**	25	0	25	**50**	0	0	**0**	73.8	Orange		UPC-I
4.4	Up to 20 rooms	10	25	15	**50**	0	0	10	**10**	0	0	**0**	52.5	Green		UPC-I
5.0	**RAILWAY LOCOMOTIVE WORK SHOP/ INTEGRATED ROAD TRANSPORT WORKSHOP/ AUTHORIZED SERVICE CENTERS**															
5.1	Railway locomotive work shop/ Integrated road transport workshop/ Authorized service centers (wastewater generation ≥ 10 KLD)	20	25	25	**70**	30	25	0	**55**	30	10	**40**	84.3	Red		IPC-V
5.2	Railway locomotive work shop/ Integrated road transport workshop/ Authorized service centers (wastewater generation <10 KLD)	20	25	15	**60**	30	25	0	**55**	30	10	**40**	79.0	Orange		IPC-V
6.0	**RAILWAY STATIONS**															
6.1	Railway Stations (Wastewater Generation ≥ 5 MLD)	20	0	35	**55**	25	0	25	**50**	30	10	**40**	75.3	Orange	Wastewater generating from public toilets, public taps, platform, and apron washing, coach cleaning, laundry, restaurants etc. Emissions and generation of hazardous waste due to overall operations are considered.	UPC-I
6.2	Railway Stations (Wastewater Generation ≥ 100 KLD, but < 5 MLD)	20	0	15	**35**	0	0	0	**0**	0	0	**0**	35.0	Green	Wastewater generating from various domestic uses as public toilets, public taps, platforms, and apron washing, restaurants etc.	UPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
7.0	**RAILWAY SIDINGS** (Fugitive emissions due to loading, unloading, storage and transportation of the minerals.)															
7.1	Railway sidings / Mineral stock yard	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25.0	Green		UPC-I
7.2	Railway sidings only for defence purpose	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0.0	White		UPC-I
8.0	**PORTS AND HARBOURS**															
8.1	Ports and harbours, jetties and dredging operations	20	30	25	**75**	0	25	0	**25**	30	20	**50**	84.4	Red		WM-I
8.2	Ports and harbours (only containers handling)/ Captive jetties	20	25	20	**65**	0	25	0	**25**	30	10	**40**	76.4	Orange		WM-I
9.0	Automobile service stations/ workshops	20	25	20	**65**	20	0	0	**20**	30	10	**40**	75.5	Orange		IPC-V
10.0	**BUILDING CONSTRUCTION PROJECTS** (i. During the construction phase, the sector is mainly air polluting. However, in post construction phase it is mainly water polluting due to generation of sewage. Consent to Establish/Operate to be taken as per EC conditions, as applicable. ii. Building construction project ≥ 5,000 sq. m., but < 20,000 sq. m. built-up area (with connectivity to terminal STP) may not require separate classification. iii. For projects < 5000 the wastewater shall be managed according to on-site sanitation methods as mentioned in the Manual on Sewerage and Sewage Treatment System (2013), published by the Central Public Health and Environmental Engineering Organisation (CPHEEO), and as amended from time to time.)															
10.1	Building construction project ≥ 20,000 sq. m. built-up area	20	0	25	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange		UPC-I
10.2	Building construction project ≥ 5,000 sq. m., but < 20,000 sq. m. built-up area (without connectivity to terminal STP)	20	0	20	**40**	0	0	0	**0**	0	0	**0**	40.0	Green		UPC-I
11.0	Standalone mechanized laundry (using boiler)	20	0	20	**40**	25	0	25	**50**	0	0	**0**	60.0	Orange		IPC-V
12.0	New highway construction project	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75.0	Orange	Such projects involve use of hot mix plants, ready-mix concrete plants, construction activities generating fugitive emissions, etc.	UPC-I

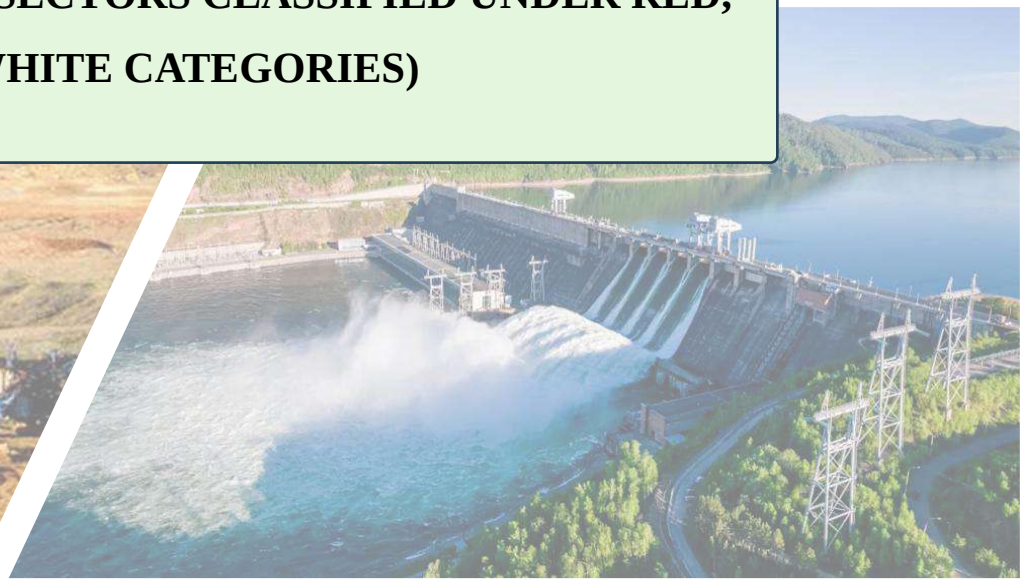
S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
13.0	**DAIRY FARM** (Dairy farms having less than 15 animals do not require separate classification.)															
13.1	Dairy Farm (having more than 500 animals)	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82.0	Red		IPC-IV
13.2	Dairy Farm (having 101 to 500 animals)	30	25	20	**75**	0	20	0	**20**	0	0	**0**	77.5	Orange		IPC-IV
13.3	Dairy Farm (having 15 to 100 animals)	30	25	15	**70**	0	20	0	**20**	0	0	**0**	73.0	Orange		IPC-IV
14.0	Gold Assaying & Hallmarking Centres	0	0	0	**0**	35	0	0	**35**	25	10	**35**	46.4	Green	Lead oxide, nitrous fumes are generated during cupellation and parting acid treatment, respectively contributing to the air emissions.The hazardous waste is generated during fire assay in the form of spent cupels bearing lead, spent acid, scrubbed water etc.	IPC-V
15.0	Facility of handling, storage, and transportation of food grains in bulk	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25.0	Green		IPC-V
16.0	Flyash export or disposal operations	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25.0	Green		IPC-V
17.0	Oil and gas transportation pipeline (excluding pipeline covered under definition of isolated storage of hazardous chemicals, as per Manufacture, Storage, and Import of Hazardous Chemicals Rules, 1989)	0	0	0	**0**	25	0	10	**35**	0	0	**0**	35.0	Green		IPC-I
18.0	Gaushalas	20	0	15	**35**	0	20	0	**20**	0	0	**0**	41.5	Green		IPC-IV

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
19.0	Household bio-digesters/gobar-gas (cow-dung) plants based on biodegradable wastes, etc.	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20.0	White		IPC-V



ANNEXURE-IV

(LIST OF OTHERS/SPECIAL CATEGORY SECTORS CLASSIFIED UNDER RED, ORANGE, GREEN, AND WHITE CATEGORIES)



OTHERS/SPECIAL CATEGORY SECTORS

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**HYDEL POWER PLANTS INCLUDING PUMPED STORAGE PROJECTS**															
1.1	Hydel power plants (Capacity > 50 MW)													Red	PI may be considered as 90.	IPC-II
1.2	Mini Hydel power plants (Capacity from more than 25 MVA and up to 50 MW)													Orange	PI may be considered as 67.5.	IPC-II
1.3	Mini Hydel power plants (Capacity ≤ 25 MW)													White	PI may be considered as 12.5.	IPC-II
2.0	**SAND / RIVERBED MATERIAL MINING FROM RIVERBED AND ITS FLOODPLAINS** (excluding manual excavation) (i. Sand / riverbed material mining from riverbed and its floodplains may cause ecological disturbances, erosion of riverbed, change in hydro-geological conditions & river ecosystem, etc. ii. Cluster mining means that the distance of mining lease area is less than 500 m from periphery of another lease area. iii. This categorization is made considering the ecological damages and not based on pollution potential/index. iv. Cluster mining as defined in 'Enforcement & Monitoring Guidelines for Sand Mining, 2020', issued by MoEF&CC.)															
2.1	Mining lease area more than 5 hectares or Mining lease area up to 5 hectares which is part of cluster mining													Red	PI may be considered as 90.	IPC-II
2.2	Standalone mining lease area up to five hectares in areas (not a part of any cluster mining)													Orange	PI may be considered as 67.5.	IPC-II

ANNEXURE-V

FORMAT FOR SUBMISSION OF INFORMATION BY SPCBS/PCCS REGARDING SECTORS CLASSIFIED UNDER WHITE CATEGORY

S. No.	Sector	Water Pollutant Score (PI_W)				Air Pollutant Score (PI_A)				Waste Pollutant Score (PI_H)			Pollution Index (PI)	Remarks (including brief description of process and pollution potential)
		W1	W2	W3	W	A1	A2	A3	A	H1	H2	H		

A tool for progressive environmental Management

CPCB

Central Pollution Control Board

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

REPORT OF EXPERT COMMITTEE CONSTITUTED BY CPCB

(IN COMPLIANCE TO HON'BLE SUPREME COURT ORDER DATED 24.02.2025 IN Writ Petition(s)(Civil) No(s). 13029/1985, M.C. MEHTA Vs. UNION OF INDIA & ORS.)

CENTRAL POLLUTION CONTROL BOARD

(*Ministry of Environment, Forest & Climate Change*) "Parivesh Bhawan", East Arjun Nagar, Delhi-110032

……May, 2025

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1.0 Background

1.1 Hon'ble Supreme Court Order

Hon'ble Supreme Court vide order dated 24.02.2025 in the matter of Writ Petition(s)(Civil) No(s). 13029/1985, M.C Mehta Vs. Union of India & Ors., inter alia, directed the following, reproduced herein below:

Para 3: Another important issue flagged by the learned senior counsel appointed as Amicus Curiae is that the percentage of segregation waste is very low in Municipal Corporation of Delhi area, Gurugram and Faridabad. The State of Uttar Pradesh has not furnished any figures. As rightly submitted by the learned Amicus Curiae, the segregation of waste at source is of vital importance for the environment. ***If there is no proper segregation, even waste-to-energy projects will cause more pollution***

Para 6: We direct the ***Central Pollution Control Board to submit a report to this Court on the impact of waste to energy projects on the environment and public health.***

Para 7. The affidavit by the NCR States shall be filed by end of March 2025. No further time shall be granted. ***The Central Pollution Control Board shall also file a report by end of March, 2025****. The affidavits and the report will be considered on 2nd April, 2025 at 3.00 p.m.*

Further, Hon'ble SC vide order dated 24.04.2025 directed the following:

Para 12: As far as the issue of Waste to Energy Plants is concerned, the Central Pollution Control Board by filing an affidavit dated 22nd April, 2025 has sought time of one month to make compliance. We, accordingly, grant time of one month to the Central Pollution Control Board to make compliance from 22nd April, 2025. At this stage, the learned Amicus Curiae has invited our attention to a letter dated 12th February, 2025 addressed by the Member Secretary of the Central Pollution Control Board to the State Pollution Control Boards. She has invited our attention to page 03 of the said letter and has raised concerns about a new category mentioned therein. To enable the learned ASG to seek clarification, this aspect will be considered on 8th May, 2025 at 12:00 noon.

A copy of Hon'ble SC order dated 24.02.2025 and 24.04.2025 are attached as **Annexure I.**

1.2 Overview of Waste to Energy Plants in India

In 2007, the Municipal Corporation of Delhi (MCD) and the New Delhi Municipal Council (NDMC) facilitated the establishment of a 16 MW WtE project on a BOOT (Build-Own-Operate-Transfer) basis, creating an integrated municipal solid waste processing facility at Timarpur-Okhla. The first successful municipal solid waste (MSW) incineration-based Waste-to-Energy (WtE) plant in India, located at Timarpur-Okhla in Delhi, became operational in January 2012.

As per information provided by SPCBs/PCCs in the matter of OA No. 536/2024, NGT, PB, there are presently 21 WtE plants operational in India. The list of WtE plants is attached as **Annexure-II.**

1.3 Brief description of Waste to Energy Plant

Waste-to-Energy (WtE) plants convert municipal solid waste into energy. The process begins with manual and mechanical screening of the waste into inert, recyclable, biodegradable fraction and refuse-derived fuels (RDF). The RDF is fed into the boiler, where it is incinerated to produce heat energy. This heat energy is used to generate steam, which drives a turbine to produce electricity. The biodegradable fraction is converted into compost, recyclables are sent to the recyclers and inerts are disposed of in the landfill. It also may have potential for use as a construction material

The major sources of emissions from the WtE plants are the emissions from the boiler stack, flyash and bottom ash from the boiler, leachate and odour from the waste handling areas.

The process description of a WtE plant is illustrated below **(Figure 1):**

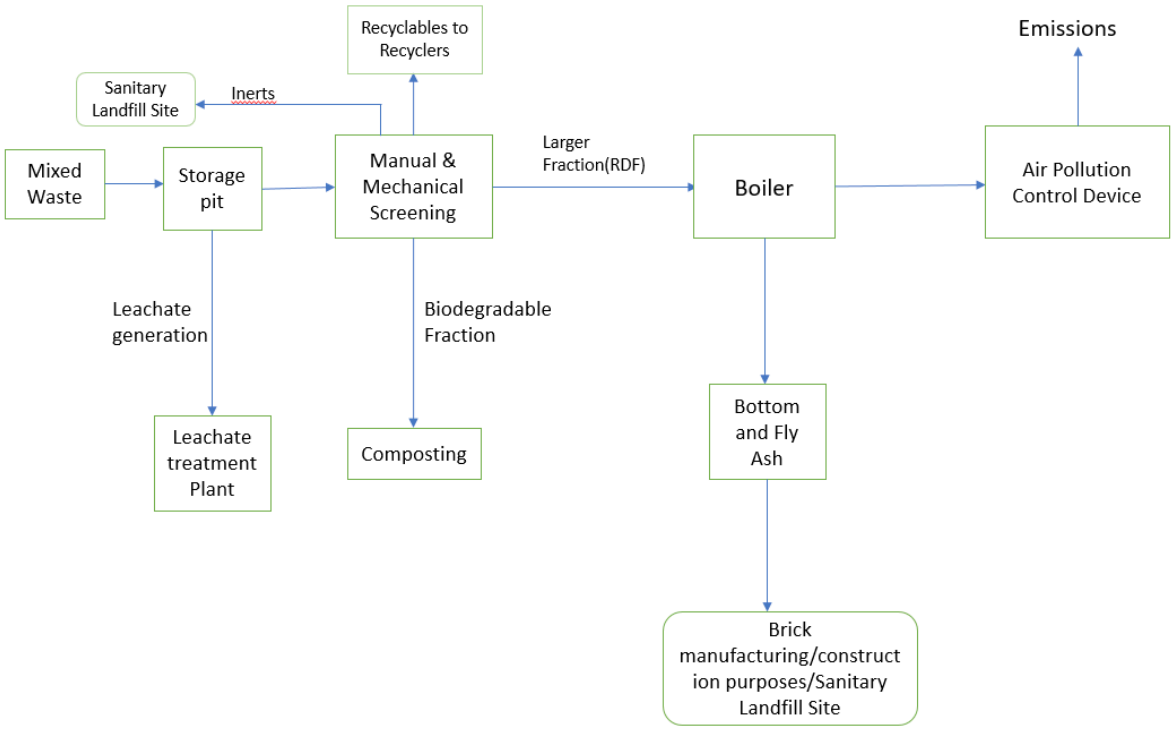

Figure 1: Process description diagram of Waste to Energy Plant

1.4 Classification of Waste to Energy Plants as Blue Category projects

Recently, CPCB revised the system of categorization (Classification of Sectors into Red, Orange, Green, White and Blue Categories) as per which industries are now categorized into Red, Orange, Green, White, and Blue categories, based on a cumulative Pollution Index (PI). The PI score accounts for water pollution, air pollution, and hazardous waste generation. In the revised system of classification, Essential Environmental Services Sectors (EES) have been defined as those facilities which are essential to control, abate and mitigate pollution generated from Domestic and Industrial activities. Essential Environmental Services Sectors have further been subclassified as “EES for industrial waste” and “EES for domestic waste” The sectors falling under “EES for Domestic Waste “have been classified as Blue Category. and Waste to Energy plants which mainly handle municipal solid waste have been classified in blue category as per the revised classification system-.

It is to be noted that the revised classification system has been finalized by the working committee constituted for the purpose based on 160 representations comprising of more than 700 comments received by CPCB. Human settlements whether located in rural/urban/eco-sensitive areas generate sewage, solid waste, and C&D waste, which are required to be managed to prevent adverse impact on environment and human health. Basic environment management facilities are required to be set-up to manage such waste which includes STP, C&D waste processing facility, MSW management facility like sanitary landfill, material recovery facility & waste processing units, bio-methanation, bio-composting, waste to energy, etc. These facilities are basically essential environment services which play a vital role in protecting environment and human health. These facilities may also bring value addition by producing various by-products such as secondary raw material, compost, energy,

etc. and promotes circular economy and sustainable development by converting waste into wealth. Moreover, these categories do not generate hazardous or infectious wastes. The role and importance of these facilities is different in nature as compared to other activities and industries in the sense that they are primarily set-up for prevention, control and abatement of soil, water and air pollution.

CPCB has issued Directions dated 12.02.2025 to all State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) for the adoption and implementation of the the revised classification system. Copy of the said direction is placed at **Annexure III.**

1.5 Legal Framework in India:

The Solid Waste Management (SWM) Rules delineate the provisions for Waste to Energy (WtE) plants. The relevant clauses are mentioned as under:

(a) Clause 21 (1) of SWM Rules, 2016 specifies that non-recyclable waste having a calorific value of 1500 kcal/kg or more shall not be disposed of in landfills and shall only be utilized for generating energy either through refuse derived fuel or by giving away as feedstock for preparing refuse derived fuel.

(b) Schedule II (Part B) specifies the standards for treated leachate prescribing 19 parameters viz. pH, Suspended Solids (SS), Total Dissolved Solids (TDS), Ammoniacal Nitrogen (N), Total Kjeldahl Nitrogen (TKN), Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Arsenic (As), Mercury (Hg), Cadmium (Cd) , Lead (Pb), Total Chromium (Cr), Copper (Cu), Zinc (Zn), Nickel (Ni), Cyanide (CN), Chloride (Cl), Fluoride (F) and Phenolic compounds

(c) Schedule II (Part C) specifies the emission standards from incinerators /thermal technologies in Solid Waste treatment/disposal facility for 11 parameters namely Particulate Matter, HCl (Hydrochloric Acid) , SO_2 (Sulphur Dioxides), CO (Carbon Monoxide) , TOC (Total Organic Carbon) , HF (Hydrofluoric Acid), NOx (Nitrogen Oxides) , Dioxins & Furans , Hg (Mercury & Compounds, Cd+Th (Cadmium , Thorium & Compounds), Sb+As, Pb+ Cr, Co, Cu, Mn+ Ni+ V (Antimony , Arsenic, Lead , Chromium , Copper , Manganese , Nickel , Vanadium & Compounds). The same is applicable to WtE plants. Further, the following are the major compliances to be ensured by the WtE plants as per Schedule II, Para C :

i. 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 (TSDF).

ii. All the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950 degrees Celsius in the secondary combustion chamber and with a gas residence time in the secondary combustion chamber not less than 2 (two) seconds.

iii. 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.

A copy of the Solid Waste Management Rules, 2016 is placed at **Annexure IV**

1.6 International Scenario Vis-à-vis Indian Scenario

As per the United Nation Environment Program (UNEP), document (https://www.unep.org/ietc/resources/publication/waste-energy-considerations-informed-

decision-making), there are over 1,700 thermal WtE plants worldwide. Over 80 per cent of thermal WtE plants are located in developed countries, led by Japan, France, Germany and the United States. Globally, more than 200 thermal WtE plants are currently under construction. Thermal WtE plants are emerging in developing countries in Asia Pacific, including China, Thailand, the Philippines, Indonesia and Myanmar. The no. of incineration based WtE Plants worldwide are given in **Figure 2.** The top 11 Countries that have maximum no. of incineration based WtE are given in **Figure 3.**

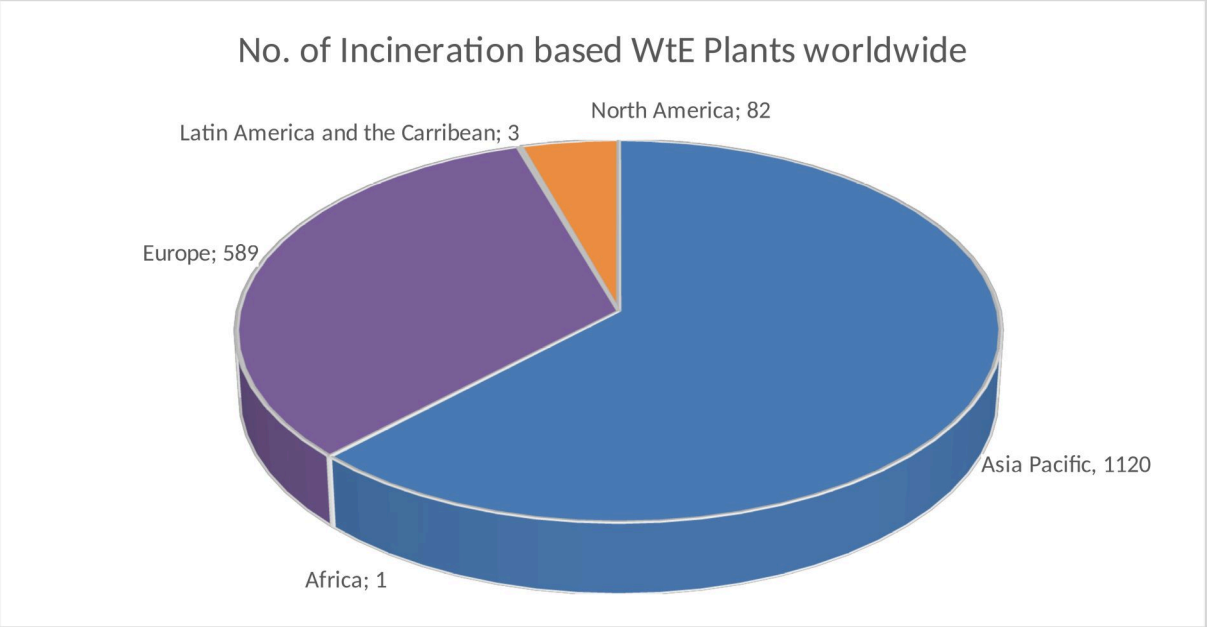

Figure *2: Number of incineration based WtE Plants Worldwide (Source: UNEP)*

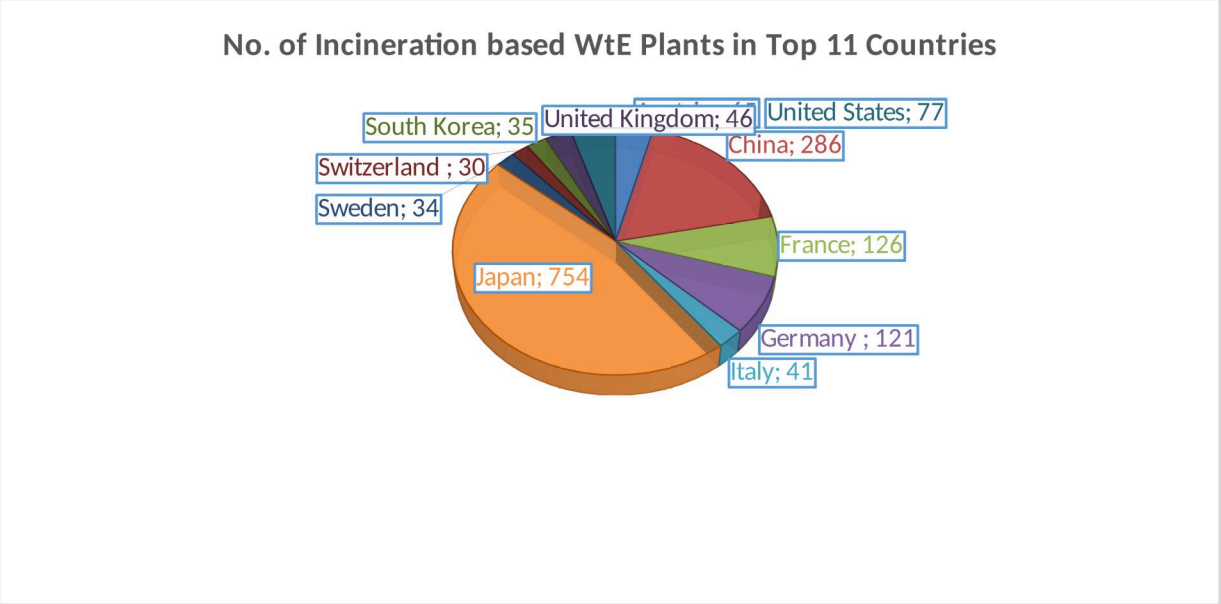

Figure *3: Number of incineration-based WtE Plants in Top 11 Countries (Source: UNEP)*

The Centre Collaborating with UNEP on Environmental Technologies (CCET) guidelines outlines the current processes and mechanisms commonly adopted for Waste-to-Energy (WtE) incinerators worldwide. A comparison of these global practices with the Indian scenario is presented in **Table 1.**

Table 1: Comparison of International Scenario with Indian Conditions

S.No.	Particulars	International Scenario	Indian Scenario
1	Calorific value	The Lower Calorific value must be, on average, at least 1,667 kcal/kg and never fall below 1,428 kcal/ kg for WtE incineration	As per SWM Rules, 2016 non-recyclable waste having calorific value of 1500 kcal/kg or more shall not be disposed of on landfills. Such wastes shall only be utilized for generating energy either through refuse derived fuel or as feed stock for preparing refuse derived fuel.
2	Type of Incinerator	Stoker type incinerator, comprising of set of grates, is mostly used for incineration,	As per the observations made during inspection of WtE plants in Delhi, moving grate system is used for incineration , which is a similar incineration technology
3	Number of incineration chambers	The combustion chamber is divided into three stages: “dry zone”, “combustion zone” and “burn-out zone”	As per SWM Rules, 2016 twin chamber system is mandated for incineration.
4	Temperature of Incinerator	To prevent incomplete combustion of flue gas, a temperature of 850ºC or more and a retention time of two seconds or longer are required in the secondary combustion zone.	As per SWM Rules, 2016 all the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950ºC in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.
5	Air Emissions	Bag filters are used to remove air pollutants from flue gas through filtering. An alkali agent such as lime powder and powdered activated carbon are injected into	As per the WtE Plants in Delhi, which have been inspected by CPCB, Bag filters are used to remove air pollutants from flue gas through filtering. An alkali agent

		flue gas before it passes through the bag filter. Air pollutants can be removed through the following mechanisms. • Dust is removed by filtering. • Acidic gases such as hydrochloric acid (HCl) and sulfur dioxide (SO2) are reacted with an alkali agent and removed. • Dioxins and mercury are adsorbed into powdered activated carbon and removed.	such as lime powder and powdered activated carbon are injected into flue gas before it passes through the bag filter.
6	Bottom Ash	When bottom ash is discharged from an incinerator, "Loss on Ignition (LOI)", which indicates unburned content in bottom ash, should be measured to ensure the quality of combustion. In Japan, LOI of bottom ash is regulated at 5% or less The most common method of treatment of bottom ash is reclamation in a controlled landfill site. Can be used as construction material after checking the heavy metals concentrations	The loss on ignition Should be less than 5% of the dry weight. As per the conditions stipulated by DPCC in the Consent issued to the WtE plants located in Delhi, Bottom Ash is to used by Waste to Energy Plants in making Bricks and other products which can be consumed in construction activities road (Paver Blocks, Kerbs Stones, subgrade preparation etc.) / building construction In case concentration of toxic metals exceeds the limits specified in the Hazardous and Other wastes (Management and Transboundary movement) Rules, 2016, as amended time to time the ash is sent to Hazardous Waste Treatment and disposal Facility.
7	Fly Ash	It is normally collected using bag filters and then discharged. It consists mainly of an injected alkaline agent and salt compound with an acidic gas, such as sulfur dioxide and hydrogen chloride, as well as dust containing harmful components such as heavy metals and dioxins. In order to prevent toxic substances from leaching, Fly ash is generally reclaimed in a controlled disposal site after treatment with cement or chemicals.	As per the conditions stipulated by DPCC in the Consent issued to the WtE plants located in Delhi, in case concentration of toxic metals exceeds the limits specified in the Hazardous and Other wastes (Management and Transboundary movement) Rules, 2016, as amended from time to time, the ash is sent to Hazardous Waste Treatment and disposal Facility.
8	Waste Water	Many plants use closed systems that do not generate wastewater. In such systems, wastewater generated during the treatment process is sprayed as coolant in furnaces, which then evaporates and is treated by flue gas treatment systems.	As per the conditions stipulated by DPCC in the Consent issued to the WtE plants located in Delhi, the leachate generated from MSW is treated in leachate treatment plant and the treated leachate is reused in the plant for different purposes

It is observed that basic operational conditions & pollution control measures as per Solid Waste

Management Rules, 2016 and Consent issued to the WtE plants located in Delhi, are similar to those adopted at international levels as per UNEP's CCET Guidelines.

2.0 Actions taken by CPCB

CPCB constituted an Expert Committee comprising of members from the Indian Institute of Technology (IIT) Kanpur, the National Environmental Engineering Research Institute (NEERI), Nagpur, DPCC and CPCB to assess the impact of Waste-to-Energy projects on the environment and public health. The office order for the constitution of the Committee is annexed as **Annexure V.**

CPCB conducted inspection of the Waste to energy (WtE) Plants located in Delhi to assess the ground-level conditions related to the quantum of waste generation and its likely impact on the environment. The inspections were conducted jointly with Delhi Pollution Control Committee (DPCC). Three WtE plants located at Okhla, Ghazipur and Bawana were covered in the inspection conducted during March 21-23, 2025. The monitoring/sampling of stack emissions, ambient air quality, fly ash and bottom ash, treated leachate and groundwater was carried out by M/s Shriram Institute for Industrial Research (SIIR) (engaged by DPCC) in presence of the inspecting team of CPCB and DPCC. The analysis of the same was also carried out by the said laboratory, SIIR.

The fourth WtE plant located at Tehkhand could not be inspected during March 21-23, 2025, as it was shut down for maintenance during this period and it became operational on April 9, 2025. Therefore, the inspection of the plant at Tehkhand was conducted by CPCB on April 23-24, 2025, jointly with DPCC. The monitoring and sampling of stack emissions (except Dioxins & Furans), ambient air quality, fly ash and bottom ash, treated leachate, and groundwater was carried out by CPCB in the presence of the inspecting team from DPCC. The analysis of the same was conducted by the CPCB laboratory. The task of sampling & analysis of the stack emission parameter for Dioxins & Furans was awarded to M/s Fare Lab Pvt. Ltd. by CPCB, and the sampling was conducted by the Lab on April 24, 2025.

Additionally, the monitoring/sampling of solid waste for calorific value was carried out by CPCB at all four WtE plants in Delhi on April 23-24, 2025 and the analysis of the same was conducted in the CPCB Laboratory.

2.1. Identification of focus areas for assessing impact of WtE plants:

The meeting of the Expert Committee was held on 19th March, 2025. Based on deliberations held during the meeting, the following areas were identified as focus areas for assessing impact of the WtE plants on environmental & Public health from the above WTE plants.

(A) Quality of waste incinerated in the WtE plants
(B) Compliance of WtE plants with design considerations in Schedule II (C) of SWM Rules
(C) Air Pollution Control Measures and Compliance with Emission standards specified in Schedule II (C) of SWM Rules
(D) Ambient air quality
(E) Management of fly ash and bottom ash
(F) Groundwater quality
(G) Odour management & green belt development
(H) Leachate management
(I) Impact on ambient air quality

(J) Impact on public health

2.2. Assessment of the Waste to Energy Plants

The findings of the Joint inspection of the four WtE plants in Delhi, were assessed specifically w.r.t to aforementioned focus areas and the same have been briefly described:

2.2.1 Quality of Waste incinerated in the WtE plants

It was observed that the four WtE plants receive unsegregated municipal solid waste (MSW), which is pre-processed using manual and mechanical segregation methods at WtE, prior to incineration in the boiler at the respective WtE facility.

(a) WTE Bawana

The unit has a setup consisting of conveyor belt for manual segregation, 13 trommels with 4 ballistic separators, magnetic separators, and Wind Shifter for segregation of MSW into inert, recyclable, biodegradable and refused-derived fuel (RDF) fraction.

(b) WTE Ghazipur

The unit has a setup consisting of a conveyor belt for manual segregation, 2 trommels with 2 ballistic separators, magnetic separators for segregation of MSW into inert, recyclable, compostable materials and refuse-derived fuel (RDF).

(c) WTE Okhla

The unit has a setup consisting of 1 trommel with 2 ballistic separators, 3 Magnetic separators, 2 Shredders for segregation of MSW into inert, recyclable, compostable materials and refuse-derived fuel (RDF). The process begins with the arrival of closed compactors carrying MSW at the WTE Plant, which pass through a radioactive sensor and weigh bridge before entering an enclosed storage pit. Bio-culture is applied to degrade organic material. The stored MSW is then pre-processed, and segregated into inert, recyclable, compostable materials and refuse-derived fuel (RDF).

(d) WTE Tehkhand

The unit has a setup consisting of 1 trommel with 4 ballistic separators, 3 Magnetic separators, 1 Shredder for segregation of MSW into inert, recyclable, compostable materials and refuse-derived fuel (RDF).

The process flow diagram of all Four WtE Plants are placed in **Annexure VI.**

It is observed that all four WtE plants have installed pre-processing facilities. Waste samples were collected from the inlet point and the boiler feed point for measuring the calorific value, the details of which are given at **Table 2.0.** It is observed that the calorific value of pre-processed waste at the boiler feed point is higher than that of unsegregated waste at inlet point of the WtE plant.

Table2.0: Calorific value of Unsegregated Waste and Pre-processed Waste

Unit	Calorific Value of unsegregated waste* (kcal/Kg)	Calorific value feed of preprocessed waste *(Kcal/Kg)	% increase in calorific value of waste

Bawana WtE	1590.84	2478.02	55.76
Ghazipur WtE	1117.7	2093.15	87.27
Okhla WtE	1593.85	2812.67	76.47
Tehkhand WtE	1482.33	1990.51	34.28

**Values reported on Wet basis*

Based on the above, it is observed that calorific value of pre-processed waste at the incinerator feed point is more than 1500 kcal /kg in all the four WtE plants, which is in compliance of Rule 21(1) of SWM Rules, 2016.

2.2.2 Compliance of WtE plants with Design specifications/ process conditions in Schedule II (C) of SWM Rules

As per Schedule II (C)of SWM Rules, all the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950^{o}C in secondary combustion chamber with a gas residence time not less than 2 (two Seconds). The status of compliance with these **Design specifications/ process conditions** of the WtE plants is given in **Table 3.0**:

Table 3.0: Status of compliance with Design specifications/ process conditions of Schedule II (C) of SWM Rules

S.No.	Operational Parameters (24 hrs)	WTE ,Bawana	WTE, Ghazipur	WTE, Okhla	WTE Tehkhand
1	Twin Chamber incinerator	Yes	Yes	Yes	Yes
2	Temperature (^{o}C)				
	(Min)	959	1022.34	985.82	970.9
	(Max)	1041	1107.15	1100	1039.7
3	Residence time in combustion chamber (Seconds)	>2	>2	>2	>2

It is observed that all the WtE plants are complying with design specifications/ process conditions as specified in Schedule II (C) of SWM Rules, 2016.

2.2.3 Air Pollution Control Measures and Compliance with Emission standards specified in in Schedule II (C) of SWM Rules

All four WtE plants have installed Air Pollution Control Devices (APCD) to control emissions from the Boiler stack. The details of the APCDs to treat the flue gas generated from the boiler in the four WtE plants are given below:

i. WtE plant at Bawana

Two boilers are connected to a single stack of height 60 m. Details of APCD used to treat the flue gas are:

Flue Gas Distributor (Spiral-Cased Flue Duct)

The flue gas is led into the reaction tower (each boiler having one reaction tower) through a spiral-cased flue duct (also called a flue gas distributor), ensuring uniform distribution for effective treatment.

Reaction Tower (De-Acidification Tower)

Each boiler is connected to one reaction tower, which utilizes a semi-dry type rotating atomizer for lime water for the neutralization of acidic gases such as SO_2, HCl, and HF. To prevent blockages and maintain dry fly ash, the tower is equipped with two sets of

electric heating systems at the bottom.

Baghouse Filter

Solid products and excess lime are carried by gases from the reactor into the baghouse filter, with each reaction tower followed by one baghouse filter. The mixture of hydrated lime and activated carbon helps absorb pollutants and also removes dioxins.

ii. WtE plant at Ghazipur

There is one boiler connected to a stack of height 60m. Details of APCD used to treat flue gas is provided below:

Semi Wet Reactor

The flue gas is passed through a Semi wet lime scrubber to neutralize acidic gases like HCl and Sulphur Oxides (SOx) and further sprayed with Activated Carbon to capture any residual toxic gases. Lime dosing system is used for injection of lime slurry in the semi wet reactor.

Bag filter:

It is the filtration unit in which fabric bags are used to separate the dust from the flue gas.

Selective non-catalytic reduction (SNCR)

SNCR unit is used for the injection of urea solution in high temperature zone of boiler to control the NO_x.

iii. WtE plant at Okhla

The Flue Gas Cleaning System (FGCS) is designed to treat flue gas from the boiler. It comprises the following components:

Turbo-Reactor

Flue gas from the boiler passes through a venturi nozzle into the turbo-reactor, where it mixes with hydrated lime and activated carbon to absorb SO_2, HCl, Dioxins. Controlled water is added to optimize temperature, and the remaining dust particles are carried to the baghouse filter for removal.

Sorbent Handling System

Sorbent handling system contains storage silos of hydrated lime and activated carbon; the sorbents are conveyed from the sorbent silos into turbo-reactor through dilute-phase conveying system

Baghouse Filter

The flue gas, which contains dust particles, flows into the baghouse filter through a central duct to chambers. The flue gas passes through filter bags, trapping solids on the outside of the bags which ensures the removal of particulate matter.

iv. WTE Plant at Tehkhand

There is one boiler connected to a stack of height 60m. Details of APCD used to treat flue gas is provided below:

Gas Conditioning Tower

Flue gases from the boilers will enter the Gas Conditioning Tower where the Controlled water is added to optimize the gas temperature.

Reactor Tower

The flue gas from gas conditioning tower enters the reaction tower through a venturi nozzle, where the flue gas comes into turbulent contact with hydrated lime and activated carbon, which absorb SO_2, HCl and other acidic compounds, and Dioxins. The heavy dust particles fall and remaining light particles are carried with the flue gas into the baghouse filter.

Sorbent Handling System

Sorbent handling system contains storage silos of hydrated lime and activated carbon; the sorbents are conveyed from the sorbent silos into reactor tower through lean phase conveying system.

Baghouse Filter

The flue gas contains dust particles, flows into the baghouse filter through a central duct to chambers. The flue gas passes through filter bags, trapping solids on the outside of the bags, forming a filtration-aiding layer (filter cake). This process ensures the removal of particulate matter. Further, a certain amount of the chemical reaction also takes place at filter cake.

End Product Handling System

The particulate matter collected in the baghouse filter is transferred to an intermediate silo, then conveyed by pneumatic conveying system into silos. These silos store the fly ash, which is later transported by closed vehicles to the SLF.

The Flow diagrams of APCD installed at Four WtE Plants are Placed as **Annexure VII.**

2.2.4 Stack Emission Monitoring

Stack emission monitoring was conducted during the joint inspection of the three WtE Plants in Delhi in Bawana , Ghazipur & Okhla on 21.03.2025, 22.03.2025 and 23.03.2025 respectively and in Tehkhand plant, it was conducted on 23.04.2025. The analysis results of the same are given in Table **4.**

Table 4: Stack Emission Monitoring Results at WtE Plants in Delhi

S.No.	Parameters	Solid Waste Management Rules, 2016,	Measured Stack Emission mg/Nm^3(Corrected to 11% O_2 as per SWM Rules)			
			WTE Bawana	WTE Ghazipur	WTE Okhla	WTE Tehkhand
1	SPM	50 mg/Nm^3	28	20	15	25.45
2	Hydrogen Chloride	50 mg/Nm^3	0.72	BQL	1.3	0.74
3	SO_2	200 mg/Nm^3	18	22	27	BDL
4	NO_X (NO and NO_2) expressed as NO_2)	400 mg/Nm^3	179	153	128	146.1
5	CO	100 mg/Nm^3	25	30	34	0.773
6	HF	4 mg/Nm^3	BQL*	BQL	BQL	BDL**
7	Total Organic Compounds	20 mg/ Nm3	2.8	2.8	2.8	4.025
8	Sb + As + Pb +Cr+Co+ Cu+ Mn + Ni+V+ their compounds	0.5 mg/Nm^3	0.266	0.1212	0.1702	0.022

9	Cd + Th +their compounds	0.05 mg/Nm^3	**0.055**	0.086	0.028	Cd- BDL
9	Pb	Not prescribed	0.058	0.018	0.024	BDL
10	Hg	0.05 mg/Nm^3	0.002	0.0008	0.0007	BDL
11	Total Dioxin & Furans	0.1 ng TEQ/Nm^3	**0.598**	0.0721	0.0031	0.053

***BQL- Below Quanitification Limit (Detected but could not be quantified)*
***BDL- Below Detection Limit*

It is observed that the emissions from the three WtE plants (Ghazipur, Okhla & Tehkhand) are complying with the stipulated emission norms. However, in case of Bawana Dioxin & Furan & Cd+Th are exceeding the stipulated emission norms.

2.2.5 Ambient air quality monitoring

Monitoring of ambient air quality was conducted during the joint inspection of four WtE Plants in Delhi viz Bawana , Ghazipur, Okhla & Tehkhand and the results are given in **Table 5.0.**

TABLE 5: Ambient Air Quality at Four WtE plants in Delhi													
		WtE Bawana (21.03.2025)		WtE Ghazipur (22.03.2025)		WtE Okhla (23.03.2025)		WtE Tehkhand (23.04.2025)		**Range of values reported at 39 CAAQMS (Continuous Ambient Air Quality Monitoring Stations) in Delhi during Joint Inspection**			
Parameters	**Prescribed Standard***	**Canteen near main gate (Inside plant)**	**Fire station building (Outside plant)**	**Ghazipur Police station(Outside plant)**	**Delhi Transco Ltd. Ghazipur (Outside plant)**	**Near STP Okhla (Outside plant)**	**NDMC building Opp. Plant (Inside plant)**	**Near ramp inside the premises(Inside plant)**	**Near raw water storage(Inside plant)**	**21.03.2025 to 22.03.2025**	**22.03.2025 to 23.03.2025**	**23.03.2025 to 24.03.2025**	**23.04.2025 to 24.04.2025**
PM_{10}	100 µg/m^3 (avg, 24 hours)	238	141	221	186	169	166	417.67	272	103.58 - 307.58	79.19 - 519	131.21 - 302.42	106.4-449.42
$PM_{2.5}$	60 µg/m^3(avg, 24 hours)	54	46	84	57	55	75	105	85	31.7 - 133.33	18.97 - 125	53.66 - 151.32	50.75-158.17
NO_2	80 µg/m^3(avg, 24 hours)	26	25	31	27	30	29	61.83	41	7.05 - 83.91	5.29 - 118.89	5.97 - 121.33	15.01-118.02
SO_2	80 µg/m^3(avg, 24 hours)	15	16	15	20	8	14	7.33	6.5	6.07 - 64.64	5.93 - 63.43	6.12 - 66.64	6.03-56.31
O_3,	100 µg/m^3 (avg, 8 hrs)	124	142	140	138	87	129	45.07#		6.82 - 68.38	8.8 - 176.8	7.29 - 109.8	21.54-91.86
Pb	1 µg/m^3 (avg, 24	0.29	0.17	0.15	0.17	0.13	0.11	0.061	0.058	**	**	**	**

	hours)												
CO	2 mg/m^3 (avg. 8hrs)	1.5	1.2	1.6	1.7	1.2	1.6	1.12#		0.42 - 2.95	0.35 - 2.64	0.45 - 3.31	0.44- 3.82
NH_3	400 µg/m^3(avg, 24 hours)	28	19	30	46	20	29	24.63#		11.81 - 65.56	12.6 - 54.6	11.07 - 68.95	9.03- 63.15
Ni	20 ng/ m^3 (annual average)	25.1*	5.1*	24.2*	19.5*	5.5*	9.6*	20*	10*	**	**	**	**

**24 hours measured value and hence not comparable with the prescribed annual average of 20 ng/m^3*

#CPCB Lab has only one mobile van for sampling of these parameters, hence the sampling was conducted at one location only.

***Data not available at 39 CAAQMS stations*

Following are the observations from ambient air quality measurements:

i. PM_{10} concentration levels at all eight stations monitored at the four WtE plants is exceeding the prescribed limits. It is however, within the range of concentration levels monitored at the 39 monitoring stations in Delhi.

ii. $PM_{2.5}$ levels at one station at Ghazipur WtE, one station at WtE Okhla and both the stations at WtE Tehkhand is exceeding the prescribed limits. It is however, within the range of concentration levels monitored at the 39 monitoring stations in Delhi.

iii. Ozone concentration levels in ambient air at five stations (2 at Ghazipur, 2 at Bawana and 1 at Okhla) is exceeding the prescribed limits. Presence of NOx is a precursor for Ozone generation. There are multiple sources for NOx in the environment. As detailed in Section 2.2.10, GLC level of NOx due to WtE plants is minuscule. Hence, contribution of WtE plants to increase in Ozone concentration in ambient air is negligible.

iv. Nickel concentration in ambient air has been reported as > 20 ng/m^3- at one station each in Ghazipur and Bawana during 24 hr monitoring at these stations. The Nickel measurements are one-day (24 hr) measurements and as such are not comparable with annual average for which minimum monitoring of 104 days is required.

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2.2.6 Bottom Ash & Fly Ash

Sampling and analysis of bottom ash & fly ash was carried out during the joint inspection of four WtE Plants in Delhi viz Bawana , Ghazipur, Okhla & Tehkhand ,and the results of the same given in **Table 6.**

The conditions stipulated in the Consent to Operate(CTO) issued by DPCC to the four WtE Plants are as given below:

WTE Bawana:

(i) The Consentee shall transport Fly Ash/Bottom Ash/Inert materials in properly covered vehicles and ensure that no fugitive emission occurs in the air either during loading, unloading and transportation.

(ii) The Consentee shall properly operate and maintain the existing Bottom Ash Processing Facility and utilize the processed products.

(iii) The Consentee shall provide the facility for Fly Ash utilization & the same shall be used in brick manufacturing etc.

(iv) In case concentration of toxic metals exceeds the limits specified in the Hazardous and Other wastes (Management and Transboundary movement) Rules, 2016, as amended time to time the consentee shall send the ash to Hazardous Waste Treatment and Disposal Facility.

WTE Ghazipur:

(i) No Ash shall be disposed of in low-lying areas

(ii) In case concentration of toxic metals exceeds the limits specified in the Hazardous and Other wastes (Management and Transboundary movement) Rules, 2016, as amended time to time the consentee shall send the ash to Hazardous Waste Treatment and disposal Facility.

WTE Okhla:

(i) Phasing out of dumping of ash in low lying areas/dumping sites /Engineered Sanitary Landfill at the earliest (at least within six months) and an Action Plan shall be submitted in this regard.

(ii) Ash (Fly Ash & Bottom Ash) must be used by Waste to Energy Plants in making Bricks and other products which can be consumed in construction activities road (Paver Blocks, Kerbs Stones, subgrade preparation etc.) / building construction (Fly Ash Bricks, etc.), and submit Time Bound Action Plan in this regard for 100% utilization of Ash.

(iii) In case concentration of toxic metals exceeds the limits specified in the Hazardous and Other wastes (Management and Transboundary movement) Rules, 2016, as amended time to time the consentee shall send the ash to Hazardous Waste Treatment and disposal Facility.

WTE Tehkhand:

(i) The Consentee shall collect the Fly Ash and Bottom Ash in dry form and storage facility shall be provided & maintained properly. Fly Ash, Bottom Ash & Inert materials shall be transported in properly covered containers / vehicles within the premises of the Plant and ensure that no fugitive emission occurs in the air, either during loading, unloading and transportations.

(ii) The Consentee shall ensure strict compliance of the Directions u/s 5 of the Environment (Protection) Act, 1986 along with Solid Waste Management Rules, 2016 regarding utilization of Ash generated from Waste to Energy Plants in Delhi. The Waste to Energy Plants shall ensure following:

- Phasing out of dumping of ash in the Low-Lying Areas / Dumping sites / Engineered

Sanitary Landfill at the earliest (at least within six months) and an Action Plan shall be submitted in this regard within 30 days.

- Ash (Fly Ash & Bottom Ash) must be used by Waste to Energy Plants in making Bricks and other products which can be consumed in construction activities - road (Paver Blocks, Kerbs Stones, subgrade preparation etc.) / building construction (Fly Ash Bricks, etc.), and submit Time Bound Action Plan in this regard for 100 % utilization of Ash.

TABLE 6 : TCLP# RESULTS: BOTTOM ASH & FLYASH AT WTE PLANTS IN DELHI									
Parameters	**Standards**	**Bawana(21.03.25)**		**Ghazipur(22.03.25)**		**Okhla (23.03.25)**		**Tehkhand (23.04.2025)**	
		Bottom Ash	**Fly Ash**	**Bottom Ash**	**Fly Ash**	**Bottom Ash**	**Fly Ash**	**Bottom Ash**	**Fly Ash**
*Loss on Ignition (for Bottom ash only)	<5%	6.20%	NA	2.4	NA	3.4	NA	0.983	NA
Arsenic	5 mg/l**	BQL	BQL	BQL	BQL	BQL	BQL	BDL	BDL
Cadmium	1 mg/l**	0.45	**57.4**	0.31	**4**	0.46	0.02	0.147	BDL
Chromium	5 mg/l**	0.69	3.06	0.45	0.28	0.2	0.05	0.036	BDL
Manganese	10 mg/l**	7.28	**11.23**	3.29	0.52	5.46	BQL	1.578	BDL
Lead	5 mg/l**	0.79	**48**	0.4	0.05	0.38	0.38	0.056	**5.968**
Selenium	1 mg/l**	BQL	BQL	BQL	BQL	BQL	BQL	BDL	BDL
Copper	25 mg/l**	2.03	**87.8**	3.5	0.04	1.85	BQL	1.006	0.145
Nickel	20 mg/l**	0.44	1.8	0.3	0.08	0.31	0.01	0.058	BDL
Zinc	250 mg/l**	24.05	211	17.2	0.04	30.8	BQL	8.161	0.722
Cobalt	80 mg/l**	0.14	0.34	0.24	0.01	0.6	BQL	0.102	BDL
Vanadium	24 mg/l**	0.1	BQL	0.04	0.02	0.01	0.21	0.007	BDL
Antimony	15 mg/l**	0.06	0.3	0.31	1.28	0.02	0.82	0.011	BDL

#TCLP :Toxicity Characteristics Leaching Procedure

**As per Schedule II (Part C of SWM Rules 2016)*

***Concentration Limit to categorize as hazardous waste as per Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 notified under Environment (Protection) Act, 1986.*

It is observed that bottom ash is meeting the stipulated norms in Okhla, Ghazipur and Tehkhand and is exceeding the stipulated norms in the Bawana WtE plant. Further, the flyash is meeting the stipulated norms only in case of Okhla plant and is exceeding the stipulated norms in the remaining three WTE plants. Flyash and bottom ash is to be disposed/utilised as per the conditions stipulated in the CTO issued to the Unit by DPCC.

2.2.7 Ground Water Quality Monitoring:

Sampling and analysis of ground water was carried out by DPCC.during the joint inspection near four WtE Plants in Delhi viz Bawana , Ghazipur & Okhla and Tehkhand ,and the results of the same are given in **Table 7:**

Table 7: Analysis of Ground water quality

S.N.	Parameters	SWM Rules, 2016 (Limits as per IS 10500:2012)		Measured Values (mg/L)						
		Desirable Limit (mg/l)	Permissible Limit (mg/L)	WTE Ramp (Bawana)	Near main gate (Bawana)	Temple infront of veterinary hospital (Ghazipur)	Veterinary Hospital (Ghazipur)	Borewell water Near WTE Okhla	Borewell behind WTE Tehkhand	Tent House near WTE Tehkhand
1	Arsenic	0.01	0.05	0.002	0.003	0.001	0.001	0.003	BDL	BDL
2	Cadmium	0.01	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	Chromium (as Cr6+)	0.05	0.05	BDL	0.03	BDL	BDL	BDL	BDL	BDL
4	Copper	0.05	1.5	BDL	0.02	BDL	BDL	BDL	BDL	BDL
6	Lead	0.05	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7	Mercury	0.001	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8	Nickel	-	0.02	BDL	0.02	BDL	BDL	BDL	BDL	BDL
9	Nitrate (as NO_3)	45	45	16	5	**83**	33	21.7	9.67	18.33
10	pH	6.5-8.5	6.5-8.5	7.8	7.4	6.8	7	6.9	6.95	7.4
11	Iron	0.3	0.3	0.04	**0.7**	**0.7**	0.07	0.02	0.069	0.05
12	Total hardness (as CaCO3)	300	600	233	**658**	566	511	**793**	**841**	512
13	Chlorides	250	1000	113	405	135	626	379	862	497
14	Dissolved Solids	500	2000	760	**2270**	1001	828	1851	**2246**	1170

15	Phenolic compounds (as C6H5OH)	0.001	0.002	BDL	BDL	BDL	BDL	BDL	**0.007**	**0.005**
16	Zinc	5	15	0.06	0.5	BDL	BDL	BDL	0.048	0.035
17	Sulphate (as SO4)	200	400	105	**1370**	104	BDL	337	123	134

It is observed that the metal concentration is within the stipulated norms except for iron at one location each at Bawana & Ghazipur. Further TDS, Hardness and Sulphate is found to be exceeding in case of Bawana, Nitrate in case of Ghazipur, Total Hardness in case of Okhla and Total Hardness, Dissolved Solids & Phenolic Compounds are exceeding in case of Tehkhand Plant. As per CGWB report entitled “Aquifer mapping & ground water management plan of NCT Delhi”, 2016, it is observed that Iron in excess of maximum permissible limit has been reported from Northwest, North, Northeast, West, East, Central, Southwest and South districts of NCT, Delhi. Also total hardness, sulphate and Nitrate have also been reported in excess of maximum permissible limit from parts of Northwest, East, Southwest and South Districts of Delhi. Further, Tehkand WtE is located in close vicinity of the Okhla dumpsite and hence high concentration of phenolic compounds can be attributed to the leachate generated from the dumpsite. Additionally, the Ghazipur & Okhla WtE plants are located in very close vicinity of the Ghazipur & Okhla dumpsites respectively.

2.2.8 Odour Management & Green Belt development

The status of odour management and green belt development in and around the WtE plants is given in **Table 8.**

Table 8: Odour and Green Belt development in WtE Plants

S.No.	Particulars	WTE, Bawana	WTE, Ghazipur	WTE, Okhla	WTE, Tehkhand
1	**Odour Control measures**	Waste storage pits are maintained under negative pressure to prevent odour from escaping into the surroundings of Okhla Plant. Spray of bioculture in storage area	Waste storage pits are maintained under negative pressure to prevent odour from escaping into the surroundings at Okhla Plant. Spray of herbal inoculum in storage area	Waste storage pits are maintained under negative pressure to prevent odour from escaping into the surroundings at Okhla Plant. Spray of bioculture in storage area	Waste storage pits are maintained under negative pressure to prevent odour from escaping into the surroundings at Okhla Plant. Spray of bioculture in storage area
2	**Observations during the plant visit**	Mild odour was observed at storage pits but no noticeable odour was observed inside or outside the premises.	Odour was observed within the WtE premises. The odour may also be due to Ghazipur dumpsite adjacent to the plant.	Mild odour was observed at storage pits, but no noticeable odour was observed inside or outside the premises.	Mild odour was observed at storage pits, but no noticeable odour was observed inside or outside the premises.
3	**Provision of Buffer zone & Green belt**	There is no residential development around the plant, at distance of approx. 1000m from the plant. Green belt has been developed in and around the unit.	A residential colony is located at approx. 100m from the boundary of the plant. No green belt has been provided in the premises.	A residential colony is located at approx. 200m from the boundary of the WTE Plant. Green belt has been developed in and around the unit.	A residential colony is located at approx. 200m from the boundary of the WTE Plant. Green belt has been developed in and around the unit.

It is observed that measures for odour control have been taken at the four plants. Three plants, Okhla, Ghazipur and Tehkhand are located close to residential areas and no

green belt has been developed around Ghazipur plant as per the conditions stipulated in the Consent & Environment Clearance issued by DPCC & MoEFCC respectively. (In CTO it is mentioned that the Consentee shall ensure the development & maintenance of adequate green belt all around the boundary of the Unit to comply with conditions stipulated in Environmental Clearance (EC) given by MOEF&CC. As per EC, Greenbelt including mangrove plantation in the area should be taken up.)

2.2.9 Leachate generation & management

Leachate in a Waste-to-Energy (WtE) plant is primarily generated from waste storage pits/storage areas, where the moisture content in municipal solid waste (MSW) leads to leachate formation.

The details of the leachate management systems in the Four WtE plants including treatment processes & capacity are provided in **Table 9** below:

Table 9: Leachate management in WtE Plants

WTE Bawana	WTE Ghazipur	WTE Okhla	WTE Tehkhand
• The Leachate is being sent to Mechanical Vapour Recompression and Evaporation (MVRE) plant with capacity of 200 KLD for treatment. The recovered water is recycled and reused in plant. Condensate from the MVRE is being used in the Flue gas cleaning system of WTE. …	• The leachate generated from MSW is treated in leachate treatment plant (LTP) by biological & chemical treatment method. As informed by the plant, the treated leachate is used for horticulture and road washing, which is as per the condition stipulated in the Consent to Operate (CTO) issued by Delhi Pollution Control Committee (DPCC)	• The leachate generated from MSW is treated in leachate treatment plant (LTP). The designed capacity of leachate treatment plant is 332 KLD. Up to 100 KLD, leachate routed to an advanced technology comprising of multi effect evaporators (MEE). In CTO it has been mentioned that treated effluent shall be used/recycled within the premises. and condensate recovered from leachate is reused in the process. In case of over 100 KLD leachate leachate is routed to reverse osmosis system, the reject water is sent to MEE, while permeate is reused in the plant. …	• The leachate generated from MSW is treated in conventional type leachate treatment plant (LTP). The designed capacity of leachate treatment plant is 360 KLD. LTP comprises of Primary Treatment and Secondary Treatment which comprises of Anaerobic & Aerobic biological treatment. In CTO it is mentioned that treated effluents conforming to the prescribed standards only shall be recirculated and reused within the plant.

It is observed that the leachate generated is reused in Bawana and Okhla Plant. However, the same is used for horticulture/road washing purpose in Ghazipur plant.

In Tehkhand, the treated Leachate water is being utilized for the Ash quenching and gas conditioning tower. Further, the biogas generated from the Anaerobic digester in LTP shall be used for the CBG production. However presently, methane generated from the anaerobic digestion is being flared in the environment.

Sampling and analysis of Treated Leachate was carried out during the joint inspection of four WtE Plants in Delhi viz Bawana , Ghazipur, Okhla and Tehkhand ,and the results of the same is given in **Table 10.**

Table 10: Analysis of Treated Leachate

S. No.	**Parameter**	**Land Disposal *(mg/l max) (Schedule II (B) of SWM Rules, 2016)**	**Measured Values (mg/L)**			
			WTE Bawana	**WTE Ghazipur**	**WTE Okhla**	**WTE Tehkhand**
1	Suspended Solids (mg/l max)	200	10	8	22	11
2	Dissolved Solids (Inorganic) (mg/l max)	2100	44	**2406**	17	1948
3	pH Value	5.5-9.0	9.0	8.1	8.3	9.1
4	Ammonical Nitrogen (as N) (mg/l max)	-	1365	1	3.5	3
5	Total Kjeldahl Nitrogen (as N) (mg/l max)	-	1386	1.7	5.5	10
6	Biochemical Oxygen Demand (3 days at 27°C) (mg/l max)	100	**1528**	8	39	18
7	Chemical Oxygen Demand (mg/l max)	-	3260	56	106	131
8	Arsenic (as As) (mg/l max)	0.2	0.004	0.006	BDL	BDL
9	Mercury (as Hg) (mg/l max)	-	0.02	0.005	0.004	BDL
10	Lead (as Pb) (mg/l max)	-	BDL	BDL	BDL	BDL
11	Cadmium (as Cd) (mg/l max)	-	BDL	BDL	BDL	BDL

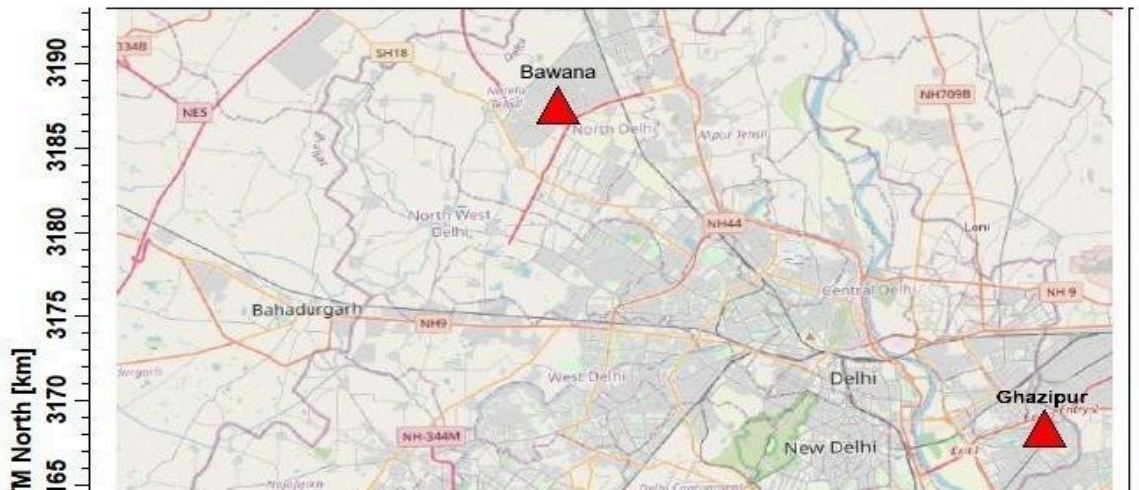
12	Total Chromium (as Cr) (mg/l max)	-	BDL	0.02	BDL	0.008
13	Copper (as Cu) (mg/l max)	-	BDL	0.01	BDL	0.008
14	Zinc (as Zn) (mg/l max)	-	BDL	0.02	BDL	0.067
15	Nickel (as Ni) (mg/l max)	-	BDL	0.04	BDL	0.026
16	Cyanide (as CN) (mg/l max)	0.2	0.09	BDL	BDL	BDL
17	Chloride (as Cl) (mg/l max)	600	26	**760**	2	**780**
18	Fluoride (as F) (mg/l max)	-	0.1	0.2	BDL	0.66
19	Phenolic Compounds (C6H5OH) (mg/l max)	-	2.8	BDL	0.09	BDL

It is observed that BOD is exceeding the prescribed norms in case of Bawana plant, Dissolved Solids & Chlorides in case of Ghazipur plant & Chloride is exceeding in case of Tehkhand plant.

2.2.10 Impact of emission of pollutants from Waste to Energy (WtE) on Ambient Air Quality

Impact of Emission of particulate matter (PM), Oxides of Nitrogen (NOx), Sulphur Dioxide (SO_2) and Dioxin & Furans (TEQ) is simulated using source dispersion model CalPuff (California Puff Model). CalPuff is an air quality modelling system that has been recognized by the United States Environmental Protection Agency (USEPA).

Meteorological domain of 50 km x 50 km at a sub-grid resolution of 4 km x 4 km is used for following the movement of puff. Hourly wind data of one year generated by Weather Research Forecast (WRF) model is used for one year. **Figure 4** shows the study domain with four sources.



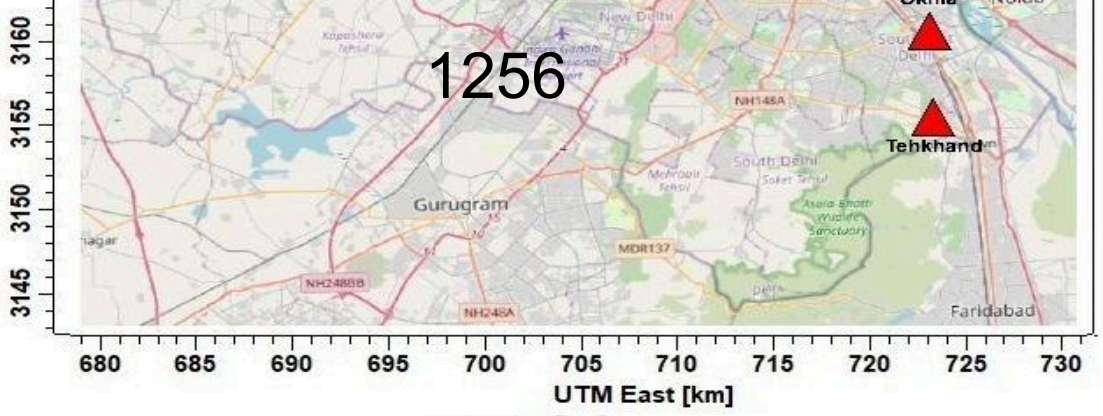


Figure 4 Study area and WtE stacks of Bawana, Ghazipur, Okhla and Tehkhand

UTM: *Universal Transverse Mercator: Coordinate System for locating a point*

Stack characteristics and Stack emission data (as monitored during the emission monitoring during March 21-23, 2025 & April 23, 2025) have been used as shown in **Tables 11 & 12** in the simulation of emission dispersion. A receptor grid around the source is used for estimating the ground level concentration (GLC) of pollutants.

Table 11: Emission characteristics used for dispersion simulation.

No.	WtE Plant	Latitude	Longitude	Base Elevation	Stack Height [m]	Top Dia. [m]
1	Okhla	28.5537	77.2808	213.89	60	3.17
2	Bawana	28.8008	77.0687	216.69	60	3.2
3	Ghazipur	28.6230	77.3239	228.57	60	1.8
4	Tehkhand	28.5079	77.2816	213.89	60	3.04

Table 12: Stack emission data used for simulation

No.	WtE Plant	Exit Velocity	Exit Temp.	PM	NOx	SO_2	Dioxin
		[m/s]	[K]	[g/s]	[g/s]	[g/s]	[g/s]
1	Okhla	16.7	470	1.2529	10.6914	2.2552	2.59E-10
2	Bawana	11.6	447	1.741	1.1127	1.1189	3.72E-08
3	Ghazipur	15.4	444	0.5228	4.0222	0.5783	1.90E-09
4	Tehkhand	9.81	424	1.2736	7.3115	0.1501	2.65E-09

(i) Dispersion of Emission from Okhla WtE Plant

The impact on Ground Level Concentration (GLC) due to emissions from stack of WtE plant at Okhla is given in **Table 13.** The corresponding isopleths of daily average and annual average GLC of PM, NOx, SO_2 and Dioxin & Furan are given in **Figure 5 to Figure 12**.

Table 13: Highest GLC due to emission from stack of WtE plant at Okhla.

	PM (µg/m^3)	**NOx**(µg/m^3)	**SO_2** (µg/m^3)	**Dioxin & Furan** (µg/m^3)
Daily Average	4.2103E-01	3.5928	7.5784E-001	9.5661E-012
Annual Average	8.0230E-002	6.8463E-001	1.4441E-001	1.7019E-012

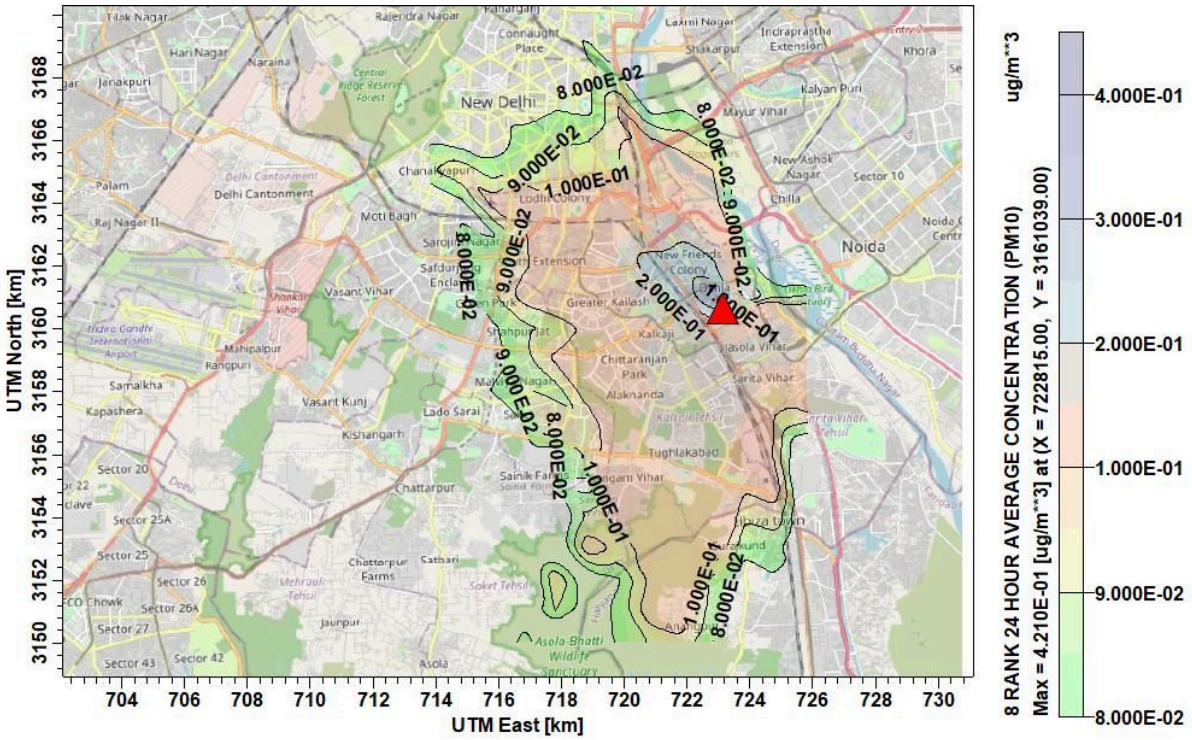


Fig. 5: Isopleth of **daily average** GLC of PM around Okhla WtE plant.

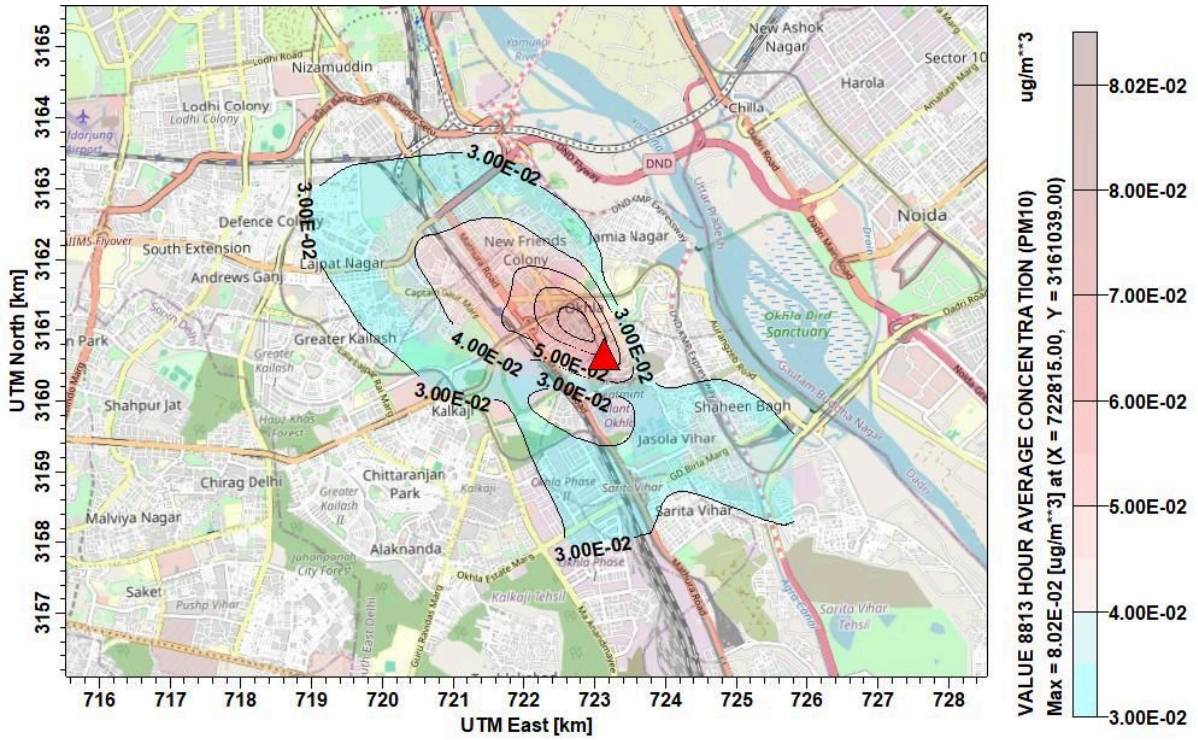


Fig. 6: Isopleth of **Annual average** GLC of PM around Okhla WtE plant.

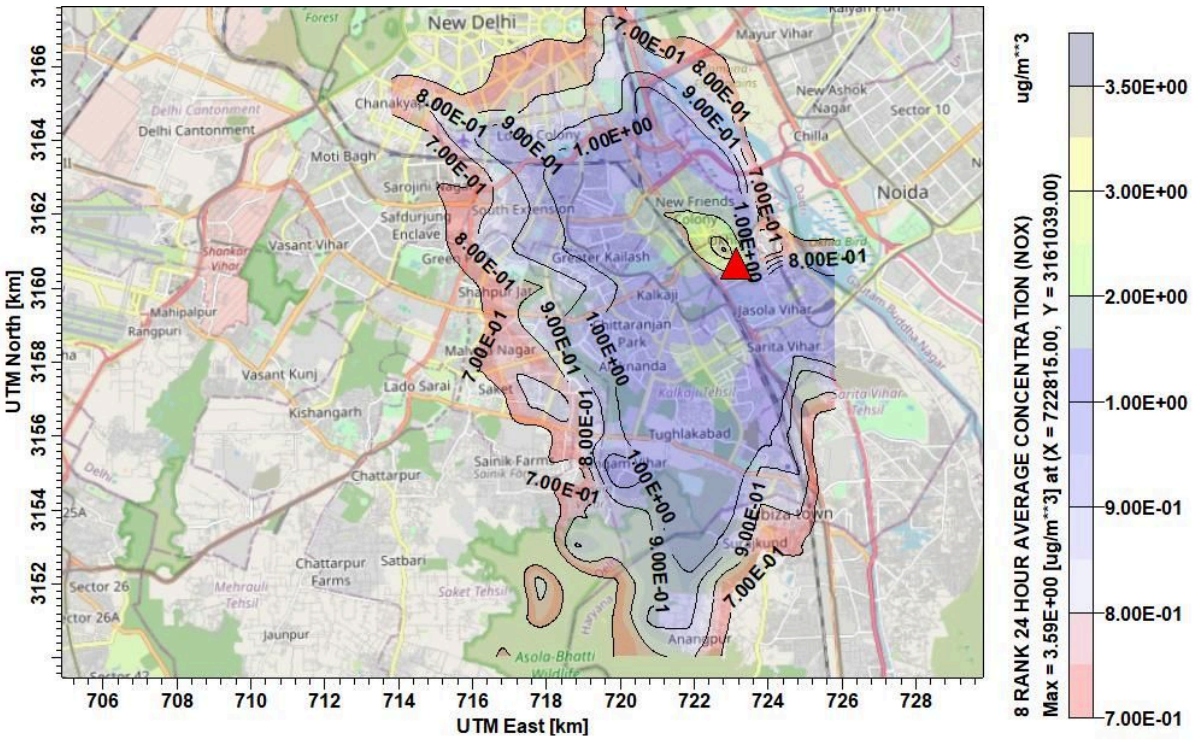


Fig. 7: Isopleth of **daily average** GLC of NOx around Okhla WtE plant.

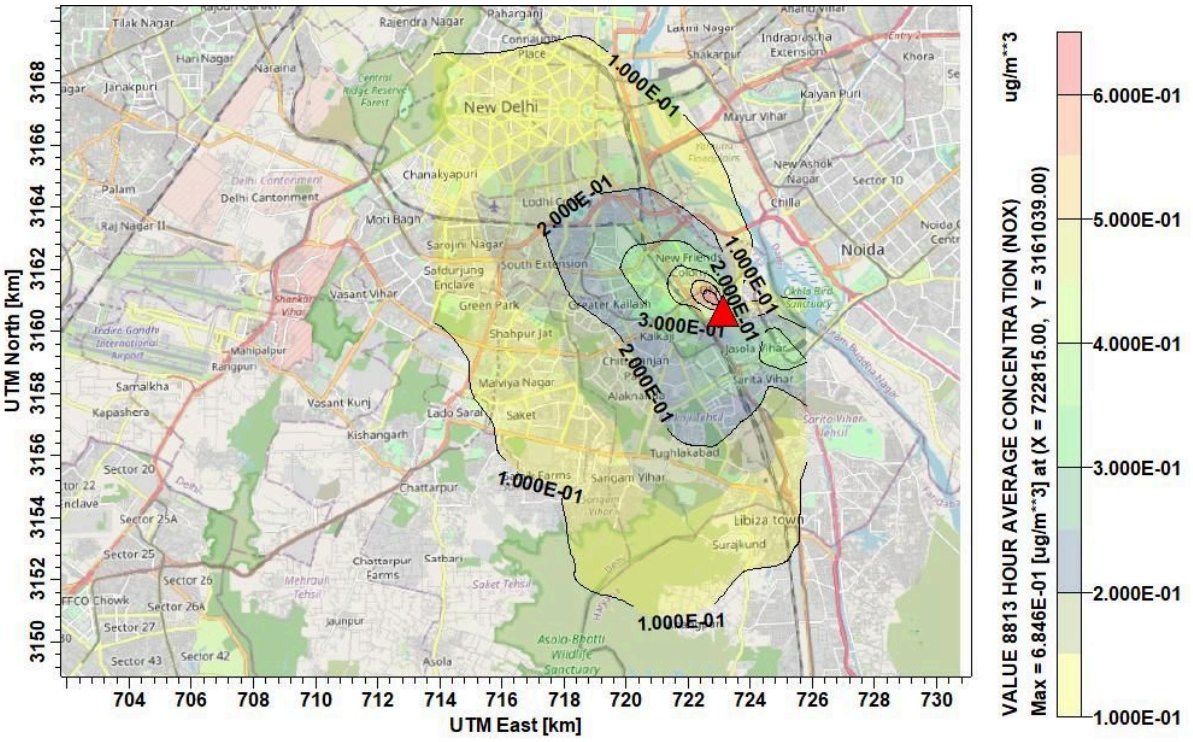


Fig. 8: Isopleth of **annual average** GLC of NOx around Okhla WtE plant.

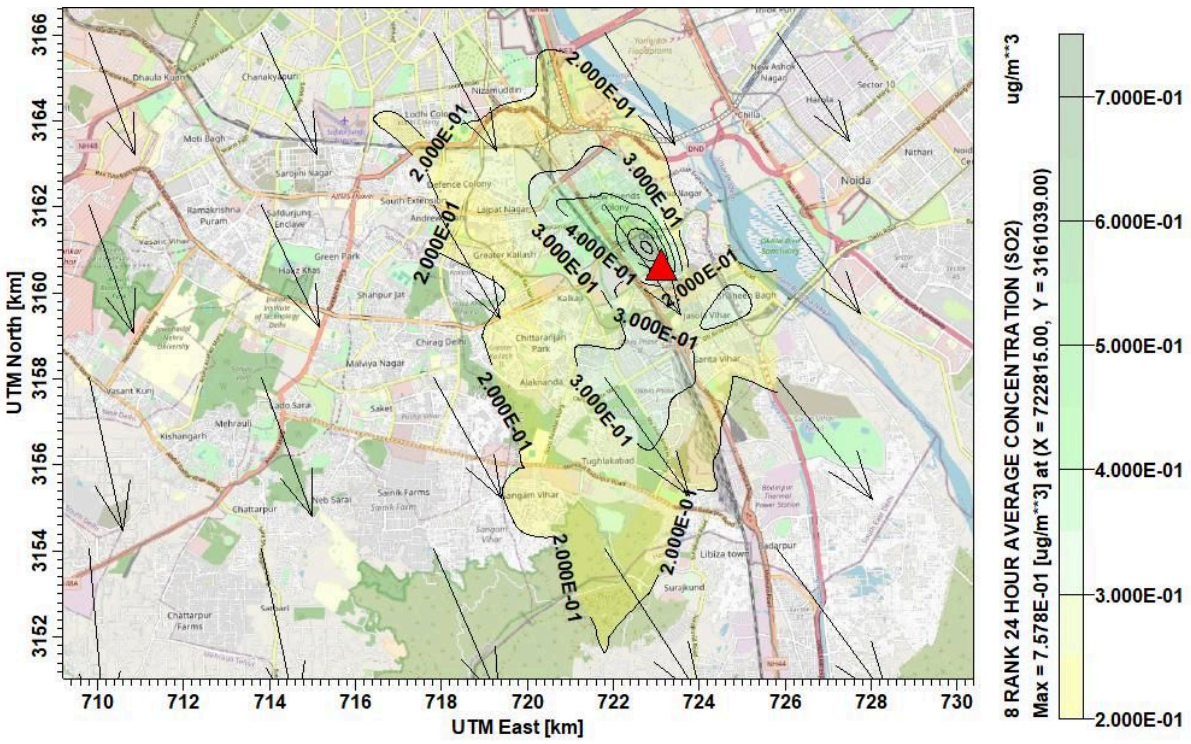


Fig. 9: Isopleth of **daily average** GLC of SO_2 around Okhla WtE plant.

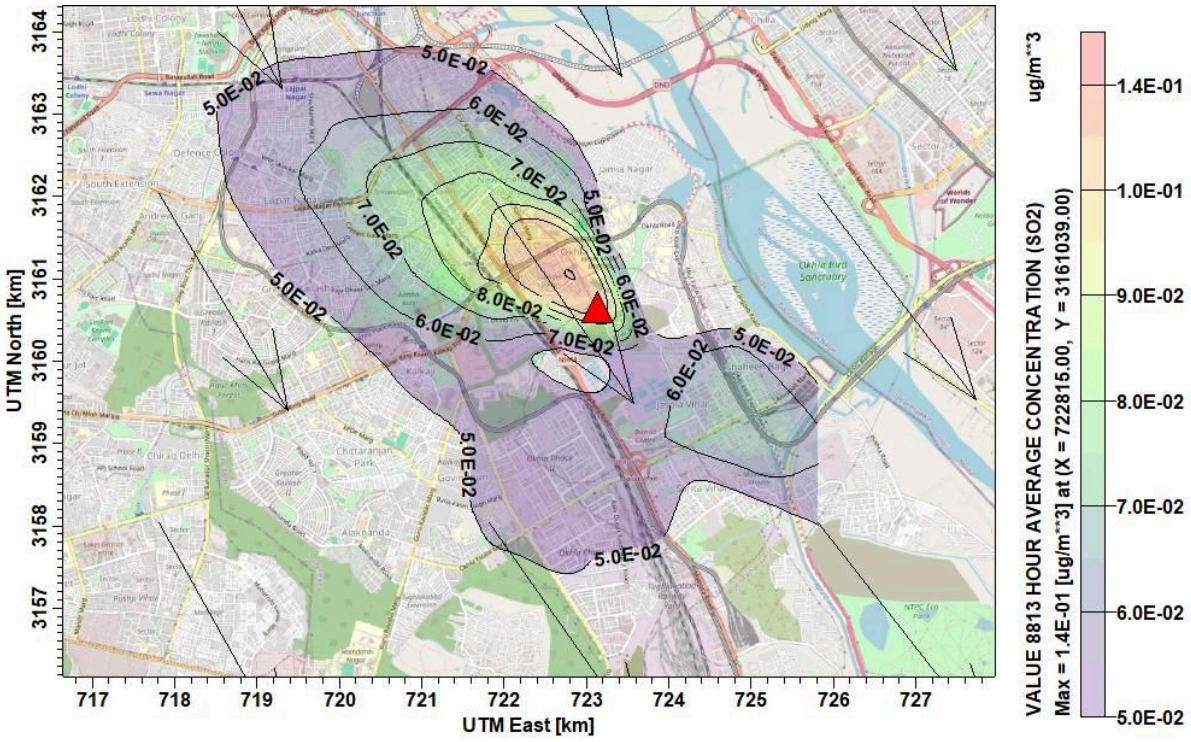


Fig. 10: Isopleth of **annual average** GLC of SO_2 around Okhla WtE plant.

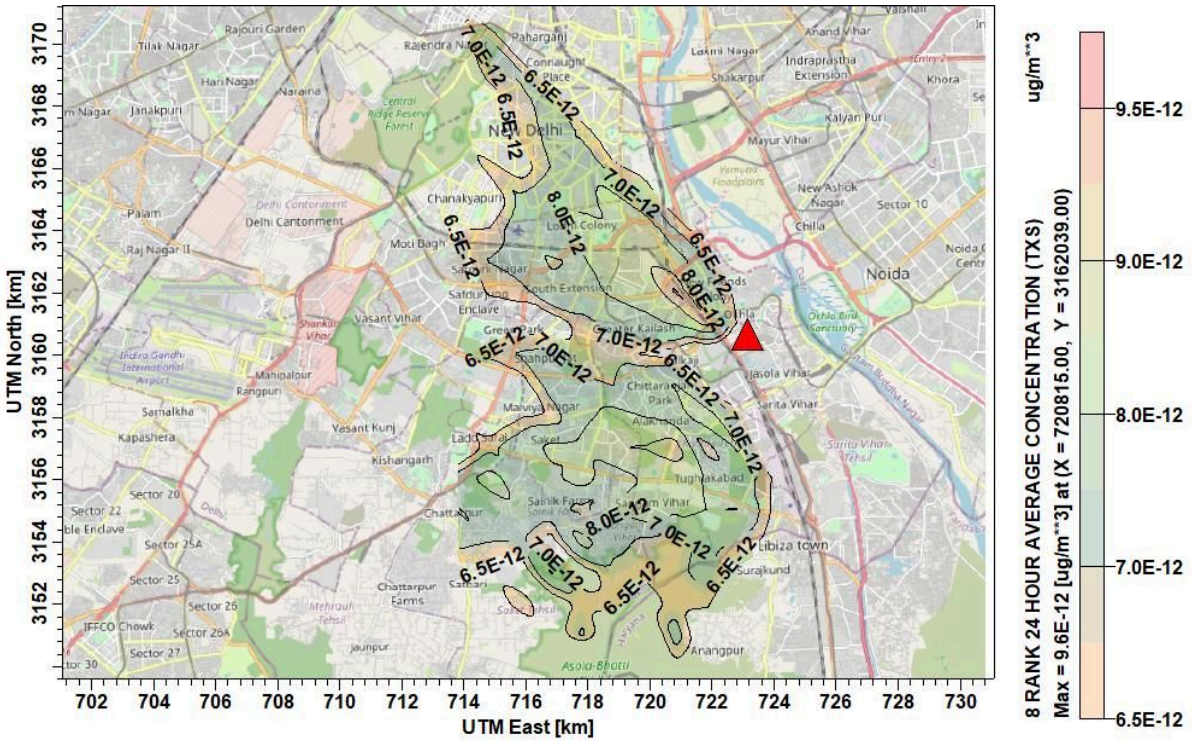


Figure 11: Isopleth of **daily average** GLC of Dioxin around Okhla WtE plant.

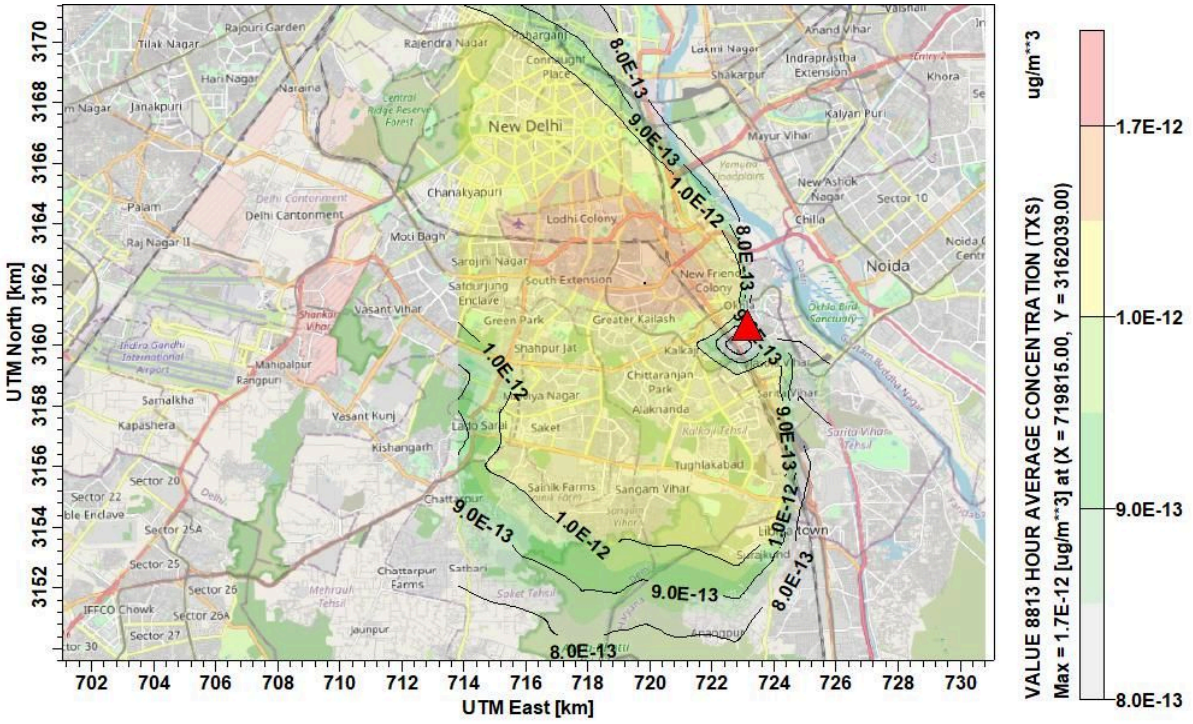


Figure 12: Isopleth of **annual average** GLC of Dioxin around Okhla WtE plant.

(ii) Dispersion of Emission from Bawana WtE Plant

The GLC due to emission from stack of WtE plant at Bawana is given in **Table 14.** The corresponding isopleths of daily average and annual average GLC of PM, NOx, SO_2 and Dioxin & Furan are given in **Figure 13 to Figure 20**.

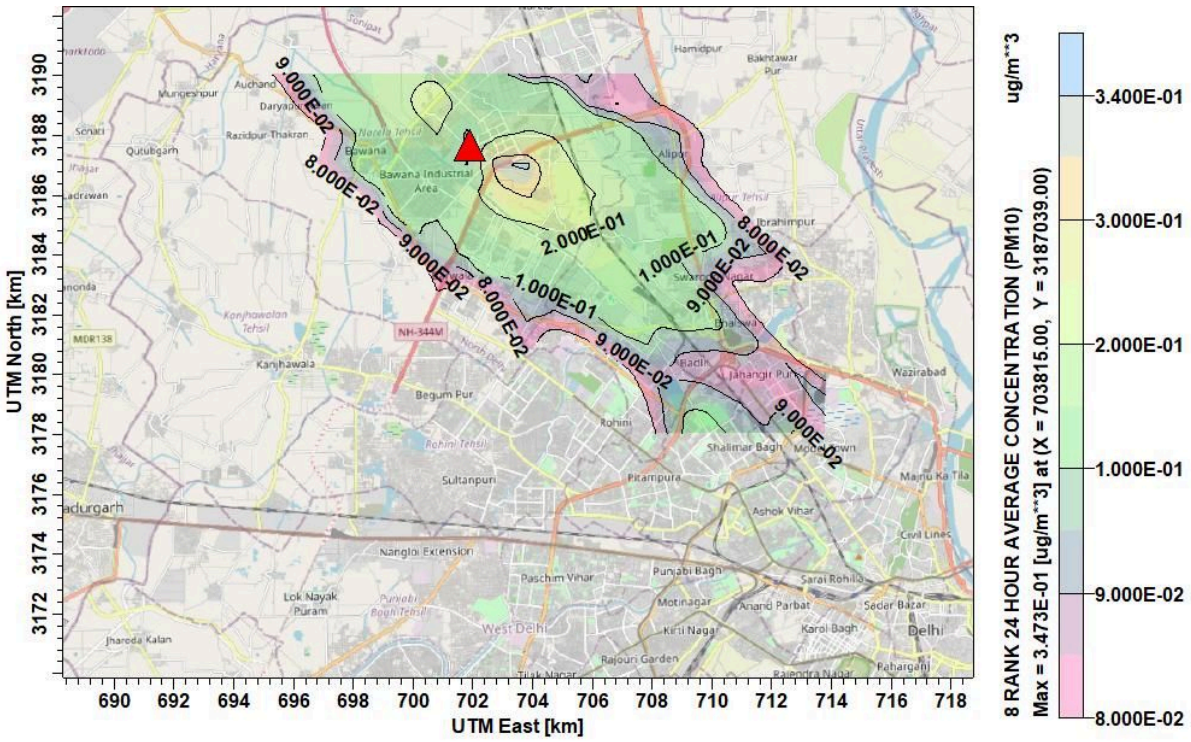


Figure 13: Isopleth of **daily average** GLC of PM around Bawana WtE plant.

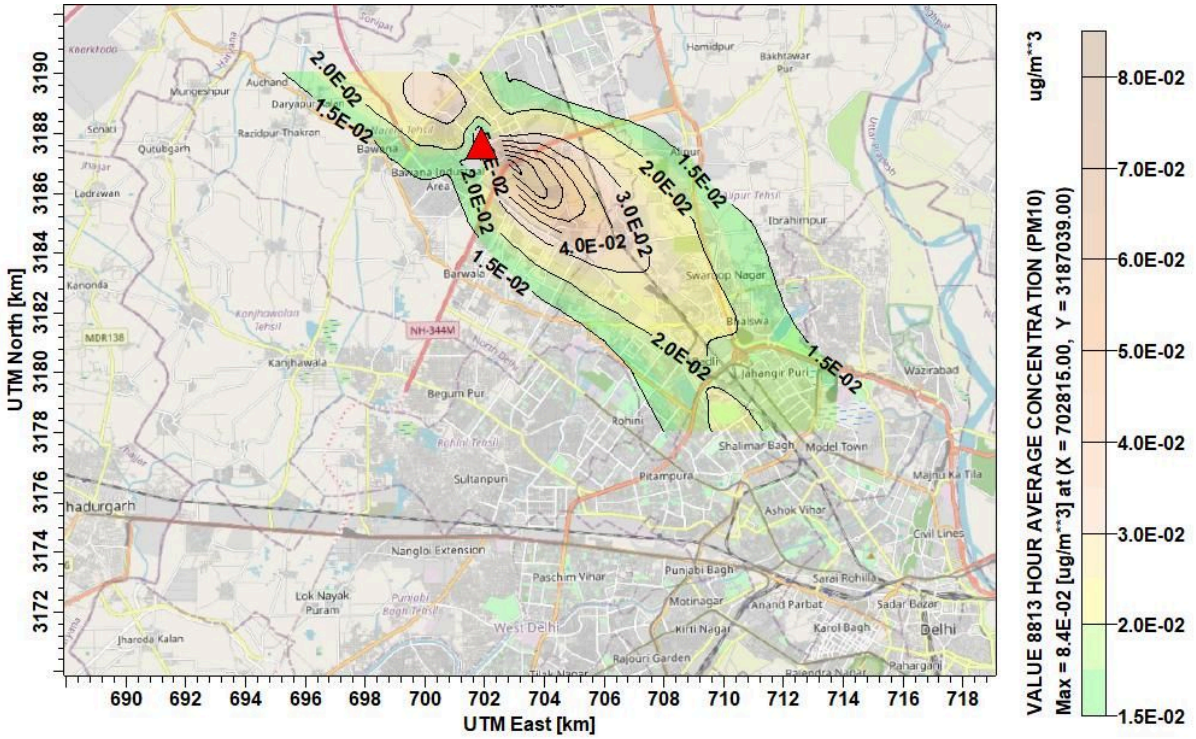


Figure 14: Isopleth of **Annual average** GLC of PM around Bawana WtE plant.

Table 14: Highest GLC due to emission from stack of WtE plant at Bawana.

	PM(µg/m^3)	**NOx**(µg/m^3)	**SO_2**(µg/m^3)	**Dioxin & Furan**(µg/m^3)
Daily Average	3.4725E-001	2.2193E-001	2.2317E-001	1.9444E-009
Annual Average	8.4250E-002	5.3845E-002	5.4145E-002	3.0420E-010

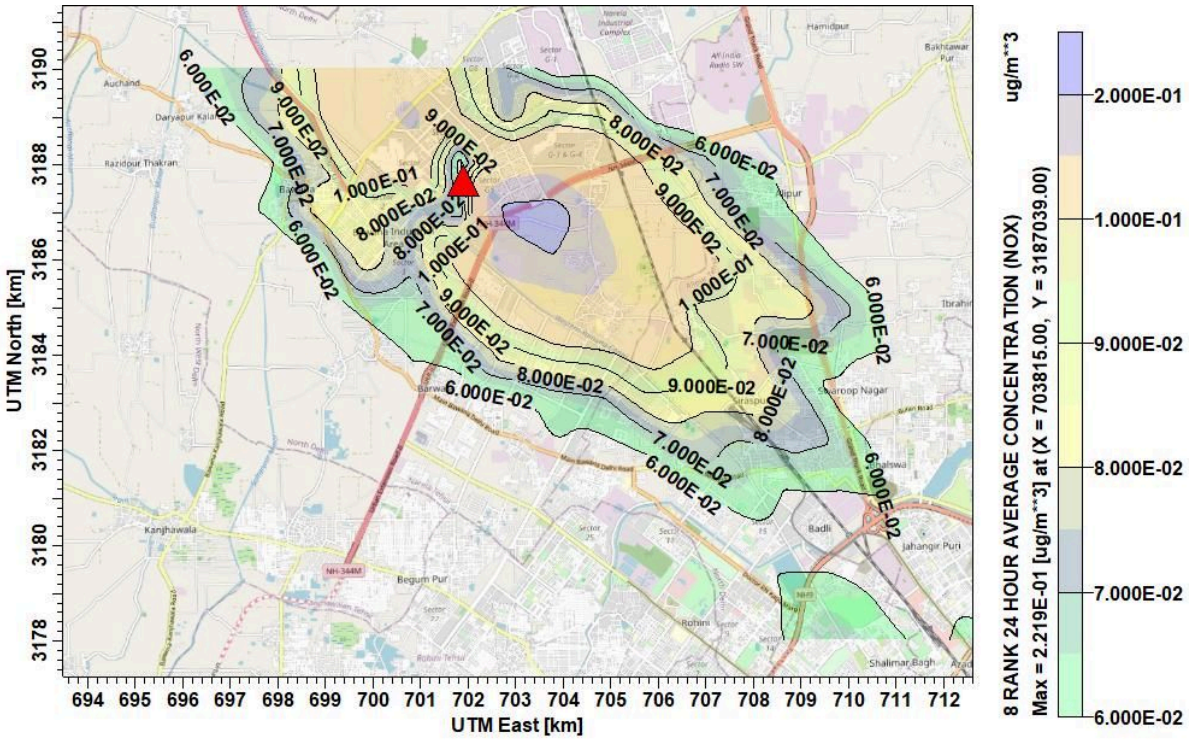


Figure 15: Isopleth of **daily average** GLC of NOx around Bawana WtE plant.

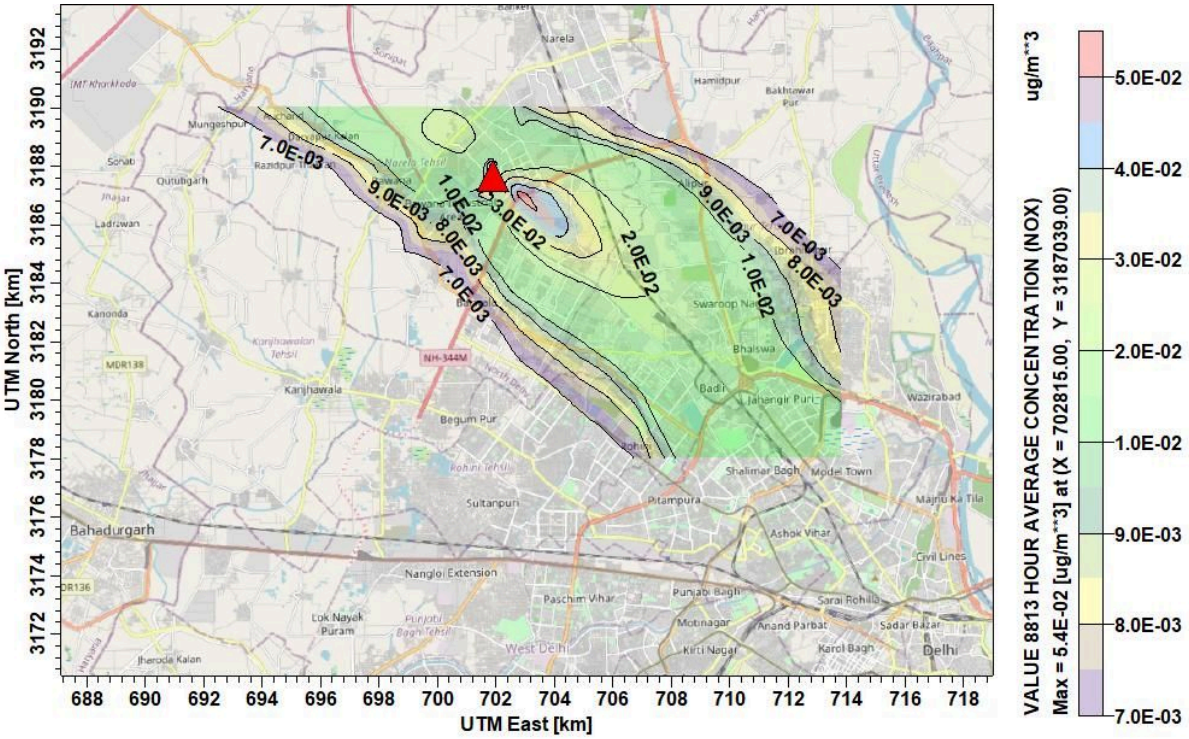


Figure 16: Isopleth of **annual average** GLC of NOx around Bawana WtE plant.

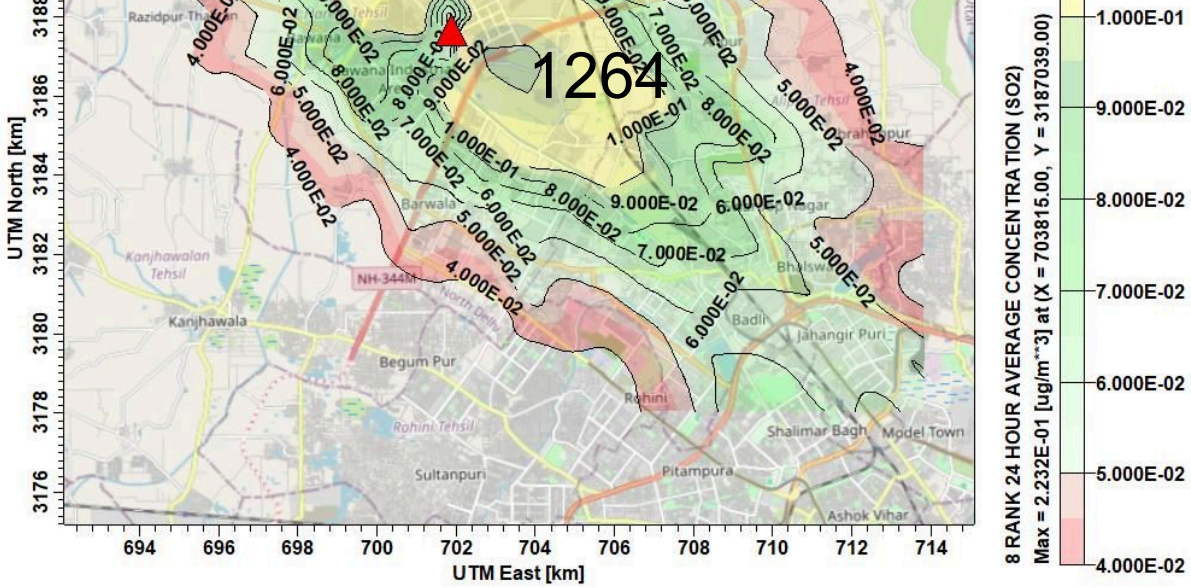


Figure 17: Isopleth of **daily average** GLC of SO_2 around Bawana WtE plant.

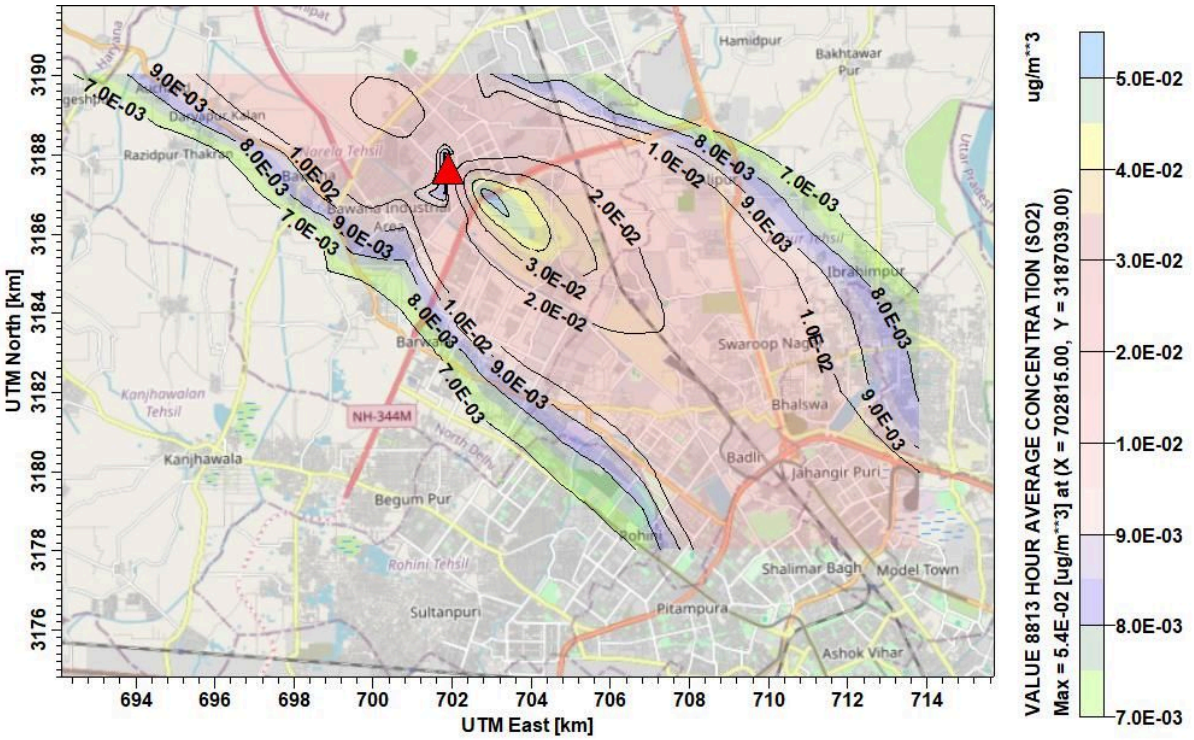


Figure 18: Isopleth of **annual average** GLC of SO_2 around Bawana WtE plant.

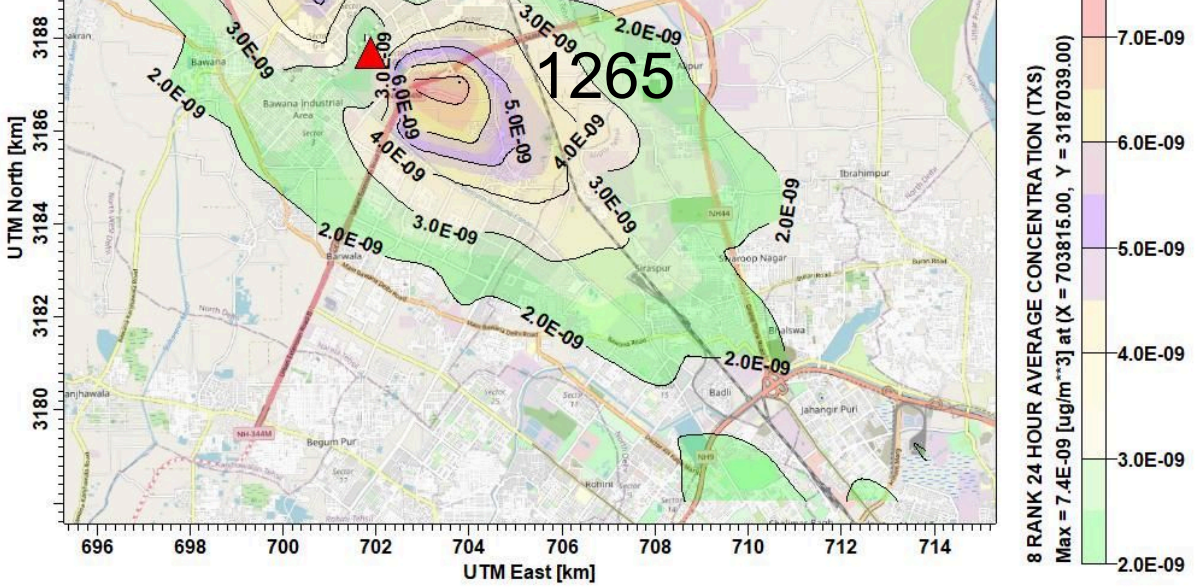


Fig. 19: Isopleth of **daily average** GLC of Dioxin around Bawana WtE plant.

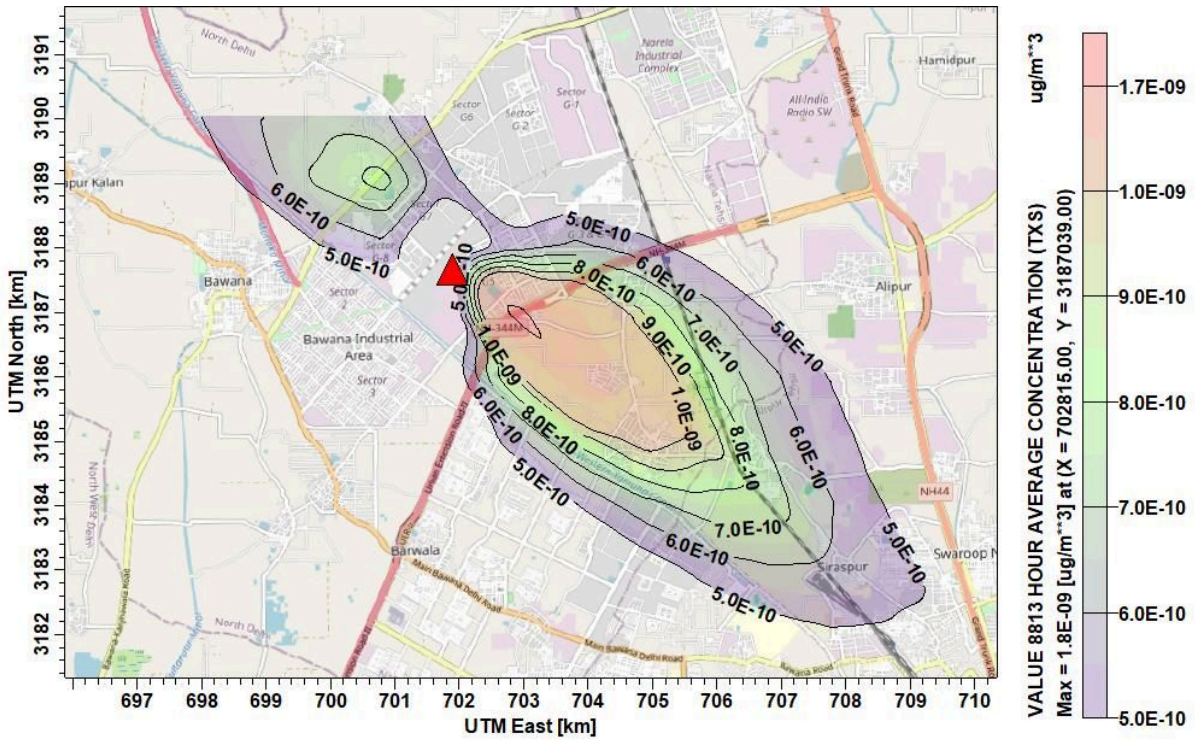


Fig. 20: Isopleth of **annual average** GLC of Dioxin around Bawana WtE plant.

(iii) Dispersion of Emission from Ghazipur WtE Plant

The GLC due to emission from stack of WtE plant at Ghazipur is given in **Table 15.** The corresponding isopleths of daily average and annual average GLC of PM, NOx, SO_2 and Dioxin & Furan are given in **Figure 21 to Figure 28**.

Table 15: Highest GLC due to emission from stack of WtE plant at Ghazipur.

	PM(µg/m^3)	**NOx**(µg/m^3)	**SO_2** (µg/m^3)	**Dioxin & Furan** (µg/m^3)

Daily Average	1.4503E-001	1.1158E+0	1.6042E-001	5.2595E-010
Annual Average	2.0832E-002	1.6027E-001	2.3043E-002	7.5548E-011

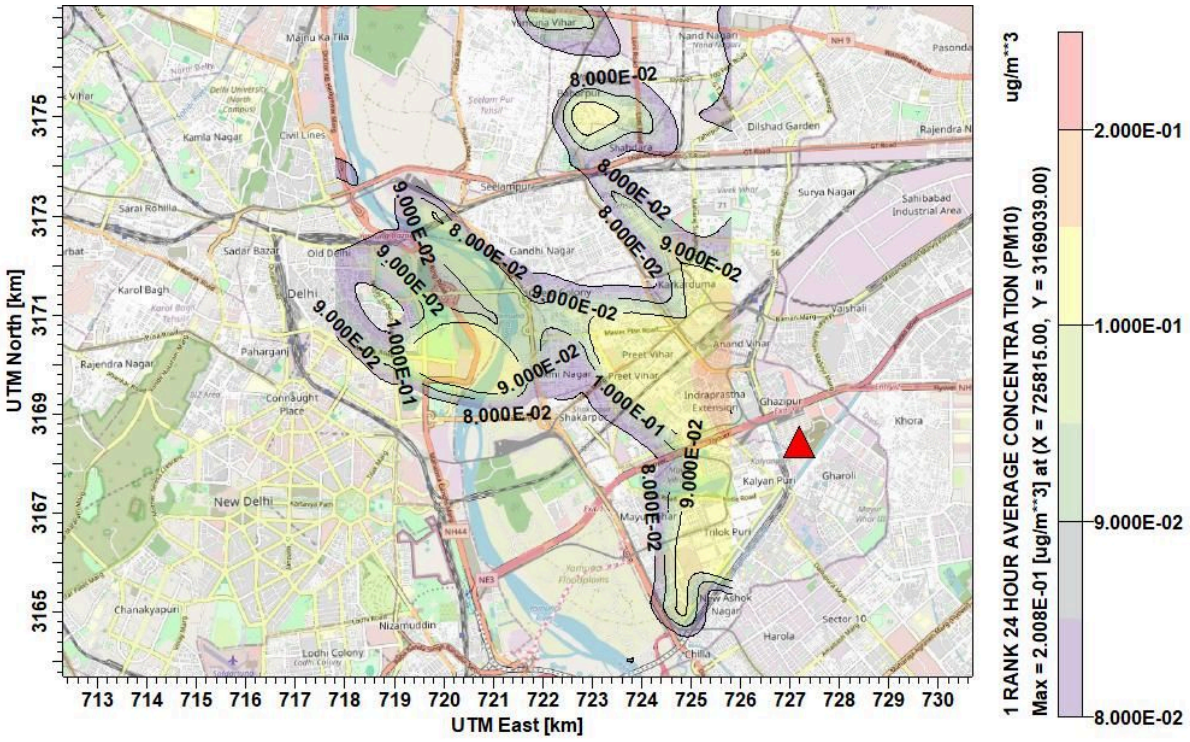


Figure 21: Isopleth of **daily average** GLC of PM around Ghazipur WtE plant.

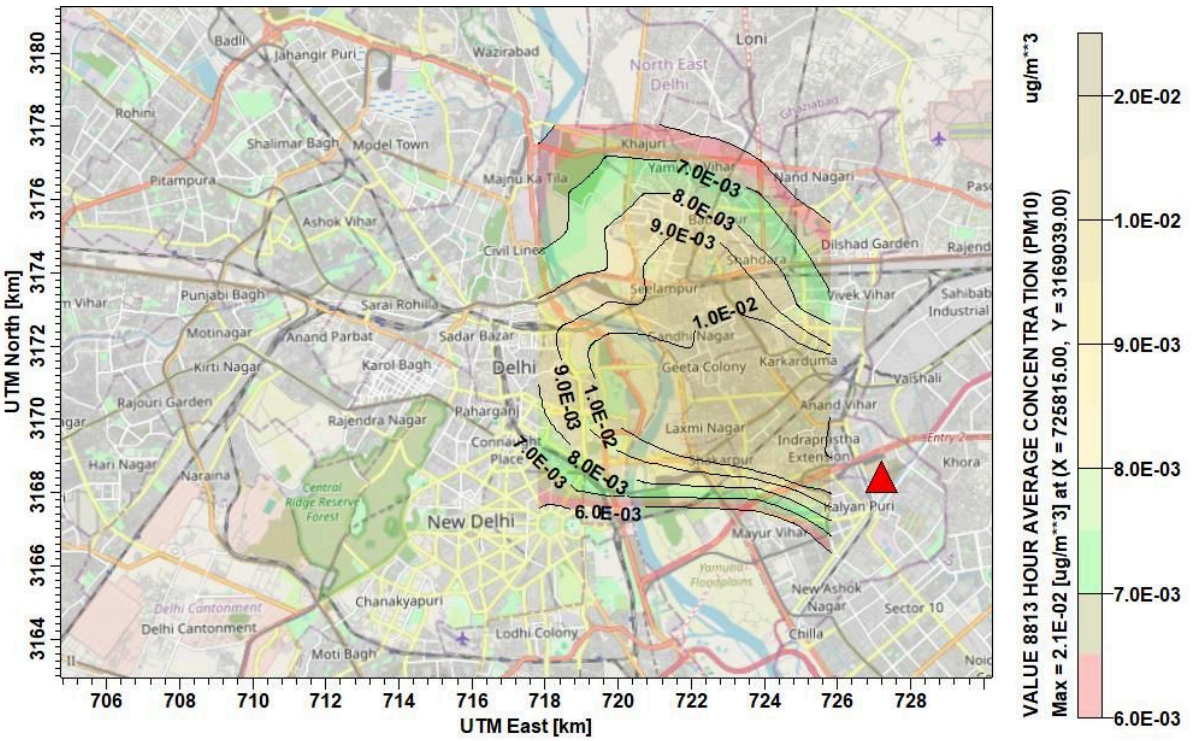


Figure 22: Isopleth of **annual average** GLC of PM around Ghazipur WtE plant.

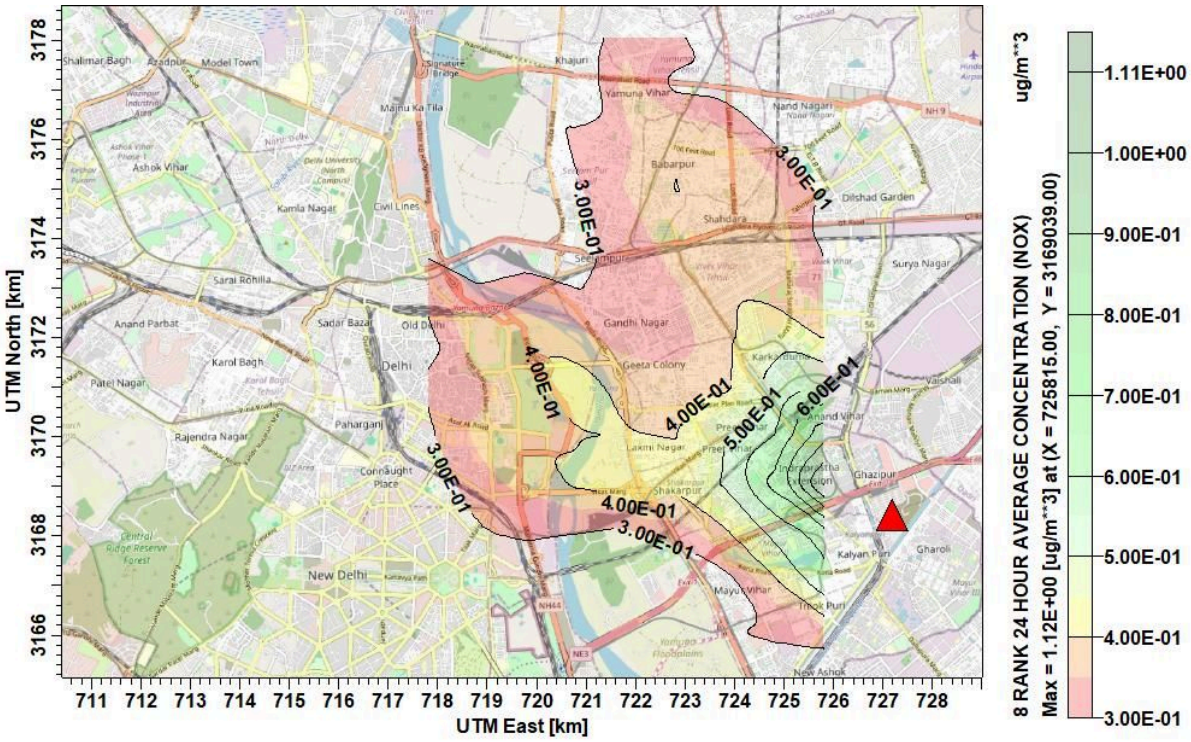


Figure 23: Isopleth of **daily average** GLC of NOx around Ghazipur WtE plant.

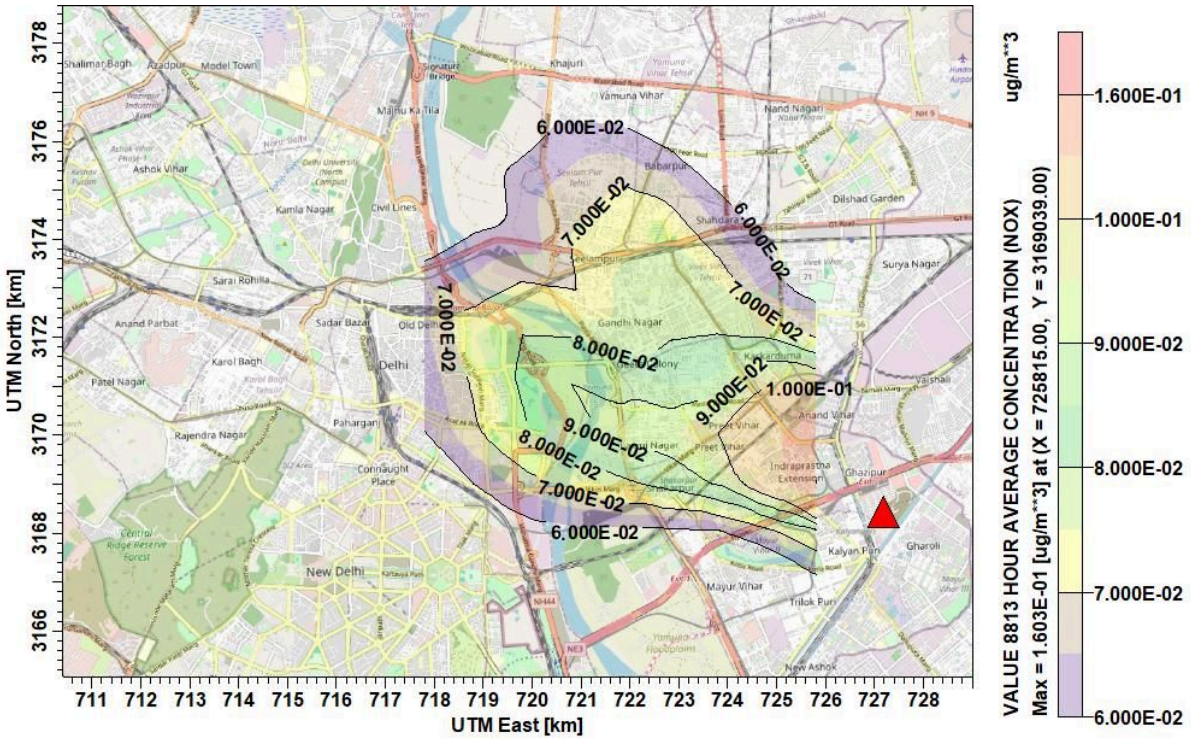


Figure 24: Isopleth of **annual average** GLC of NOx around Ghazipur WtE plant.

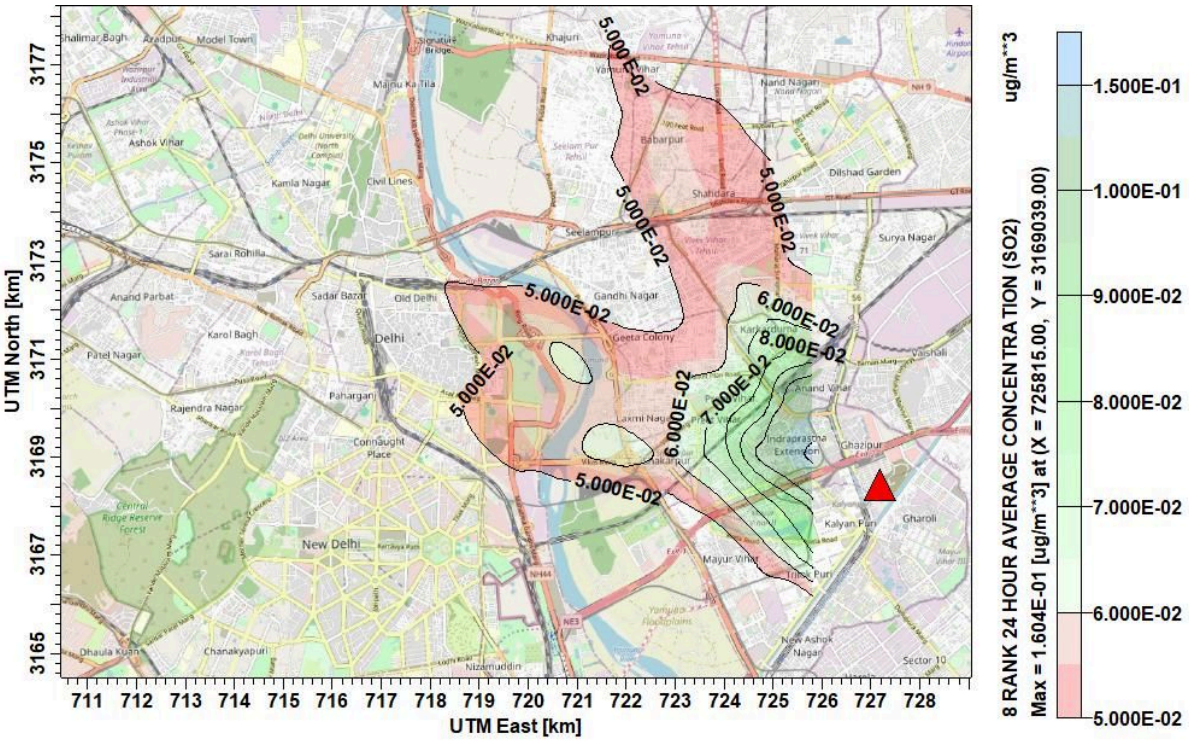


Figure 25: Isopleth of **daily average** GLC of SO_2 around Ghazipur WtE plant.

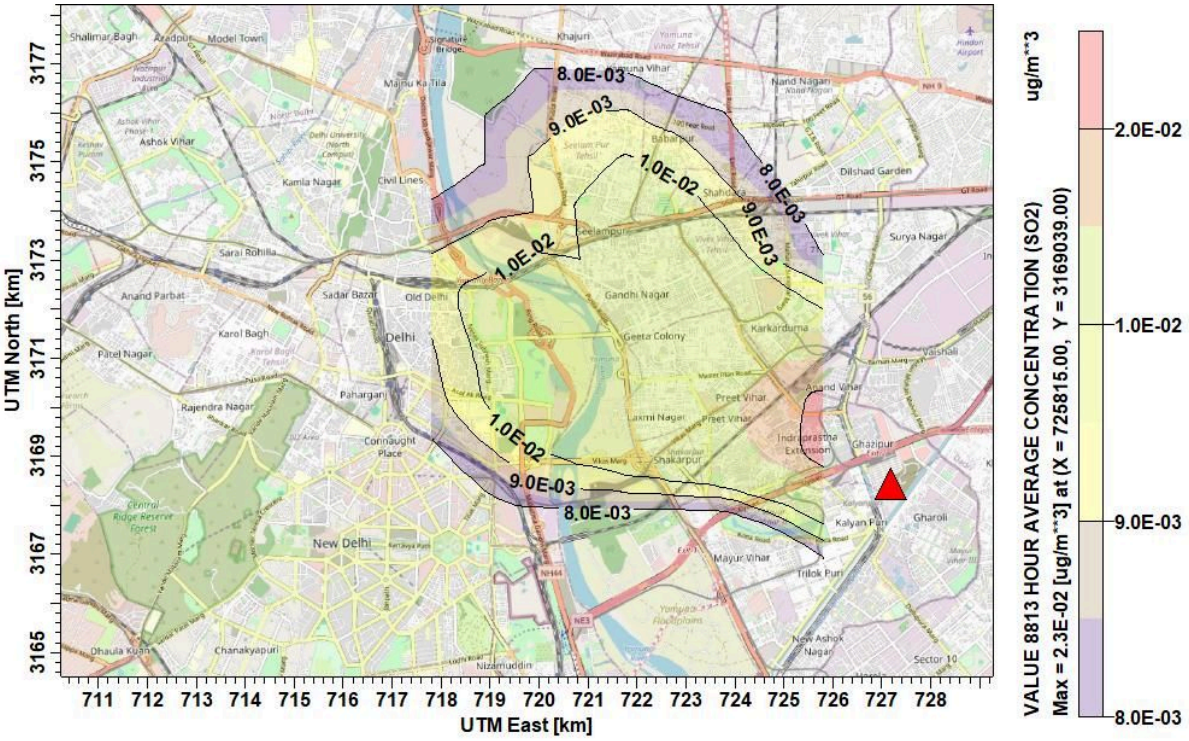


Figure 26: Isopleth of **annual average** GLC of SO_2 around Ghazipur WtE plant.

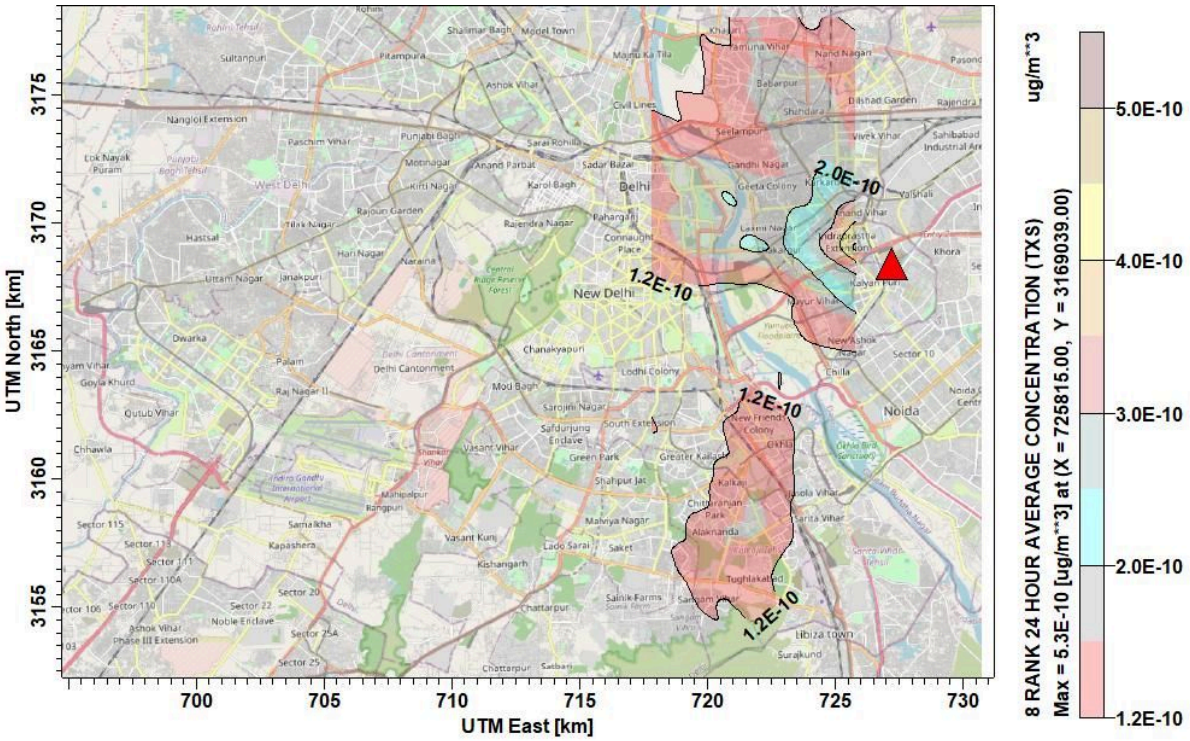


Figure 27: Isopleth of **daily average** GLC of Dioxin around Ghazipur WtE plant.

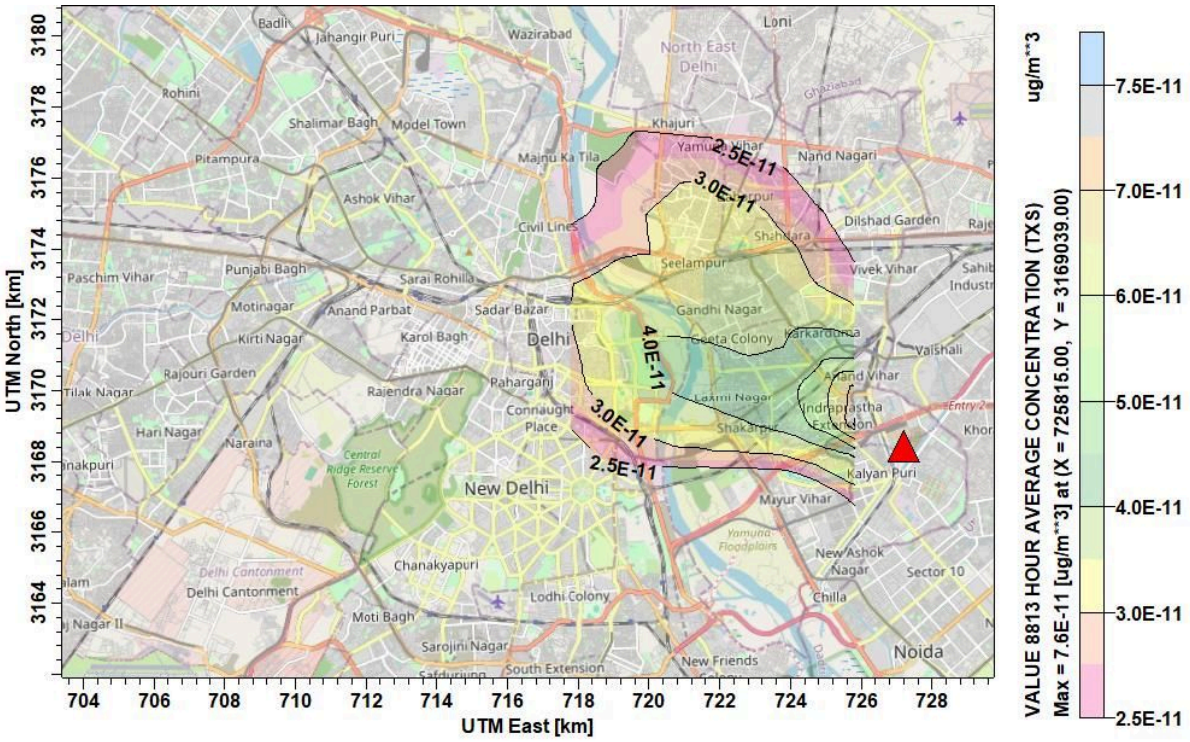


Figure 28: Isopleth of **annual average** GLC of Dioxin around Ghazipur WtE plant.

(iv) Dispersion of Emission from Tehkhand WtE Plant

The GLC due to emission from stack of WtE plant at Tehkhand is given in **Table 16.** The corresponding isopleths of daily average and annual average GLC of PM, NOx, SO_2 and Dioxin & Furan are given in **Figure 29 to Figure 36**.

Table 16: Highest GLC due to emission from stack of WtE plant at Tehkhand.

	PM(µg/m^3)	**NOx**(µg/m^3)	**SO_2**(µg/m^3)	**Dioxin & Furan**(µg/m^3)
Daily Average	5.5979E-001	3.2137E+0	3.2137E+0	1.1656E-009
Annual Average	1.2244E-001	7.0291E-001	7.0291E-001	2.5496E-010

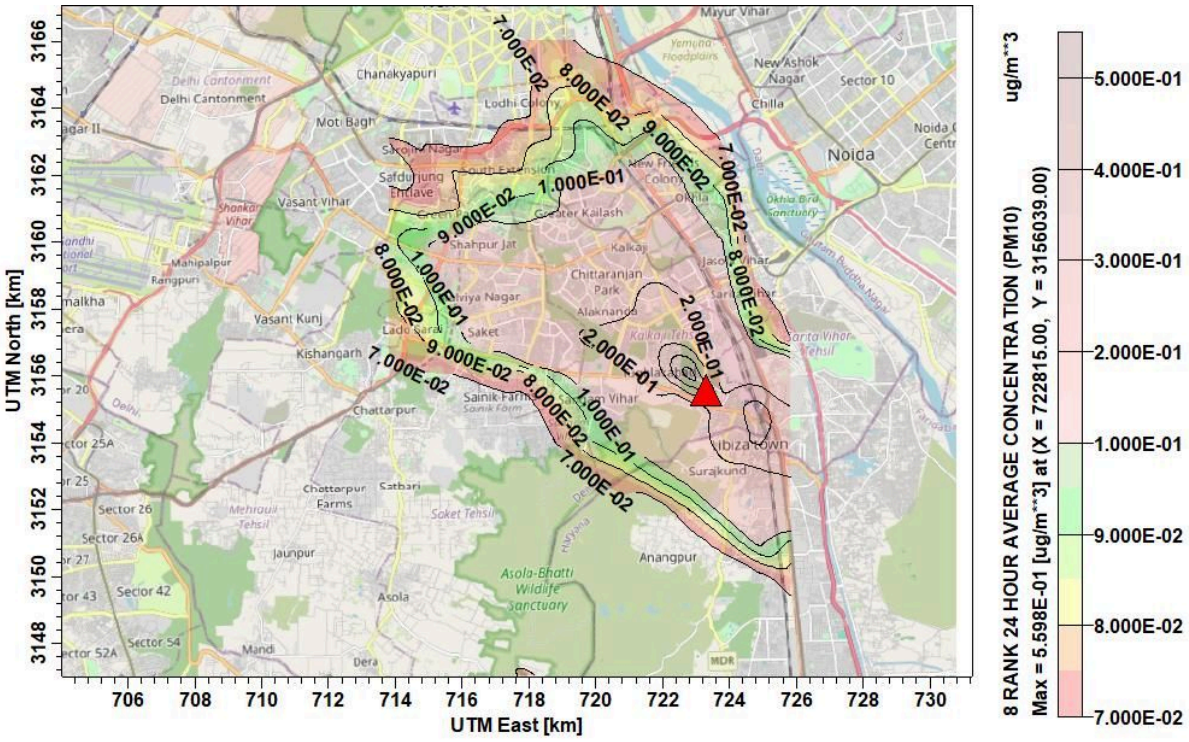


Figure 29: Isopleth of **daily average** GLC of PM around Tehkhand WtE plant.

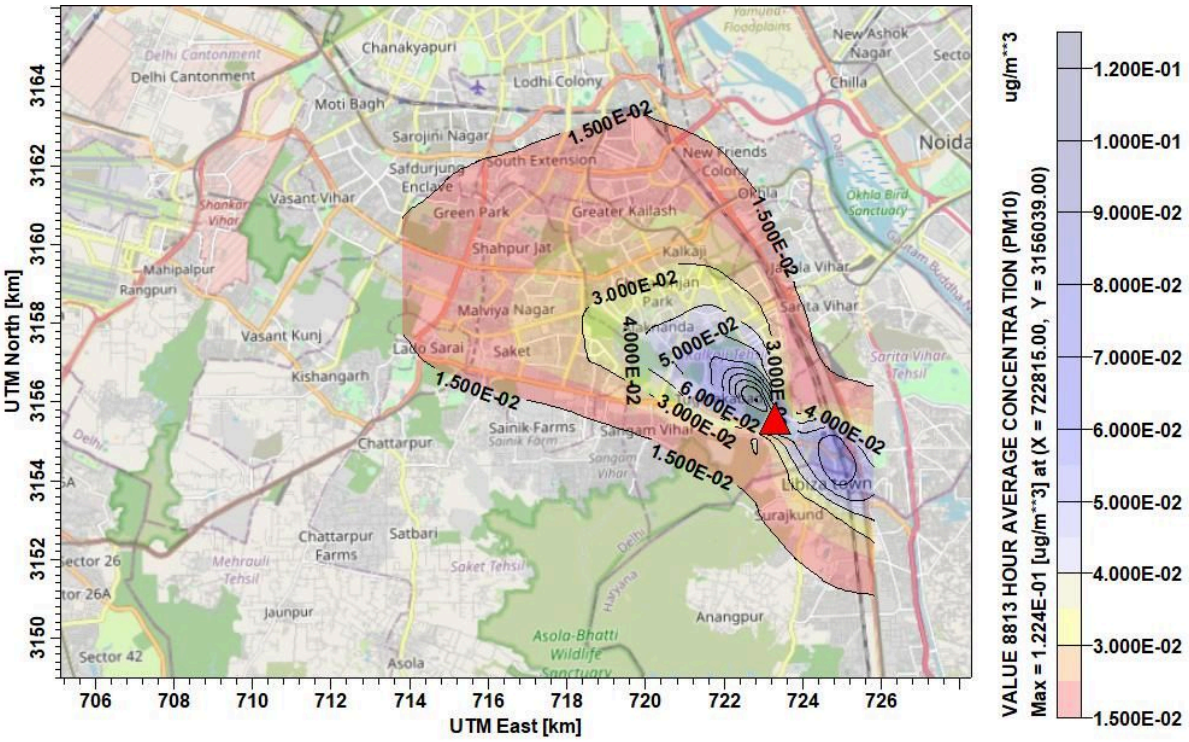


Figure 30: Isopleth of **annual average** GLC of PM around Ghazipur WtE plant.

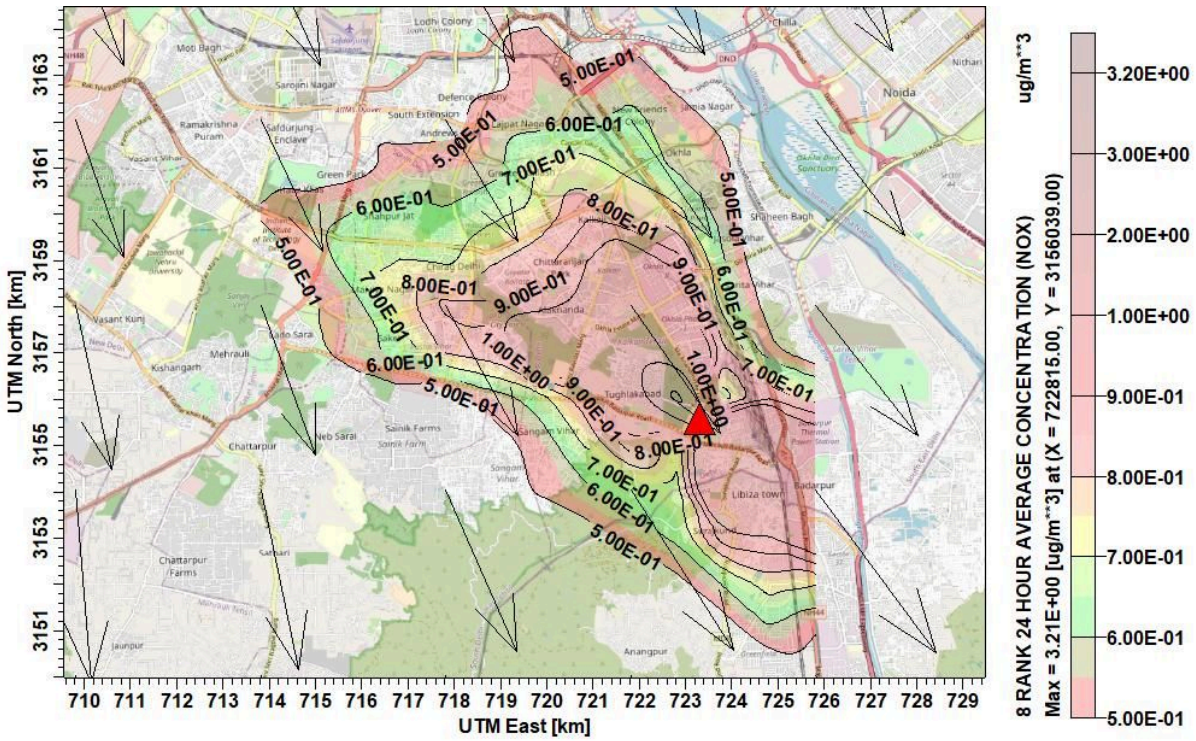


Figure 31: Isopleth of **daily average** GLC of NOx around Tehkhand WtE plant.

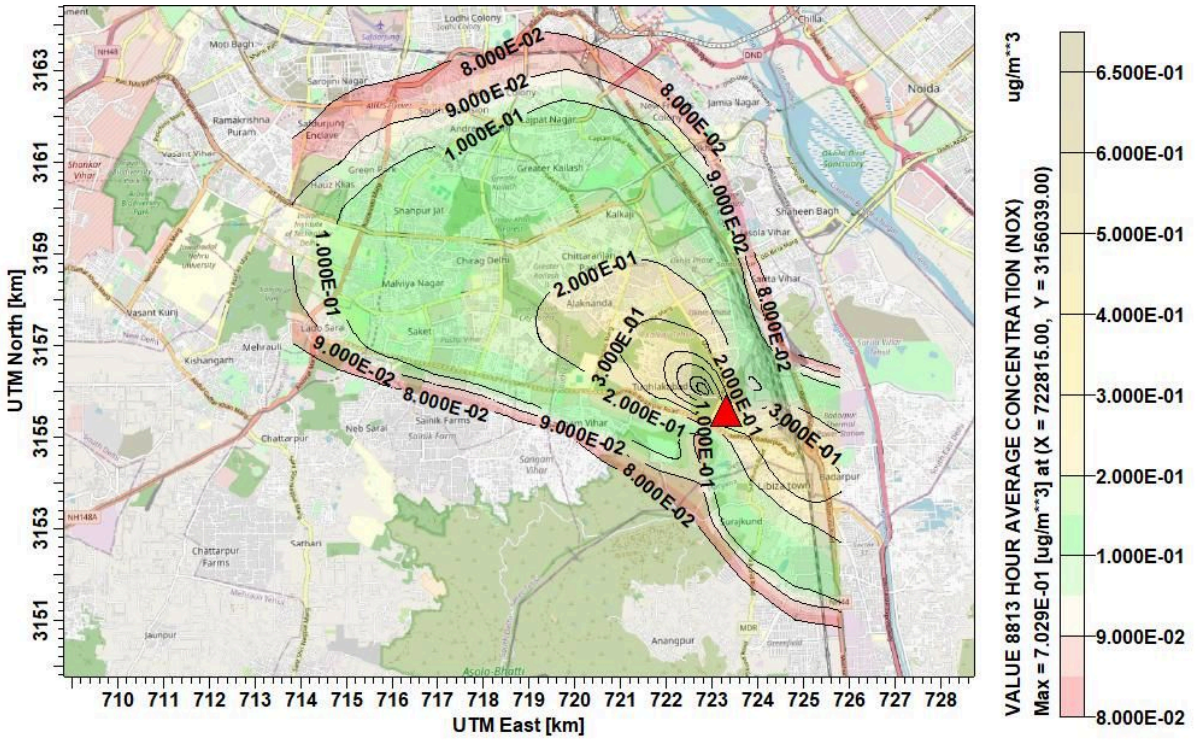


Figure 32: Isopleth of **annual average** GLC of NOx around Tehkhand WtE plant.

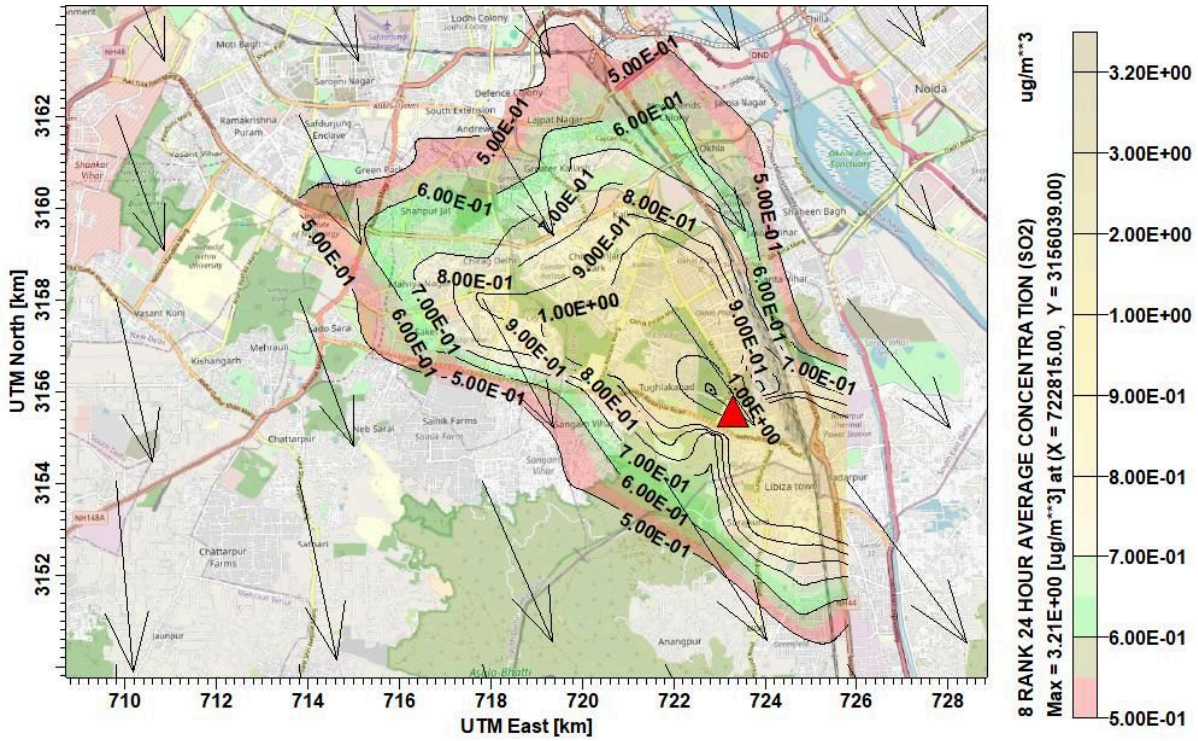


Figure 33: Isopleth of **daily average** GLC of SO_2 around Tehkhand WtE plant.

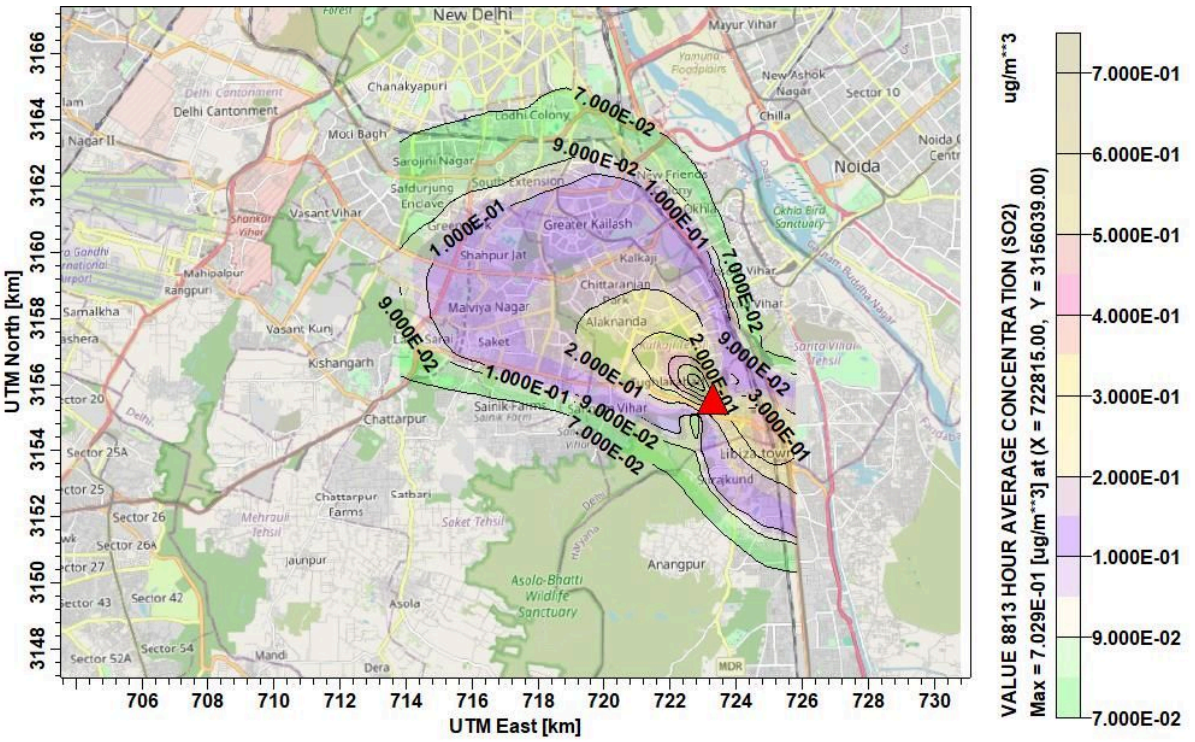


Figure 34: Isopleth of **annual average** GLC of SO_2 around Tehkhand WtE plant.

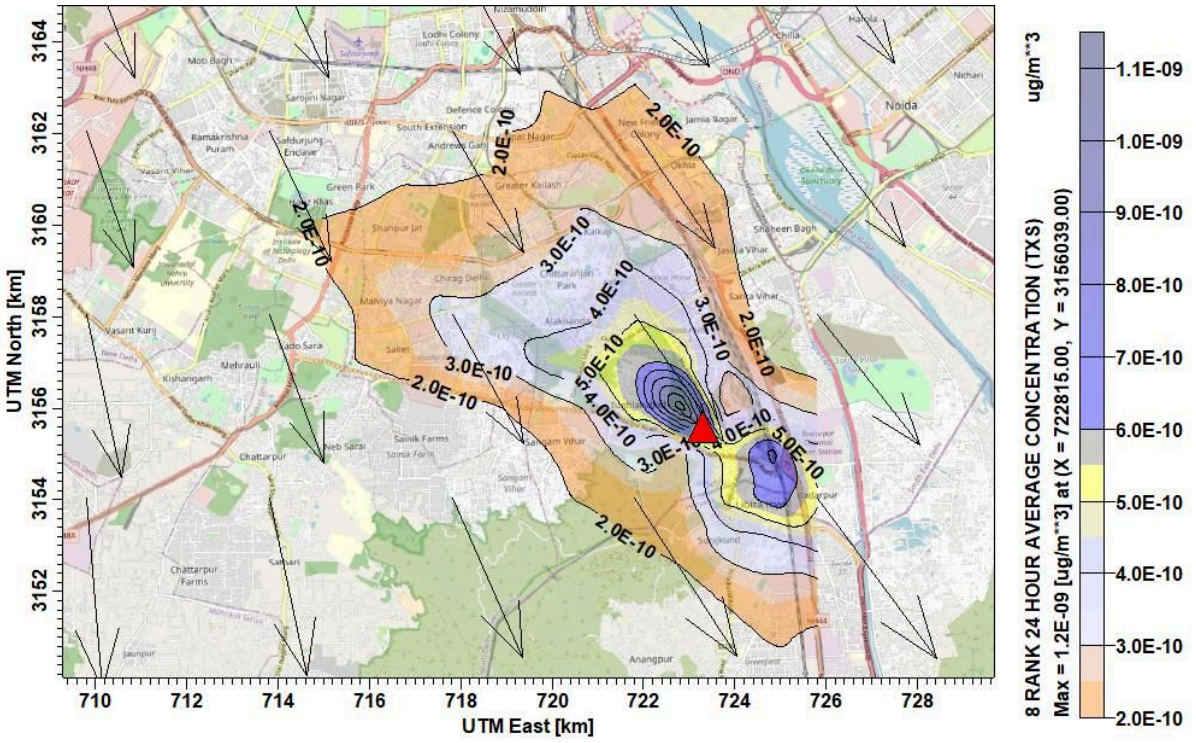


Figure 35: Isopleth of **daily average** GLC of Dioxin around Tehkhand WtE plant.

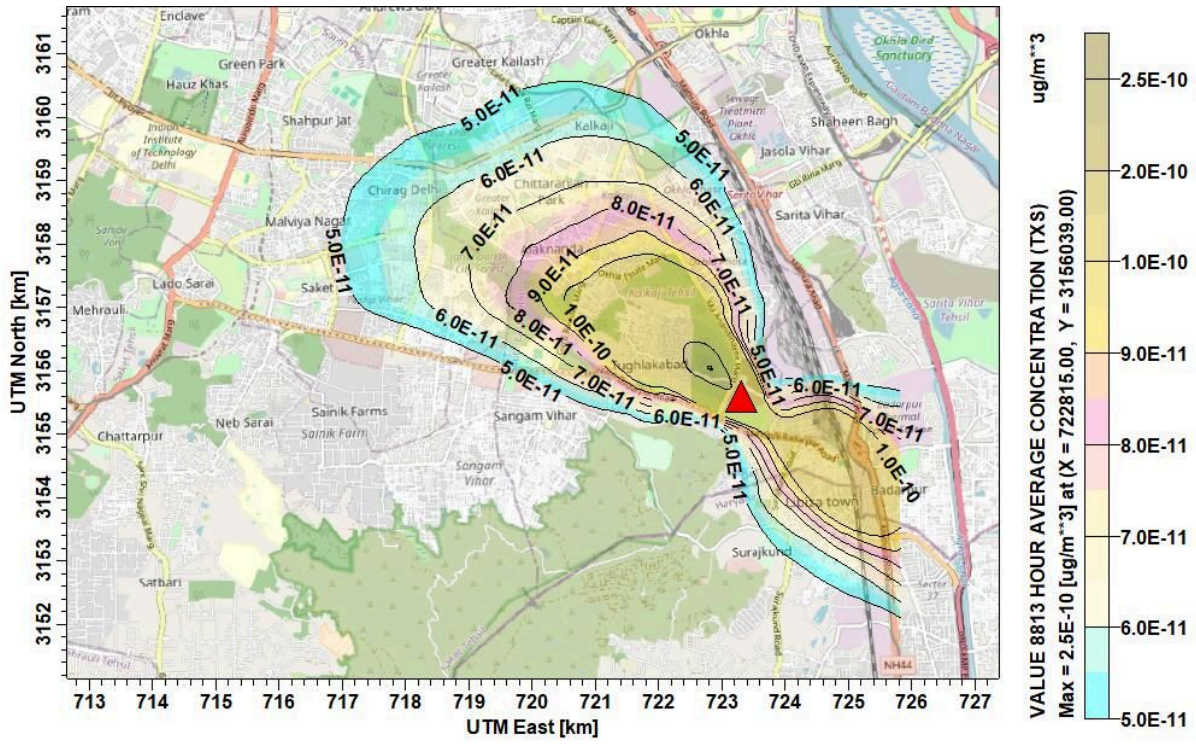


Figure 36: Isopleth of **annual average** GLC of Dioxin around Ghazipur WtE plant.

The maximum model computed both 24 hr and annual concentrations are extremely low at less than 0.05 µg/m^3 (NAAQS (µg/ m^3): PM_{10} (100), SO_2 (80), NO_2 (80)) and do not pose any significant contribution to the air quality in the area.

It is to be noted that GLC has been simulated for four criteria pollutants – PM, SO_2, NO_x ,Dioxin & Furan. As per the Source distribution monitoring, particulate component is very minuscule (<0.5%). The contribution of Heavy metals, which are a constituent of the particulate matter, is hence expected to be very low.

2.2.11 Impact of Dioxin from WtE Plant on Public Health

Dioxins are a group of chemically related compounds that are persistent organic pollutants (POPs). Risk Analysis has been carried out for the most potent Dioxin 2.3.7,8TCDD (Tetra Chlor Di-Benbo p-Dioxin)

The Incremental Cancer Risk through Inhalation Route from Waste-to-Energy Plants has been calculated using USEPA prescribed unit risk factor and is given in **Table 17**.

Table 17: Estimated inhalation incremental cancer risk at WtE plants

S. No.	Incineration Plant	Daily Avg, GLC (pg/m^3) (Refer Section 2.2.9)	Incremental Cancer Risk
1.	Okhla	9.56×10^{-6}	3.15×10^{-10} (or 4 persons out of 1000 crore)
2.	Ghazipur	5.26×10^{-4}	1.73×10^{-8} (or 2 persons out of 10 crore)
3.	Bawana	1.94×10^{-3}	6.40×10^{-8} (or 7 persons out of 10 crore)
4	Tehkhand	1.16×10^{-3}	3.83×10^{-8} (or 4 persons out of 10 crore)

As per USEPA (Refer: https://www.epa.gov/radiation/radiation-health-effects#:~:text=Risks%20that%20are%20low%20for,radiation%20dose%20over%20a%20lifetime) acceptable risk is one in million. It is observed that the estimated inhalation incremental cancer risk at all four WtE sites is much less than acceptable risk as per the USEPA

3.0 Summary and Conclusions

a) It is observed that basic operational conditions & pollution control measures as per SWM Rules, 2016, Consent conditions and observations made during inspection of the four WtE in Delhi 2016, are similar to those followed at international levels as per UNEP's CCET Guidelines. Further, as per the UNEP there are more than 1700 thermal WtE plants operational across the world. However, only 21 thermal WtE plants are operational in India, as on date.

b) It is observed that as all four WtE plants have installed pre-processing facilities, the calorific value of pre-processed waste at the boiler feed point improves as compared to that of unsegregated waste at the inlet point of the WtE plant. Further, it is observed that calorific value of pre-processed waste at the incinerator feed point is more than 1500 Kcal /kg, which is in compliance of Rule 21(1) of SWM Rules, 2016.

c) It is observed that all the four WtE plants are complying with Design specifications/ process conditions as specified in Schedule II (C) of SWM Rules, 2016.

d) It is observed that the emissions from the four WtE are complying with the stipulated

emission norms. However, in case of Bawana, Dioxin & Furan & Cd+Th concentration are exceeding the stipulated stack emission norms. The operator of WtE plant, Bawana, shall take necessary measures (improving Operation & maintenance/upgrading Air Pollution Control System/etc. of the WtE) ensuring that stack emissions should meet the stipulated standards as per the conditions stipulated in the CTO issued by DPCC. It is,however, observed that the estimated inhalation incremental cancer risk (7 out of 10 Crore- Refer Section 2.2.11) due to Dioxin emissions from all four WtE plants including the Bawana plant is much less than acceptable risk of one in million as per USEPA. (Refer: https://www.epa.gov/radiation/radiation-health-effects#:~:text=Risks%20that%20are%20low%20for,radiation%20dose%20over%20a%20lifetime)

e) The following are the observations w.r.t Ambient Air Quality:
   (i) PM_{10} concentration levels at all eight stations monitored at the Four WtE plants is exceeding the prescribed limits. It is, however, within the range of concentration levels monitored at the 39 CAAQMS stations in Delhi.
   (ii) $PM_{2.5}$ levels at one station at Ghazipur WtE, one station at WtE Okhla and at both the stations at WtE Tehkhand is exceeding the prescribed limits. It is, however, within the range of concentration levels monitored at the 39 CAAQMS stations in Delhi.
   (iii) Ozone concentration levels in ambient air at five stations (2 at Ghazipur, 2 at Bawana and 1 at Okhla) is exceeding the prescribed limits. Presence of NOx is a precursor for Ozone generation. There are multiple sources for NOx in the environment. As detailed in Section 2.2.10, GLC level of NOx due to WtE plants is minuscule. Hence, contribution of WtE plants to increase in Ozone concentration in ambient air is negligible.
   (iv) Nickel concentration in ambient air has been reported as > 20 ng/m^3 at one station each in Ghazipur and Bawana during 24 hr monitoring at these stattions. The Nickel measurements are one-day (24 hr) measurements and as such are not comparable with annual average for which minimum monitoring of 104 days is required.
   Further, it is also to be noted that the higher concentration of PM_{10}/$PM_{2.5}$/Ozone/Nickel at the above locations may also be due to other local activities/influences of regional air quality. DPCC to conduct Nickel monitoring at the stations in Ghazipur and Bawana and take further remedial measures, as required. It is further to be noted that stack emissions from all four WtE plants are meeting the stipulated norms w.r.t Suspended Particulate Matter and Heavy metal concentration including Nickel.

f) It is observed that bottom ash is meeting the stipulated norms in Okhla, Ghazipur & Tehkhand and is exceeding the norms w.r.t. LoI in case of Bawana. Flyash is meeting the stipulated norms in Okhla WtE, and is exceeding the stipulated norms w.r.t. Cd,Mn, Pb and Cu in case of Bawana, Cd in case of Ghazipur and Pb in case of Tehkand WtE plant. The flyash and bottom ash is to be disposed/utilized as per the conditions stipulated in the CTO issued to the Unit by DPCC. Improvement in segregation may control such exceedance and also improving combustion in the WtE plants. It is further observed that the concentration of three metals viz Cd, Cu & Pb in Groundwater in and around the WtE plant premises is within the stipulated norms (BDL) at all four WtE plants. It is further to be noted that norms for concentration of Mn has not been stipulated in the SWM Rules,2016.

g) It is observed that adequate measures for odour control have been taken at the four plants. Three WtE plants, Okhla, Ghazipur & Tehkhand, are located close to residential areas and in case of Ghazipur plant, no green belt has been developed around Ghazipur plant. It is recommended that adequate green belt should be developed around Ghazipur plant as stipulated in the Consent and Environment Clearance issued by

DPCC & MoEFCC respectively

h) It is observed that BOD in the treated leachate is exceeding the prescribed norms in case of Bawana plant, Dissolved Solids & Chlorides in case of Ghazipur plant & Chloride is exceeding in case of Tehkhand plant. It is further observed that the leachate generated is reused in Bawana, Okhla and Tehkhand Plant. The same is used for horticulture as per the CTO in case of Ghazipur plant. The operator WtE plant of Bawana, Ghazipur and Tehkhand shall take necessary measures (improving Operation & maintainance/upgrading Effluent Treatment Plant/etc.) ensuring that treated leachate should meet the stipulated standards and should be reused as per the conditions stipulated in the CTO issued by DPCC.

i) With regard to ground water monitoring, it is observed that the metal concentration is within the stipulated norms except for iron at one location each at Bawana & Ghazipur. Further TDS, Hardness and Sulphate is found to be exceeding in case of Bawana, Nitrate in case of Ghazipur, Total Hardness in case of Okhla and Total Hardness, Dissolved Solids & Phenolic Compounds are exceeding in case of Tehkhand Plant. As per CGWB report entitled “Aquifer mapping & ground water management plan of NCT Delhi”, 2016, it is observed that Iron in excess of maximum permissible limit has been reported from Northwest, North, Northeast, West, East, Central, Southwest and South districts of NCT, Delhi. Also total hardness, sulphate and Nitrate have also been reported in excess of maximum permissible limit from parts of Northwest, East, Southwest and South Districts of Delhi. Further, Tehkand WtE is located in close vicinity of the Okhla dumpsite and hence high concentration of phenolic compounds may be attributed to the leachate generated from the dumpsite. Additionally, the Ghazipur & Okhla WtE plants are located in very close vicinity of the Ghazipur & Okhla dumpsites respectively. A detailed study through expert agencies may be taken by DPCC to examine impact on ground water quality due to handling of leachate operation at these WtEs and remedial measures required, if any, may be implemented.

j) The maximum model computed GLC(24 hr and annual concentrations) of PM, SOx, NO_2 and Dioxin & Furan at all 4 WtE plants are extremely low (<than 0.05 µg/m^3) when compared to the corresponding NAAQS. Hence, they do not pose any significant incremental contribution to the air quality in the area. It has been estimated that inhalation incremental cancer risk due to Dioxin Emissions at all four sites is much less than acceptable risk of one in million as per USEPA (Refer: https://www.epa.gov/radiation/radiation-health-effects#:~:text=Risks%20that%20are%20low%20for,radiation%20dose%20over%20a%20lifetime)

k) Segregating waste and plastics, especially those containing chlorine like PVC, is crucial to prevent Dioxin & Furans formation during incineration, as chlorine is a key precursor to Dioxins & Furans. By preventing chlorine-containing waste entering waste to energy or incinerators, one can significantly lower dioxin emissions. The WtE operators, therefore, shall continue their efforts in segregating such wastes.

Segregation of waste at source, as stipulated in the SWM Rules,2016, may result in further emission control including Dioxins & Furans from WtE plants, which could be achieved by awareness among the public by the Municipal Corporation.

l) The fly ash/bottom ash should be tested periodically and in case it exceeds the prescribed limit, the same shall be disposed of at hazardous Treatment, Storage Disposal Facility (TSDF) in accordance with conditions stipulated by DPCC under the CTO.

m) In view of the aforementioned points, it is concluded that the WtE shall have minimal impact of health and environment, provided requisite measures are implemented in these plants to comply with standards specified in the SWM Rules, 2016

n) The concerned SPCBs/PCCs are required to take necessary measures to ensure that

the WtE plants operational in their jurisdiction comply with the stipulated norms, specifically w.r.t Stack emissions, fly ash & bottom ash and treated leachate.

ITEM NO.10 COURT NO.4 SECTION PIL-W

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Writ Petition(s)(Civil) No(s). 13029/1985

M.C. MEHTA Petitioner(s)

VERSUS

UNION OF INDIA & ORS. Respondent(s)

IN RE: MUNICIPAL SOLID WASTE

NAME OF THE FOLLOWING ADVOCATES MAY BE TREATED TO HAVE BEEN SHOWN IN THE LIST:
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MS. APARAJITA SINGH, SR. ADVOCATE (A.C.)
MS. UTTARA BABBAR, SR. ADVOCATE (A.C.)
MR. A.D.N. RAO, SR. ADVOCATE (A.C.)
MS. SHIBANI GHOSH, ADVOCATE (A.C.)
MR. SIDDHARTHA CHOWDHURY, ADVOCATE (A.C.)
MR. G.S. MAKKER,
MR. AMRISH KUMAR,
MR. M.K. MARORIA,
MR. SANJAY KR. VISEN,
MR. SUDEEP KUMAR,
MR. KARAN SHARMA,
MR. SANDEEP KR. JHA,
MR. JYOTI MENDIRATTA,
MR. RAHUL KHURANA,
ADVOCATES

Date : 24-02-2025 This petition was called on for hearing today.

CORAM :
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HON'BLE MR. JUSTICE UJJAL BHUYAN

Ms. Aparajita Singh,Sr.Adv. (Amicus Curiae)
Ms. Uttara Babbar,Sr.Adv. (Amicus Curiae)
Mr. A.D.N. Rao,Sr.Adv. (Amicus Curiae)
Ms. Shibani Ghosh,Adv. (Amicus Curiae)
Mr. Siddhartha Chowdhury,Adv.(Amicus Curiae)
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UPON hearing the counsel the Court made the following

O R D E R

IN RE: MUNICIPAL SOLID WASTE

1. We have perused the note submitted by the learned Amicus Curiae on the issue of Solid Waste Management in the National Capital Region (NCR) States.

2. Firstly, we direct all the NCR States to file comprehensive affidavits dealing with compliance so far made by all Urban Local Bodies with the provisions of the Solid Waste Management Rules, 2016 (for short, "the 2016 Rules"). This direction will apply only to all Urban

Local Bodies forming part of the NCR.

3. Another important issue flagged by the learned senior counsel appointed as Amicus Curiae is that the percentage of segregation waste is very low in Municipal Corporation of Delhi area, Gurugram and Faridabad. The State of Uttar Pradesh has not furnished any figures. As rightly submitted by the learned Amicus Curiae, the segregation of waste at source is of vital importance for the environment. If there is no proper segregation, even waste to energy projects will cause more pollution.

4. We, therefore, direct the NCR States, while filing the affidavits as aforesaid, to set out a comprehensive plan containing timelines and implementing agencies for waste management. Needless to add that the affidavits will state compliance with the 2016 Rules in relation to all Urban Local Bodies within the NCR States. We also direct them to set out the best practices that they propose to follow including those listed in the report of the Niti Aayog and "Waste-wise cities, Best Practices in the Solid Waste Management, 2021".

5. We may also add that the concerned Urban Local Bodies are also free to file affidavits in terms of the aforesaid directions.

6. We direct the Central Pollution Control Board to submit a report to this Court on the impact of waste to energy projects on the environment and public health.

7. The affidavit by the NCR States shall be filed by end of March, 2025. No further time shall be granted. The Central Pollution Control Board shall also file a report by end of March, 2025. The affidavits and the report will be considered on 2nd April, 2025 at 3.00 p.m.

IN RE: TRANSPORT AND PAYMENT OF SUBSISTENCE ALLOWANCE

8. All the States and other stake holders shall file affidavits on the issues relating to Transport and Payment of Subsistence Allowance to be dealt with on 28th February, 2025 and advance copy thereof be furnished to the learned Amicus Curiae.

IN RE: ORDER DATED 27TH JANUARY, 2025

9. In the second last line of paragraph 13 of this Court's order dated 27th January, 2025, the year "2025" shall be replaced by "2019".

(ANITA MALHOTRA)
AR-CUM-PS

(AVGV RAMU)
COURT MASTER

ITEM NO.14 COURT NO.4 SECTION PIL-W

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

WRIT PETITION(S)(CIVIL) NO(S). 13029/1985

M.C. MEHTA **Petitioner(s)**

VERSUS

UNION OF INDIA & ORS. **Respondent(s)**

[TO BE TAKEN UP AT 2:00 P.M.]
IN RE: STRENGTHENING AIR QUALITY MANAGEMENT MONITORING NETWORK ENFORCEMENT VACANCIES IN SPCBS AND IN RE: CONSTRUCTIONS AND ROAD DUST AND IN RE: GRIEVANCE REDRESSAL MECHANISM AND IN RE: SOLID WASTE MANAGEMENT IN RE: COMPLIANCE REPORTED BY THE OTHER ENTITES NAME OF THE FOLLOWING ADVOCATES MAY BE TREATED TO HAVE BEEN SHOWN IN THE LIST: MR. HARISH N. SALVE, SR. ADVOCATE (A.C.) MS. APARAJITA SINGH, SR. ADVOCATE (A.C.) MS. UTTARA BABBAR, SR. ADVOCATE (A.C.) MR. A.D.N. RAO, SR. ADVOCATE (A.C.) MS. SHIBANI GHOSH, ADVOCATE (A.C.) MR. SIDDHARTHA CHOWDHURY, ADVOCATE (A.C.) MR. G.S. MAKKER, MR. AMRISH KUMAR, MR. M.K. MARORIA, MR. SANJAY KR. VISEN, MR. SUDEEP KUMAR, MR. KARAN SHARMA, MR. SANDEEP KR. JHA, MR. JYOTI MENDIRATTA, MR. RAHUL KHURANA, ADVOCATES)

Date : 24-04-2025 This petition was called on for hearing today.

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UPON hearing the counsel the Court made the following

O R D E R

IN RE: STRENGTHENING AIR QUALITY MANAGEMENT, MONITORING NETWORK, ENFORCEMENT AND VACANCIES IN SPCBS

1. We have heard Ms. Aparajita Singh, learned Senior Advocate appointed as Amicus Curiae on the suggestions for strengthening air quality governance. We have perused paragraph 10 of the Note filed by the learned Amicus Curiae for hearing on 23.04.2024, wherein she has incorporated the issues on which directions of this Court are required. Ms. Aishwarya Bhati, learned ASG, seeks time to respond to the same. We will also hear the NCR States on these directions on 8th May, 2025 at 12:00 noon.

2. The other issue regarding filling-in of the vacant posts in State Pollution Control Boards will be also considered on 8th May, 2025.

3. We have heard the learned Amicus Curiae on the Solid Waste Management Rules, 2016 (for short, "the 2016 Rules"). She has rightly emphasised on achieving the target of 100 per cent segregation of waste within the fixed timelines and 100 per cent collection of solid waste by 31st December, 2025.

4. We clarify that the directions which we propose to issue today will supplement the directions already issued against the Municipal Corporation of Delhi (for short, "the MCD") by our earlier order dated 8th April, 2025 and, therefore, the directions will be in addition to what is already directed.

5. As far as 100 per cent segregation of waste is concerned, we have dealt with the issue while dealing with the compliance by the MCD of the 2016 Rules. As achieving this target is of immense importance, we direct the States of Delhi, Haryana, Rajasthan and Uttar Pradesh as well as the MCD to designate high ranking officers as nodal officers to supervise the compliance activities of achieving 100 per cent segregation of waste. The same nodal officers shall also supervise the target of achieving 100 per cent collection of solid waste. As far as the MCD is concerned, it has laid down the timelines for achieving this target. However, the other NCR States have not done so. Therefore, we direct the states of Delhi, Haryana, Rajasthan and Uttar Pradesh to fix an outer limit for achieving the target of 100 per cent collection of solid waste. The nodal officers dealing with both the issues (100 per cent segregation of waste and 100 per cent collection of solid

waste) shall file regular compliance reports starting from 1st September, 2025. After every quarter, compliance reports shall be filed by the nodal officers in this Court. As and when the compliance reports are filed, the Registrar (Judicial) of this Court shall ensure that the same are placed before the appropriate Bench dealing with the case.

6. For implementation of the 2016 Rules, it is necessary to ensure that the penalties are imposed in case of non-compliances. Unless proper publicity is given to the provisions of the 2016 Rules and the penalties provided therein for non-compliance, the provisions of the 2016 Rules cannot be effectively implemented. Therefore, we direct that the NCR States as well as the MCD to undertake a massive awareness campaign about the provisions of the 2016 Rules. Needless to add that in the awareness campaign, publicity shall be given to the existing grievance redressal mechanism which can be used by the citizens to lodge complaints about the breaches or non-compliances with the 2016 Rules. We direct the NCR States and the MCD to report compliance with the above direction as well as to produce data before the Court regarding the penalties imposed and recovered so far.

7. There is another important issue flagged by the learned Amicus Curiae. She has rightly submitted that the activity of recycling the product from the construction and dust waste must be incentivized. Her submission is that the rate of GST should be reduced to minimum or ideally zero. We direct the Union of India to consider this aspect by placing it before the appropriate authority. We recommend that this activity needs to be

incentivized which will help the cause of environment protection.

8. As regards commissioning of the landfill facilities in MCD area is concerned, at this stage, no further directions are required in view of what was observed in the order dated 8th April, 2025.

9. The other issue which remains as regards the MCD is of formation of the Standing Committee. On this aspect, we propose to issue directions after hearing the concerned parties on 08th May 2025 at 12 noon.

10. On the issue of solid waste management, we may note here that this Court is dealing with the issues which arise at present. Considering the large-scale construction/development projects in the NCR region, the generation of the municipal solid waste is bound to be multiplied and, therefore, all the NCR States must make a realistic assessment of the expected generation of municipal solid waste in the next 25 years so that all the authorities will be in the state of preparedness to deal with the ever-increasing quantum of municipal solid waste generated in the cities. We direct the Governments of the NCR States to file affidavits on or before 1st September, 2025 dealing with the steps taken in this behalf. We make it clear that the affidavits shall give data of all the local authorities falling within the jurisdiction of the respective States which are in the NCR region. As far as these directions are concerned, we direct that all the affidavits shall be filed by the nodal officers who shall be responsible for providing copies to the office of the learned Amicus Curiae as well as the learned counsel appearing for the respective parties.

11. At this stage, we may also note that the learned senior counsel appearing for the Greater NOIDA Industrial Development Authority pointed out that in the affidavit of compliance filed on 4th April, 2025, the Authority has stated that an action is being taken to ensure that by the end of August 2025, legacy waste will be reduced to zero. We hope and trust that this target is achieved by the Authority.

12. As far as the issue of Waste to Energy Plants is concerned, the Central Pollution Control Board by filing an affidavit dated 22nd April, 2025 has sought time of one month to make compliance. We, accordingly, grant time of one month to the Central Pollution Control Board to make compliance from 22nd April, 2025. At this stage, the learned Amicus Curiae has invited our attention to a letter dated 12th February, 2025 addressed by the Member Secretary of the Central Pollution Control Board to the State Pollution Control Boards. She has invited our attention to page 03 of the said letter and has raised concerns about a new category mentioned therein. To enable the learned ASG to seek clarification, this aspect will be considered on 8th May, 2025 at 12:00 noon.

IN RE: CONSTRUCTION AND ROAD DUST

13. As regards the issue of prosecutions concerning violation of the Construction and Demolition Waste Rules of 2016, a compliance report dated 25th March, 2025 has been filed by the Commission for Air Quality Management (for short, "the CAQM"), in which, paragraphs 8 to 10 are relevant. It is stated that the Member Secretaries of the NCR State Pollution Control Boards/DPCC have

been authorised to file prosecutions under the Commission for Air Quality Management in NCR & Adjoining Areas Act, 2021 (for short, "the CAQM") where area of a plot is more than 500 square metre. As regards the plots having an area of less than 500 square metre, by a statutory direction dated 2nd January, 2025, the authorities in the ULBs concerned have been empowered to file prosecutions under the CAQM Act. We direct the CAQM to call for the data of the action taken by the concerned authorities in terms of paragraphs 8 and 9 of the compliance report dated 25th March, 2025 filed by the CAQM. The CAQM shall compile the data up to 31st July 2025 and file an affidavit by 1st September, 2025. While filing the affidavit on 1st September, 2025, the CAQM will give categorised data indicating the number of complaints filed against the private individuals and the number of complaints filed against the Government entities.

14. As regards the compliance with the 2016 Rules, the same will be considered on 8th May, 2025.

IA NOS.194489/2024 (FOR IMPLEADMENT) AND IA NO.194490/2024 (SEEKING PERMISSION FOR REGISTRATION OF FIRE TENDER VEHICLE HAVING BS-IV ENGINE)

15. List on 8th May, 2025 at 12:00 noon.

(ASHISH KONDLE)
ASTT. REGISTRAR-cum-PS

(AVGV RAMU)
COURT MASTER (NSH)

Annexure II

List of Municipal Solid Waste based (MSW) Waste to Energy Plants operational in India (As per Information provided by States/UTs)

S.No.	State /UT & No of WTEs	Name of WTE plant & Location
1	**Andhra Pradesh (02)**	Jindal Urban Waste Management, Visakhapatnam, A.P
2		Jindal Urban Waste Management, Limited Guntur **,** A.P
3	**Delhi (04)**	East Delhi Waste Processing Company Ghazipur,Delhi
4		Tehkhand Waste to Electricity Project Ltd. Delhi
5		Timarpur Okhala, waste management Company Ltd. Delhi
6		M/S Delhi MSW Solutions Ltd.Delhi
7	**Gujarat (02)**	Goodwatts WtE Jamnagr Pvt Ltd., Gujarat
8		Jindal WtE Pvt. Ltd .Ahmedabad., Gujarat
9	**Haryana (01)**	Integrated Solid Waste Management Facility , Murthal ,Sonipat , Haryana
10	**Karnataka (01)**	Bidadi Waste to Energy Plant, Bidadi, Karnataka
11	**Madhya Pradesh (02)**	Rewa MSW Energy Solution Pvt Ltd ,M.P
12		Jabalpur MSW Pvt. Ltd Kathonda, Jabalpur , M.P
13	**Maharashtra(02)**	Anotny Lara Renewable Energy Private Limited, Waste to Energy, PimpriChinchwad, Mahararashtra
14		Bhumi Green Energy Pvt. Ltd., Sangli, Maharashtra
15	**Telangana (02)**	Hyderabad MSW Energy Solution Ltd, Telangana
16		Dundigal WtE Pvt. Ltd , Telangana
17	**Uttarakhand (03)**	Sidharth Papers Ltd., US Nagar, Uttarakhand
18		Siddheshwari Paper Udyog Pvt Ltd., Kashipur Uttarakhand
19		Bahl Paper Mills Ltd., Kashipur, Uttarakahnd
20	**Uttar Pradesh (02)**	Rollz India Waste Management Pvt. Ltd., Deenanathpur, Ghaziabad
21		Rollz India Waste Management Pvt. Ltd., Bahadarpur, Ghaziabad

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

CP-18/1/2023-IPC-VI-HO-CPCB-HO Date: 12.02.2025

To

The Chairman
State Pollution Control Board/Pollution Control Committee
(As per the list)

Sub: 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 and Blue 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 the classification of industrial sectors under different categories. Therefore, in 2012, to have uniformity in classification throughout the country, CPCB vide letter no. B-29012/1/2012/ESS/1526-1563, dated 04.06.2012 issued directions under section 18(1(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs to adopt and implement standardized list of Red, Orange and Green categories of industries; and

WHEREAS, in 2016, the Central Pollution Control Board (CPCB) developed a scoring methodology based on the Pollution Index (PI) to harmonize the criteria for classification of industrial sectors. The PI is determined based on Precautionary Principle- by evaluating potential of water pollution, air pollution, and hazardous waste generation from particular sector. CPCB vide letter no. B-29012//ESS(CPA)/2015-16, dated 07.03.2016 issued directions under section 18(1(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs to adopt and implement revised classification. SPCBs/PCCs were also directed to categorize any new or left over sectors at their level by constituting a Committee and following the methodology prescribed by CPCB; and

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, New Delhi - 110032
दूरभाष/Tel: 43102030, 22305792, वेबसाईट/Website : www.cpbc.nic.in

WHEREAS, CPCB vide letter no. B-29016/ROGW/IPC-VI/2020-21, dated 30.04.2020, issued directions under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs regarding segregated list of non-industrial sectors (activities/ facilities/ infrastructure/ services) such as sewage treatment plants, healthcare facilities, hotels, building and construction projects, airports, highways etc. Further, CPCB also classified few additional sectors from time to time; and

WHEREAS, based on the experience gained over the years in Pollution Index calculation, use of cleaner fuels like PNG/CNG etc., adoption of cleaner technology resulting in reduced emission/wastewater generation, a need was felt to revisit the classification methodology of 2016; and

WHEREAS, during July 2023, CPCB prepared a "Draft Report on Classification of Industrial Sectors into Red, Orange, Green and White Categories: A Tool for Progressive Environmental Management" which was uploaded on CPCB website for seeking comments/suggestions of the stakeholders/public on the same. The draft report was also circulated to SPCBs/PCCs/MoEF&CC for comments; and

WHEREAS, CPCB vide office order dated 26.09.2023 constituted a committee to critically examine and analyse the comments/suggestions and to make recommendations for suitable incorporation in the finalizing the methodology and classification; and

WHEREAS, based on the stakeholders' comments, a need was felt to promote/incentivize units for adopting measures resulting in better environmental performance. Additionally, a requirement was also felt for separate category – Blue Category- for essential environmental services for management of environmental pollution arising from domestic/household activities. Accordingly, CPCB prepared an "Addendum and substitution thereto in Draft Report on Classification of Sectors into Red, Orange, Green, White and Blue Categories", which was shared with SPCBs/PCCs and also uploaded on CPCB website on 11.07.2024 for seeking inputs/comments; and

WHEREAS, the amendment in Section-21 of the Air (Prevention and Control of Pollution) Act, 1981 through the Jan Vishwas (Amendment of Provisions) Act, 2023 and amendment in Section-25 of the Water (Prevention and Control of Pollution) Act, 1974 through the Water (Prevention and Control of Pollution) Amendment Act, 2024, grant exemption to certain categories of industries, as notified by Central Government, for obtaining consent under these Acts; and

WHEREAS, the Ministry of Environment, Forest and Climate Change, Government of India vide notification no. G.S.R. 702(E), dated 12.11.2024 granted exemption of consent under the Water Act, 1974 and the Air Act, 1981 to exemption of Consent to Establish (CTE) and Consent to Operate (CTO) to all industrial plants having pollution index score upto 20 (at present total 39 industrial sectors under white categories as per 2016 methodology) subject to

condition that such plant shall inform in writing to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC); and

WHEREAS, the MoEF&CC vide letter no. Q-15012/2/2022/-CPW-Part (1)/e-240741, dated 14.11.2024 has issued Standard Operating Procedure for implementation of the said Notification dated 12.11.2024. The SOP includes the following provisions for White categories of industries:

i. Industry to intimate to concerned SPCB/PCC about operations and self-declare the compliance with prevalent rules & regulations,
ii. Concerned SPCB/PCC to maintain separate list of such industries/activities, and
iii. Concerned SPCB/PCC to ensure that no activities other than those intimated, are carried out by exempted units.

WHEREAS, the Committee constituted by CPCB evaluated the comments, incorporated the suitable changes and finalized the revised methodology as well as classification of sectors. Final report in this regard titled as "Classification of sectors in to Red, Orange, Green, White and Blue Categories (A tool for progressive environmental management)" was submitted to Ministry of Environment, Forest and Climate Change (MoEF&CC) for concurrence. The MoEF&CC vide letter no. Q-16017-57-2015-CPA, dated 15.01.2025 granted concurrence to the revised classification; and

WHEREAS, as per the revised methodology, the category of the sector is decided based on the following ranges of Pollution Index:

i. Red: $PI \geq 80$,
ii. Orange: $55 \leq PI < 80$,
iii. Green: $25 \leq PI < 55$,
iv. White: $PI < 25$; and

WHEREAS, based on the revised methodology, CPCB has classified a total of 419 sectors and sub-sectors as under:

i. The Red Category: 125
ii. The Orange Category: 137
iii. The Green Category: 94
iv. The White Category: 54
v. The Blue Category: 9; and

WHEREAS, the purpose of classification is to ensure that the industry is established in a manner consistent with the environmental objectives and also to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in the generation of no or minimum pollutants. The revised classification system also defines criteria for incentivizing such industry. The industry may self-assess the PI score as per defined criteria and can submit application to respective SPCBs/PCCs for consideration; and

NOW, THEREFORE, in the exercise of the powers delegated 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 dated 07.03.2016 and subsequent directions/letter in the context of categorization of industries are withdrawn with immediate effect and following **'Directions'** are hereby issued for compliance by all SPCBs and PCCs:

1. That SPCBs and PCCs shall immediately adopt the revised methodology for classification of sectors and list of 419 sectors/sub-sectors classified under Red, Orange, Green, White, and Blue categories as detailed in the **attached** report- "Classification of Sectors into Red, Orange, Green, White and Blue Categories (A tool for progressive environmental management)".
2. That all pending application for consideration of consent (CTE/CTO) and future such application shall be processed as per the revised classification. In case CTE granted before the revised classification, applicability of CTO will be as per revised classification.
3. That the revised sectors/subsectors classified under Red, Orange, Green, White, and Blue category of sectors as given in the attached document shall be used by the SPCBs and PCCs for consent management, inventorization of units under different categories, siting criteria, deciding environmental surveillance frequency, calculation of environmental compensation, etc., as per the guidelines issued from time to time.
4. That SPCBs and PCCs shall prepare the inventory of Red, Orange, Green, White and Blue categories of units operating in their jurisdictions, based on the revised classification. SPCBs and PCCs shall upload the category and sector-wise list of such units on their website. SPCBs and PCCs shall also forward such list to CPCB, latest by 30.06.2025 and thereafter updated list by 30th June every year.
5. That the classification of sectors shall not be linked to sanction of loans/finance of bank proceedings.
6. That any further addition of any new or left-out sector and their classification which is not listed in the revised list of Red, Orange, Green, and White categories, shall be done at the level of concerned SPCB /PCC by constituting a Committee and following revised criteria & guidelines as detailed in the attached report and no concurrence of CPCB shall normally be required. Intimation of same from time to time will suffice. However, addition in Blue Category Sectors-Essential Environmental Services for domestic waste management, will be done at the level of CPCB only. SPCBs/PCCs may forward their proposal, if any, to CPCB in this regard.
7. That SPCBs and PCCs are required to prepare and submit list of additional sector classified under white category to CPCB on annual basis, by 30th of June every year, in the prescribed format (Annexure-V) as given in the attached report, for further notification for exemption from consent as per the provisions of the Jan Vishwas (Amendment of Provisions) Act, 2023, the Water Act, and the Air Act as amended from time to time by MoEF&CC.
8. That SPCBs and PCCs shall constitute a committee as prescribed in the report to evaluate the applications of the units for incentives due to adopting measures resulting in better environmental performance and reduction in PI score. The SPCB/PCC shall

place the separate list of such units on their website and also submit list of such units to CPCB on Annual Basis by 30th June every year.

The SPCBs/PCCs shall acknowledge the receipt of directions and submit the "Action Taken Report" in compliance with these directions to CPCB before 20.02.2025.

Encl. As above.

(Bharat Kumar Sharma)
Member Secretary

Copy to:

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5. The Joint Secretary (CP Division)
   Ministry of Environment, Forests and Climate Change
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(Bharat Kumar Sharma)
Member Secretary

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Classification of Sectors into Red, Orange, Green, White and Blue Categories

(A tool for progressive environmental management)

Central Pollution Control Board

"Parivesh Bhawan", East Arjun Nagar

Delhi-110032

(January 2025)

तन्मय कुमार, भा.प्र.से.
अध्यक्ष
Tanmay Kumar, I. A. S.
Chairman

सत्यमेव जयते

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
CENTRAL POLLUTION CONTROL BOARD
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

FOREWORD

The concept of classifying industries into different pollution categories originated in 1989 with the Doon Valley (Uttarakhand) Notification issued by Ministry of Environment and Forests. Subsequently the concept of pollution index was developed by Central Pollution Control Board (CPCB) during 2016 to classify the sectors into different category. The 2016 classification helped State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) in streamlining consent management, prioritizing regulatory oversight & environmental monitoring, taking decision related to siting of units, etc. However, necessity felt for refining the concept of calculating Pollution Index to overcome certain limitation and to bifurcate sub-sectors based on pollution load, scale of operation etc.

Accordingly, draft methodology was prepared and widely circulated for inputs/comments/suggestions by placing the same on CPCB website (public domain) as well as by inviting comments from MoEF&CC/SPCBs/PCCs. As of 11.08.2024, i.e. the extended date for receipt of suggestions, CPCB received 170 representations, comprising over 700 comments from PSUs, NGOs, industries, industrial associations, including feedback from SPCBs of Kerala, Nagaland, Tamil Nadu, Mizoram, West Bengal, Punjab and Lakshadweep. The report has been finalised after examining all the comments by a working committee.

The 2025 classification methodology bifurcates sub-sectors based on pollution load, scale of operation, production technology, and type of fuel used into Red, Orange, Green, White and Blue categories. Red indicates the highest pollution potential, requiring stringent regulatory oversight, while White signifies minimal or no pollution, with much reduced compliance burden of merely intimation to the concerned SPCBs/PCCs. **A new Blue Category has also been introduced to distinguish the Essential Environmental Services** required for management of environmental concerns arising from anthropogenic pollution due to domestic/household activities which otherwise will have large littering potential. Additional 2 years validity for consent to operate (as per Pollution Index) is prescribed for the blue category.

This report also outlines the implementation pathway, which includes guidelines for State Pollution Control Boards/Pollution Control Committees to follow and implement the new classification system. Earlier classified 257 sectors have now been bifurcated and classified into 403 sectors (including sub sectors) and additionally, 16 new sectors have been introduced. Thus, the revised classification of 273 key sectors comprising of total 419 sectors/sub-sectors are further classified into Red Category (125 nos.), Orange Category (137 nos.), Green Category (94 nos.), White Category (54 nos.) and Blue Category (9 nos.). Progression between red, orange and green categories for the industrial sectors is also incorporated based on the use of less polluting available processes and technologies.

The report also comprises provisions for individual units to adopt cleaner technologies and practices resulting in reduction of pollution load in any sector. Incentives, such as extended validity for Consent to Operate (CTO) and reduced inspection frequencies, are outlined to encourage continual improvement of environmental performance. The incentive mechanism allowing progression between categories will thereby promote Ease of Doing Business by extended consent validity and enhance duration between inspections, thereby leading to reduced compliance burden.

To sum up, this report aims to create a more transparent, consistent, and incentivized regulatory mechanism for better environment management, promoting sustainable industrial development and better governance. I hope the report will be useful to all concerned in the field of industrial pollution control in the country and would incentivise the industries to switch over to cleaner process and technology leading to reduced air, water and soil pollution and also encourage setting up of blue category industries.

I would like to place on record my sincere appreciation for the hard work and valuable contributions by the CPCB team comprising of Shri Amit R. Thakkar, Add. Director, Shri Saubhagya Dixit, Scientist D, and Dr. Anantha N. S., SSA under the guidance of Shri Bharat Kumar Sharma, Member Secretary. I would also like to extend my thanks to Dr. Prashant Gargava, former Member Secretary, Shri P. K. Gupta, former Director and Shri Ajay Aggarwal, former Director, for their contribution. I would also express gratitude to the Working Committee, CPCB, MoEF&CC, SPCBs/PCCs and others for their contributions in the preparation of this report.

(Tanmay Kumar)

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EXECUTIVE SUMMARY

The concept of classification of industrial sectors into red, orange, and green categories based on the size of operations and consumption of resources was first introduced in 1989 for Doon Valley, Uttarakhand. This classification aimed to aid decisions regarding siting of industries. Over the period of time, this concept was extended nationwide to manage consents and establish norms for surveillance and inspection of industry. In 2012, to have uniformity in classification throughout the country, the Central Pollution Control Board (CPCB) issued a standardized list of 244 sectors, classified under red (85 sectors), orange (73 sectors) and green (86 sectors) categories.

In 2016, the Central Pollution Control Board (CPCB) developed a scoring methodology based on the Pollution Index (PI) to harmonize the criteria for categorizing industries. This PI was determined by evaluating water pollution, air pollution, and hazardous waste generation. Using this methodology, CPCB classified 257 industrial sectors into four categories: Red (63 sectors), Orange (91 sectors), Green (65 sectors), and White (38 sectors). The White category was introduced for sectors considered "practically non-polluting" during 2016. Additionally, State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) were authorized to categorize any new or left over sectors according to the CPCB's 2016 methodology.

Further, based on the experience gained over the years, the increased use of cleaner fuels like PNG and bio-CNG, adoption of cleaner technology resulting into reduced wastewater generation, normalisation approach & different formula for calculating PI etc. a need was felt to revisit the classification methodology of 2016 for several such identified areas for improvement. Separate scoring for trade effluent and sewage effluent was also required due to differing characteristics and treatment methods.

Considering the scope of revision, CPCB published a draft report revising the methodology for calculating PI and accordingly classification of sectors into Red, Orange, Green, and White categories based on pollution index range was placed in the public domain for inputs/comments. Around 160 representations comprising more than 700 comments were received. Based on feedback/suggestions and examination of same by the working committee constituted for the purpose, the methodology was finalised. As per the final methodology, the scoring criteria for the following three major pollutant groups are as follows:

i. Water Pollutant Score (PI_W): Assesses the water pollution potential considering the oxygen demand of wastewater, other pollutants in the wastewater and quantity of wastewater generated.
ii. Air Pollutant Score (PI_A): Evaluates the potential air pollution due to process emissions (point source), work zone emissions (fugitive and odour) and type & quantity of fuel used.
iii. Waste Pollutant Score (PI_H): Considering the type and quantity of waste (which are hazardous/toxic/infectious/bulk in nature) generated.

Each pollutant group is scored out of 100, and the Cumulative Pollution Index is calculated. The category of the sector is decided based on the pollution index range, if $PI \geq 80$ the category

of sector is Red, if PI ranges between 55 ≤ PI < 80, the category of sector is orange, similarly for the range of PI between 25 ≤ PI < 55, the category is Green and for PI < 25, the category of the sector is white.

Further, based on the stakeholders' comments, a need was felt to introduce a separate "blue category" for Essential Environmental Services (ESS) required for management of waste generated from domestic/household activities and, an incentive mechanism to promote units in a particular sector, taking measures resulting into better environmental performance. An addendum was prepared, shared and presented to all SPCBs/PCCs. The addendum was also placed in the CPCB Website on 11.07.2024 for inputs/comments. 09 representations were received in the addendum. All representations were examined, and classification based on revised methodology is finalised. Based on the revised methodology, CPCB has classified total 419 sectors and sub-sectors under Red (125), Orange (137), Green (94), White (54) and Blue (9) categories.

The report introduced incentive mechanism for the units in any sector that adopt environment friendly practices such as treatment and recovery of 100% wastewater, use of 100% cleaner fuel/renewal energy etc. and ensuring continuous compliance. These incentives are designed to encourage continuous improvement in environmental performance and to reward units that demonstrate proven implementation of sustainable practices and compliances.

Following are the salient features of the revised classification methodology:

- Methodology focusses on "Potential to pollute the environment" by the sector.
- Simplified single formula for Cumulative Pollution Index for all cases.
- Equal weightage to all three pollutant groups- Air, Water, and Waste.
- Cumulative PI based on weighted proportionate scores of pollutant groups.
- Separate scoring criteria for sectors generating sewage (such as Building & construction projects, STPs, Airports, etc.) and bio-medical waste (Health Care Facilities).
- Introduced Blue Category for 9 sectors under Essential Environmental Services required for management of waste generated from domestic/household activities.
- Appropriate weightage to scale of operations by introducing more slabs to bifurcates sub-sectors based on pollution load, scale of operation, production technology and type of fuel used.
- Introduction of sub-categories for sectors based on cleaner technologies, fuel types, integrated/segregated operations etc.
- Motivation to industries for progressive environmental management.
- A tool to assess the Cumulative Pollution Index and category based on revised method.

This report, prepared by the Central Pollution Control Board (CPCB), presents a revised methodology for classifying sectors based on their pollution potential. The classification aims to enhance environmental management and regulatory oversight by classifying sectors into red, orange, green, white, and blue categories. The report covers in detail about the genesis of

classification, need for the revision of 2016 methodology, scoring methodology for calculation of cumulative PI, etc.

The report also outlines guidelines for implementing the classification system. The classification may be used for consent management, inspection frequency, siting criteria, cluster development, pollution control plans, levying environmental compensation, promoting progressive environmental management, etc.

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LIST OF ABBREVIATION

CBG: Compressed Biogas

CNG: Compressed Natural Gas

CPI: Cumulative Pollution Index

CPCB: Central Pollution Control Board

CTE: Consent to Establishment

CTO: Consent to Operate

EC: Environment Compensation

ETP: Effluent Treatment Plant

EES: Essential Environmental Services

Gen-Set: Generator Set

HAPs: Hazardous Air Pollutants

HCFs: Health Care Facilities

HW: Hazardous Waste

MoEF&CC: Ministry of Environment, Forest & Climate Change

LNG: Liquefied Natural Gas

LPG: Liquefied Petroleum Gas

NGT: National Green Tribunal

NOC: No Objection Certificate

OCEMS: Online Continuous Effluent/Emission Monitoring System

PCC: Pollution Control Committee

PM: Particulate Matter

PI: Pollution Index

PI_A: Air pollutant score

PI_H: Waste pollutant score

PI_W: Water pollutant score

PNG: Piped Natural Gas

SPCB: State Pollution Control Board

TTZ: Taz Trapezium Zone

VOCs: Volatile Organic Compounds

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Genesis and Journey of Classification

1.1 Introduction

The notifications issued by the Ministry of Environment and Forest during 1989 for Doon Valley, Uttarakhand introduced the concept of classification of industries as red, orange, and green categories. The purpose of this classification was to facilitate decisions related to location of these industries. The criteria for classification of industries was primarily based on quantity of industrial effluent, quantity of fuel/coal, and the number of employees, and amount of waste generated. The notification included list of 129 sectors, classified under red (45), orange (35), and green (39) categories. The criteria used for Doon Valley Notification, 1989 is summarized in the **Figure I**.

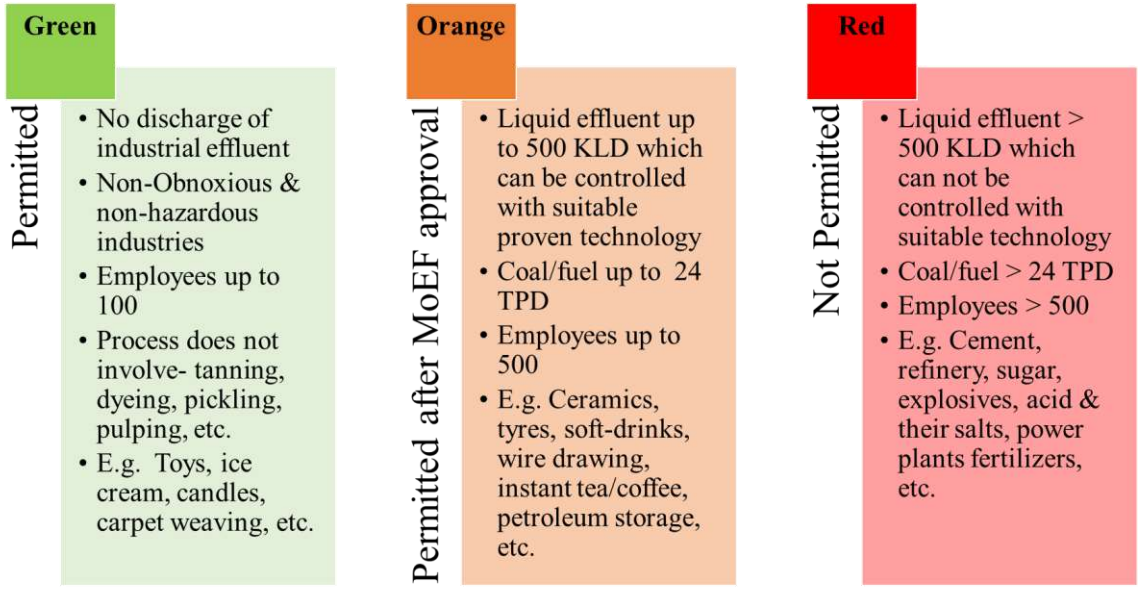

Figure I: Criteria for classification of industries in Doon Valley Notification, 1989

Subsequently, the application of this concept was extended to 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. As the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) were following different

categorization of industries, to maintain the uniformity across the country, during 2012, CPCB issued a list of 244 sectors, classified under red (85), orange (73) and green (86) categories.

In order to harmonize the criteria for categorization, during the year 2016, CPCB developed the scoring methodology to classify the industries based on the Pollution Index (PI) which was a function of water pollution, air pollution and hazardous waste generation. Based on this methodology, CPCB has classified 257 sectors under red (63), orange (91), green (65) and white (38) categories and directed SPCBs/PCCs to adopt the same. During 2016, CPCB introduced white category as a new category for such sectors which are "practically non-polluting". SPCBs/PCCs were also empowered to categorize any new/left-out sector at their own level, following the methodology prescribed by CPCB. Additionally, during 2020, CPCB also segregated the list of non-industrial operations/facilities. The overall journey of classification may be understood with the help of milestone chart shown in **Figure II**.

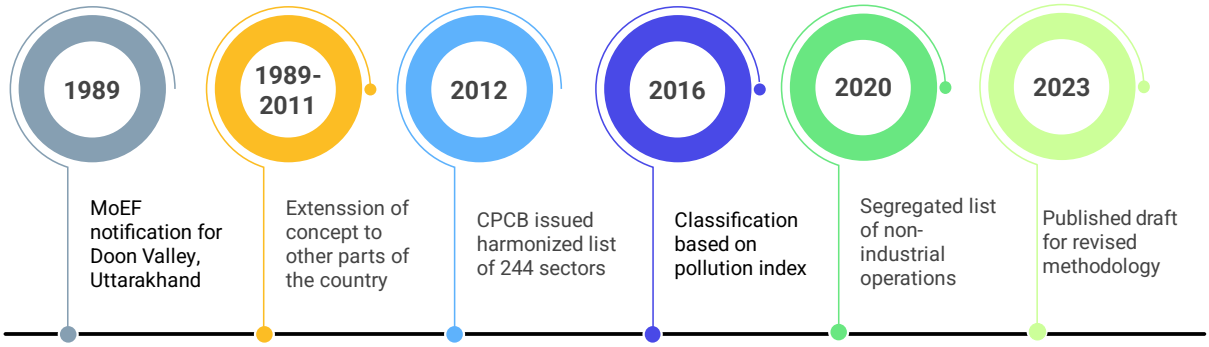

Figure II: Genisis and journey of classification of sectors

The concept of categorization is based on the "Precautionary Principle", which focuses on potential of industries to pollute the environment. 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 minimum pollutants.

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2

Modified Methodology for Classification

2.1 Need and scope for revision of methodology

Based on the experience gained over the years, a need was felt to revisit the 2016 methodology for classification of sectors considering following scope of improvement:

i. Assessment of Pollution Index:

The category of any industrial sector depends on the Pollution Index (PI), which comprises of scores of three pollutant groups i.e., air pollution, water pollution and hazardous waste. The water and air pollutants were each assigned a weight of 40%. However, the hazardous waste generation was given 20% weightage in pollution index.

As per the classification methodology of 2016, in case of absence of any pollutant groups, pollution index was normalized to 100. As a result, different formulas were required to compute pollution index.

Further, the normalization method has certain limitations while comparing pollution potential among sectors having scores for all three pollutant groups verses score only for any one/two pollutant group(s). Moreover, it was also observed that in some sectors normalization involved subjectivity based on perception.

ii. Size of operations of industrial activities:

It was observed that, there was less variation in PI score of industry based on size of operation in same sector. Limited variables/slabs were considered for the quantity of wastewater discharge and fuel consumption. It was also observed that adequate weightage in the considered variables/slabs to account the variation in size of operations of industrial activities need to introduce.

iii. Consideration to segregated industrial activities:

Although there were differences in pollution potential of integrated and standalone units of a particular sector, the classification methodology (2016) classifies the integrated or standalone units in the same sector. For example, standalone cement grinding units will have less pollution potential than integrated cement plants, but both were classified under red category.

iv. Consideration of type of fuel used:

In industrial operations requiring fuels, the amount of emissions is governed by many factors such as the type of fuel and its calorific value, combustion efficiency, emission factors, etc. Use of biomass and cleaner gaseous fuels such as Piped Natural Gas (PNG), Liquefied Petroleum Gas (LPG), Compressed Natural Gas (CNG), bio-CNG etc. have increased significantly in recent years. It was observed that adequate weightage based on type of fuel used is required.

v. Separate scoring for sewage and trade effluent:

It is desirable to have separate wastewater scoring criteria for the sectors generating trade effluent and sewage effluent, as characteristics, treatment method and impact are different for trade effluent generated from industrial sectors and sewage effluent generated from infrastructure & development sectors.

vi. Motivation to industries for progressive environmental management:

In the previous classification regime, there was no effective provision for change in category of industries based on the variation in pollution potential of a sector, even if the industries adopt cleaner technologies or switch over to cleaner raw material/cleaner fuel etc., resulting into reduction in pollution index.

2.2 Modified methodology for classification of sectors

Considering the scope of revision, CPCB prepared a draft report on "Classification of Industrial Sectors into Red, Orange, Green and White Categories: A Tool for Progressive Environmental Management". As per the draft report, a revised methodology for the classification is proposed which incorporates, water pollutant score, air pollutant score and waste generation score, based on the pollution potential of a sector on the environment. Scores out of 100 were given to each three pollutant groups and formula for calculating cumulative score based on the impact pollutant is devised. These scores are used for computation of pollution index for deciding the

category of industrial sector. The cut-offs for deciding the category were based on the quartiles of pollution indices, pollution potential of sectors, etc. The draft report was placed on CPCB website in July 2023, for comments/feedback from stakeholders.

CPCB received 161 representations, comprising more than 700 comments from various State Pollution Control Boards, research and technical institutions, industrial associations, NGOs, individual industries, and the public. The stakeholder-wise representations are shown with the help of pie-chart in **Figure III**.

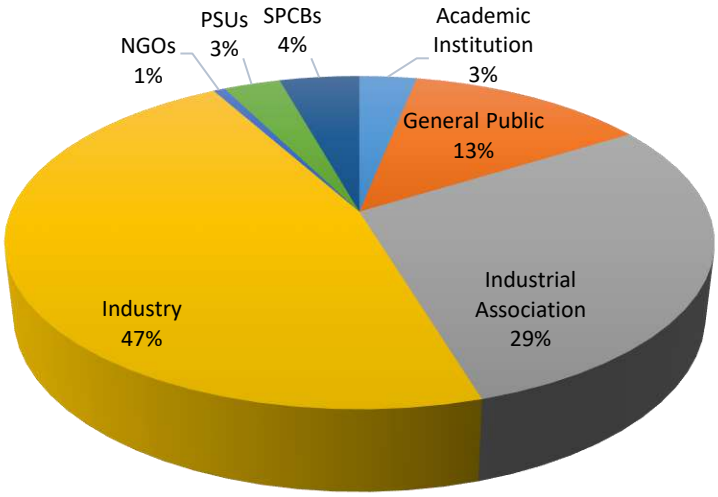

Figure III: Stakeholder-wise representations received

Subsequently, CPCB constituted a committee to critically examine and analyse the comments and to make recommendations for suitable incorporation in the final methodology and classification. After incorporating the feedback received from stakeholders, the Committee has finalized the basic methodology which can be used as a yardstick for classification of the sectors into Red, Orange, Green and White Categories.

Further, based on the stakeholders' comments, a need was felt to introduce a separate "blue category" for Essential Environmental Services (ESS) required for management of waste generated from domestic/household activities and, an incentive mechanism to promote units in a particular sector, taking measures resulting into better environmental performance. An addendum was prepared, shared and presented to all SPCBs/PCCs. The addendum was also placed in the CPCB Website on 11.07.2024 for inputs/comments. Till last date (i.e. 11.08.2024) 09 representations were received in the addendum. All representations were examined, and classification based on revised methodology is finalised.

It is worth to mention that to safeguard the environment, following the fundamental principle of classification i.e., “Precautionary Principle", scope is always available for application of mind and collective wisdom. As per the precautionary principle, when human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. Therefore, variation from methodology is possible in case of projects having high chances of damage to the environment/eco-system such as river mining, etc. or having associated accidental risk such as major accident hazards installations wherein risk is associated with industrial activities having potential in terms of operation or process, manufacturing, transportation, and storage of one or more hazardous chemicals as prescribed by the Manufacture, Storage, and Import of Hazardous Chemical Rules, 1989.

Considering the above issues, the classification methodology was modified based on the potential of three pollutant groups, namely, water pollutant, air pollutant and waste pollutant (which are hazardous/toxic/infectious/bulk in nature), which have been given scores out of 100, each. Slabs are assigned for selection of pollutant groups respectively for water, air, and waste. Score can be decided based on dominant pollutants in the pollutant groups and quantity as detailed in Table-I, Table-II and Table-III. These scores are used for computation of pollution index for deciding the category of sector. The scoring methodology is based on the pollution potential during generation and not at the end of pipe/ after treatment considering the fact that all pollutants need to be treated and disposed as per the provisions/rules notified under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 and as amended.

The details of scoring criteria for PI_W for “water pollutant,” PI_A for “air pollutant” and PI_H for “waste generating sector” are as follows:

2.2.1 Scoring criteria for Water Pollutant “PI_W”

Water pollution score consider the potential water pollution load from any sector in terms of characteristics and quantity of untreated trade effluent (wastewater). The “trade effluent” includes any liquid, gaseous or solid substance which is discharged from any premises used for carrying on any [industry, operation or process, or treatment and disposal system], other than domestic sewage.

The water pollutant score (PI_W) is the addition of three sub-scores which are based on organic content in terms of oxygen demand of wastewater (W1), potential of other pollutants (W2) and

quantum of wastewater (W3). The weightages of W1, W2 and W3 in the water pollution score are 35%, 30% and 35%, respectively.

Proportionate higher scores are assigned to the sectors generating trade effluent of high BOD and/or high COD, heavy metals/toxic compounds, and large volume of wastewater. The scores are assigned considering the potential for causing damage to the environment. It may be noted that for sectors generating industrial effluent, dominant quantity of trade effluent is considered in score W3 (W3-1 to W3-5). Whereas, for sectors generating huge volume of sewage effluent such as railway stations, STPs, residential building projects, airports etc., the separate scores W3 (W3-6 to W3-10) are assigned. The term used, "Sewage effluent" means effluent from any sewerage system or sewage disposal works and includes sullage from open drains. The scoring criteria for water polluting sectors are given in **Table-I**.

Table I: Scoring Criteria for Water Polluting Sector

Water Pollutant Group	Description	Score
Score W1: Score based on the oxygen demand of wastewater (Maximum of the following scores to be considered)		
W1-1	BOD ≥ 5,000 mg/l or COD ≥ 10,000 mg/l	35
W1-2	1000 ≤ BOD < 5,000 mg/l or 5000 ≤ COD < 10,000 mg/l	30
W1-3	500 ≤ BOD < 1,000 mg/l or 1000 ≤ COD < 5,000 mg/l	25
W1-4	100 ≤ BOD < 500 mg/l or 250 ≤ COD < 1,000 mg/l	20
W1-5	10 ≤ BOD < 100 mg/l or 50 ≤ COD < 250 mg/l	10
Score W2: Score based on other pollutants in the wastewater (Maximum of the following scores to be considered)		
W2-1	Pollutants like pesticides, heavy metals, and toxic compounds: *(Aluminium, Anionic detergents, Barium, Chloramines, Copper, Fluoride, Total residual chlorine, Iron, Manganese, Mineral oil, Phenolic compounds, Selenium, Silver, Sulphide, Cadmium, Cyanide, Lead, Zinc, Mercury, Tin, Vanadium, Antimony, Benzene, Benzo-a-pyrene, Molybdenum, Nickel, Phosphates, Polychlorinated biphenyls, Polynuclear aromatic hydrocarbons, Arsenic, Total/Hexavalent Chromium, Trichloroethane, Trichloroethylene, Adsorbable Organic Halogens (AOx), Pesticides compounds, Residual antibiotic, Radioactive materials, etc.)*	30
W2-2	Pollutants like Nitrate Nitrogen, Nitrate, Ammonical Nitrogen, Total Kjeldahl Nitrogen (TKN), Oil & grease, pH<5.5 or > 9	25
W2-3	Pollutants mainly in terms of inorganic dissolved solids and associated other impurities due to process e.g. wastewater generated from DM water rejects, boiler blowdowns, brine solution rejects, fresh-water RO rejects, etc.	20
W2-4	Pollutants mainly in terms of inorganic dissolved solids e.g. wastewater from cooling towers, cooling-re-circulation processes, etc.	15

Score W3: Score based on quantity of wastewater generated		
A. For sectors generating Industrial Trade effluent (Maximum score to be considered)		
W3-1	Wastewater ≥ 500 KLD	35
W3-2	100 KLD ≤ Wastewater < 500 KLD	30
W3-3	50 KLD ≤ Wastewater < 100 KLD	25
W3-4	10 KLD ≤ Wastewater < 50 KLD	20
W3-5	Wastewater < 10 KLD	15
B. For sectors such as STPs, building projects, etc. generating/handling only high-volume Sewage (Maximum score to be considered)		
W3-6	Sewage ≥ 5,000 KLD	35
W3-7	2,000 KLD ≤ Sewage < 5,000 KLD	30
W3-8	500 KLD ≤ Sewage < 2,000 KLD	25
W3-9	100 KLD ≤ Sewage < 500 KLD	20
W3-10	Sewage < 100 KLD	15
Water Pollutant Score (PI_W) = W1+W2+W3		

2.2.2 Scoring criteria for Air Pollutant "PI_A":

Air pollution score consider the potential air pollution load from any sector in terms of characteristics of emissions and its quantum/scale in terms of quantity of fuel. The air pollutant score is based on generation of emission. The "air pollutant" means any solid, liquid, or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The air pollution score (PI_A) is the addition of three sub-scores which are based on the type of pollutants in emissions (A1), work zone emission/fugitive emissions & odour nuisance (A2), and fuel type & quantity (A3). The weightages of A1, A2 and A3 in air pollution score are 35%, 30% and 35%, respectively.

Proportionate higher scores are assigned to the sectors generating emissions with hazardous air pollutants, process-based fugitive emissions and using solid/liquid fuels, as such pollutants have higher potential to damage the environment.

The California Air Resources Board defines fugitive emissions as "Emissions not caught by a capture system which are often due to equipment leaks, evaporative processes and windblown disturbances." The fugitive emissions from any process having acid mist, VOCs, etc. are given higher weightage (score A2=30) as compared to the fugitive emissions of inert material (score A2=25). Sectors having persistent foul odour issue, will get score A2=20. Sectors/units using solid/liquid fuel will get higher score-A3, compared to the sectors using cleaner gaseous fuel or electricity. The scoring criteria for air polluting sectors are given at **Table-II.**

Table II : Scoring criteria for air polluting sectors

Air Pollutant Group	Description	Score
Score A1: Score based on Process emissions (point source) (Maximum of the following scores to be considered)		
A1-1	Hazardous Air Pollutants (HAPs) and heavy metals: *HAPs (Phosgene, Benzene, Benzo(α)pyrene, Butadiene, Toluene Di-isocyanate, Methylene-di-phenyl Di-isocyanate, Ethylene Oxide, Ethylene Di Chloride, Acrylonitrile, Propylene Oxide), Dioxins & Furans, Asbestos, Polycyclic Aromatic Hydrocarbons (PAHs), HCN, Cd, Th, Hg, Sb, As, Pb, Co, Cr, Cu, Mn, Ni, V, etc.*	35
A1-2	Halogens, acids, and pesticides-based pollutants: *H_2S, HF, HBr, P_2O_5 as H_3PO_4, NH_3, TOC, Cl, HCl, SO_3, CH_3Cl, Total Fluoride, PM having pesticide compounds/other organic compounds, Acid mist, etc.*	30
A1-3	Pollutants due to combustion of fuel or due to process: *PM, CO_2, CO, NOx, SO_2, etc.*	25
A1-4	Volatile Organic Compounds (VOCs): *Ethyl benzene, Styrene, Toluene, Xylene, Aromatics, Propylene Glycol, Ethylene Glycol, etc.*	20
Score A2: Score based on fugitive emissions and odour nuisance (Maximum of the following scores to be considered)		
A2-1	Fugitive emissions of Particulate Matter (PM), acid mist, VOCs, etc. from process	30
A2-2	Fugitive emissions of Particulate Matter (PM), acid mist, VOCs, etc. due to storage and handling, etc.	25
A2-3	Odour nuisance, including odour due to the use of binding gums, cements, adhesives, enamels etc.	20
Score A3: Score based on quantity of fuel (Maximum of the following scores to be considered)		
	Coal or liquid fuels	
A3-1	Fuel consumption ≥ 24 TPD	35
A3-2	12 TPD ≤ Fuel consumption < 24 TPD	30
A3-3	Fuel consumption < 12 TPD	25
	Biomass-based fuels	
A3-4	Fuel consumption ≥ 48 TPD	25
A3-5	24 TPD ≤ Fuel consumption < 48 TPD	20
A3-6	Fuel consumption < 24 TPD	15
	Cleaner/gaseous fuels, such as, PNG, CNG, LPG, Compressed Biogas (CBG), propane, butane etc.	
A3-7	Fuel consumption ≥ 120 TPD	20
A3-8	60 TPD ≤ Fuel consumption < 120 TPD	15
A3-9	Fuel consumption < 60 TPD	10
A3-10	Electricity	0
Air Pollutant Score (PI_A) =A1+A2+A3		
Note: In case, any sector/unit is using more than one type of fuel, the most polluting fuel category, will be considered.		

2.2.3 Scoring criteria for Industrial Waste Generating Sector "PI_H"

Industrial waste generating sectors are considered based on the generation of hazardous waste/high volume low effect waste. As per the Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules, 2016, the "hazardous waste" means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances and shall include waste as per the Schedule I, Schedule II and Schedule III of the rule. Further, scores are also assigned to the high-volume low effect wastes such as fly ash, phosphogypsum, red mud, jarosite, slags from pyro-metallurgical operations, mine tailings and ore beneficiation rejects.

The score for waste comprises of two sub-scores H1 and H2. The H1 score is based on the different type of hazardous waste which are generated during the process, and which required to be managed/disposed through common facility OR based on the generation of high-volume low effect waste/ HW like contaminated bags/ drums etc. The H2 score is based on the total quantum of waste generated.

The desirable disposal method such as incineration, landfill after treatment, landfill etc. signifies the potency of hazardous waste. In recent time, the utilization of hazardous waste as per the Rule-9 of Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules, 2016, as alternate fuel and raw material in cement kilns, as recyclable hazardous waste etc. has increased. The classification is based on the pollution potential due to generation of such types of hazardous waste from any sector. The score for the quantum of hazardous waste is total potential of generation of such hazardous waste by any sector., Score H1: Based on potency of hazardous waste and score H2: Based on quantum of hazardous waste, are given weightage of 30% and 70%, respectively. Considering the higher risk due to amount of hazardous waste generated rather than its disposal method, more weightage is given to the quantity. Overall waste generation score in case of waste generating sector will be PI_H =H1+H2. The scoring criteria for hazardous waste generating sectors are given at **Table-III**.

A separate scoring criterion has been included for sectors generating bio-medical waste. Bio-medical waste means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in Schedule-I appended to the Bio-Medical Waste Management Rules, 2016. As any Health Care

Facilities (HCFs) generates all types of bio-medical waste (red, yellow, blue, and white) and quantities of such wastes may vary considerably based on the type of facility/location of facility (rural/urban), and other such factors. Therefore, scoring based on number of beds in a healthcare facility is considered as sole criteria for assigning waste score (H: B-1 to B-7) as tabulated in **Table-III**.

Least score of 25 is given to non-bedded healthcare facilities and maximum score of 100 is given to facilities having more than 1,000 beds. Overall waste generation score in case of bio-medical waste generating sector will be PI_H.

Table III: Scoring criteria for waste generating Sectors

Waste Pollutant Group	Description	Score
A. Score for sectors generating hazardous waste		
Score H1: Score based on the hazardous waste management/disposal method. (Maximum of the following scores to be considered)		
H1-1	Hazardous wastes which are flammable, ignitable, corrosive, oxidizing toxic, etc. and requiring disposal through incineration	30
H1-2	Hazardous wastes which are reactive, capable of yielding another material post disposal, etc. and requiring disposal in secured landfill after stabilization/treatment	25
H1-3	Hazardous wastes which are requiring direct disposal in secured landfill without stabilization	20
H1-4	High volume and low effect wastes, contaminated bags/ drums/ containers etc.	10
Score H2: Score based on quantity of hazardous waste generation. (Maximum of the following scores to be considered)		
H2-1	Hazardous Waste ≥ 5000 TPA	70
H2-2	1000 TPA ≤ Hazardous Waste < 5000 TPA	50
H2-3	200 TPA ≤ Hazardous Waste < 1000 TPA	30
H2-4	10 TPA ≤ Hazardous Waste < 200 TPA	20
H2-5	Hazardous Waste < 10 TPA	10
B. Scores for the sectors generating bio-medical waste		
B-1	No. of beds ≥ 1,000	100
B-2	500 ≤ No. of beds < 1,000	80
B-3	200 ≤ No. of beds < 500	60
B-4	50 ≤ No. of beds < 200	50
B-5	10 ≤ No. of beds < 50	40
B-6	No. of beds < 10	30
B-7	Non-bedded facility	25
For sectors generating hazardous waste PI_H =H1+H2 **For sectors generating bio-medical waste PI_H =B**		

2.3 Computation of Cumulative Pollution Index and criteria for deciding category of sector

In the revised methodology of classification (2025), all three pollutant scores due to water, air and industrial waste generation are taken into account while computing pollution index. The formula for computing cumulative pollution index (PI) is as follows:

$$PI = i_{max} + (100 - i_{max})\left(\frac{i_2 + i_3}{200}\right)$$

Where, $i_{max,}$ is the maximum score among Water (PI_W), Air (PI_A), and Waste (PI_H) pollutant scores and i_2 & i_3 are the remaining pollutant scores.

The category of the sector will be decided based on the pollution index ranges given at **Table-IV.**

Table IV: Ranges of Cumulative Pollution Index for different categories

Cumulative Pollution Index (PI)	Category of industrial sector
PI ≥ 80	Red
55 ≤ PI < 80	Orange
25 ≤ PI < 55	Green
PI < 25	White

The purpose of classification is to have uniform consent mechanism, defined routine monitoring frequency by concerned SPCB/PCC, environmental protection plans etc. Modified methodology also considers the variation in pollution potential due to various type of activities and operations in a particular sector.

The scores/pollution index/category of any two sectors may be same, however, comparing two different sectors based on the category or pollution index is not desirable as the cumulative PI is a function of air pollutant, water pollutant, and waste pollutant and the cumulative score is arithmetically relates the maximum score of one pollutant with the remaining other two pollutants. Hence, PI/category of sectors may be same but may have different impact on environment.

2.4 Blue Category Projects- Essential Environmental Services for management of environmental pollution arising from domestic/household activities

Essential Environmental Services may be defined as those facilities which are essential to control, abate and mitigate pollution generated from Domestic and Industrial activities. Such Essential environment services for Industrial Activity includes CETP, CHWTSDF, Effluent conveying system etc. and essential environment services for domestic activities includes STP, MSW etc. Both the type of EES plays a vital role in Environment Management. However, during the treatment of waste, some EES generates/handle hazardous waste/infectious waste. The EES which do not generate Hazardous Waste, and which otherwise have large littering potential can be categorised as Blue Category Projects. Further, there are past legal references wherein Hon'ble Apex court has also considered the importance and requirement of such Essential Environment Services.

Human settlements whether located in rural/urban/eco-sensitive area generate sewage, solid waste, and C&D waste, which are required to be managed to prevent adverse impact on environment and human health. Basic environment management facilities are required to be set-up to manage such waste which includes STP, C&D waste processing facility, MSW management facility like sanitary landfill, material recovery facility & waste processing units, bio-methanation, bio-composting, waste to energy, etc.

These facilities are basically essential environment services which play a vital role in protecting environment and human health. These facilities may also bring value addition by producing various by-products such as secondary raw material, compost, energy, etc. and promotes circular economy and sustainable development by converting waste into wealth. Moreover, these categories do not generate hazardous or infectious wastes.

As the role and importance of these facilities is different in nature as compared to other activities and industries in the sense that they are primarily set-up for prevention, control and abatement of soil, water and air pollution. It is more appropriate to have a separate colour category-Blue Category for essential environmental services facilizes related to environmental pollution arising from domestic/household activities. These activities are required to meet all the prescribed environmental norms/rules notified from time to time and the pollution index for such Essential Environmental Services (EES) shall continue to be calculated as per the formula and consent to operate will be governed based on the pollution index. However, the

category of the EES will be termed “Blue Category sector” and as an incentive for the essential services, additional 2 years validity for consent to operate (as per PI) will be provided.

The list of EES facilities is given at **Annexure-II**.

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3

Classification of Sectors as per Revised Methodology

3.1 Types of sectors based on their activities

The revised methodology of classification will be applicable to all industries which may have potential for generation of environmental pollutants. As per the Section 2(j) of the Industrial Disputes Act, 1947, "Industry" means any business, trade, undertaking, manufacture, or calling of employers and includes any calling, service, employment, handicraft or industrial occupation or avocation of workman", however, based on type of operational activities, the industries are divided into following four sectors:

i. Industrial Sectors
ii. Essential Environmental Services (EES)
    a. EES for Industrial Waste
    b. EES for Domestic Waste (Blue Category Sector)
iii. Service/Infrastructure Development Sectors
iv. Others/Special Category Sectors

The sectors which are involved in production of goods, products, etc. are considered under "Industrial Sectors". The sectors covered under "Essential Environmental Services (EES)" are those facilities which are essential to control, abate and mitigate pollution generated from Domestic and Industrial activities. These services are essential facilities which are required to reduce pollution load on the environment, such as sewage treatment plants, common bio-medical waste treatment facilities, construction & demolition waste processing plants, etc. Essential Environmental Services Sectors are sub classified as "EES for industrial waste" and "EES for domestic waste (Blue category sectors which do not handle or generate infectious or hazardous waste)". On the other hand, sectors which carry out service-related activities such as infrastructure projects, railways, airports, hospitals, etc. are covered under "Service/infrastructure development sectors".

"Other/special category sectors" include those projects which cannot be classified based on the scoring methodology of pollution index but require classification based on precautionary principle and considering the potential of ecological damage/ health and environment related risk, etc. Few such sectors are sand mining, hydel power plants, etc.

The revised methodology of classification, sub-categorises the main sector based on the usage of cleaner technology/cleaner production/cleaner fuel which has proven reduction in trade effluent generation, emissions, waste, etc., for better environmental management, resulting into overall reduction of pollution index compared to main sector. For example, if coffee seeds processing industries use eco-pulping technology, which generates less water pollution, the pollution index of the said sector gets reduced and category changes from orange to green. Similarly, variation in type/scale of activities in a particular sector is also considered for classification of sub-sectors.

The methodology and scores have been screened through stakeholder feedback/consultation and public opinion. Available standard literature, various documents and guidelines, inspection reports, etc. were also referred, while assessing the scores for water pollution, air pollution, and waste generation for classification of sectors. Based on the modified methodology, the list of sectors and sector specific sub-classification is given at **Annexure-I to Annexure-IV**. Summary of classified sectors is given in **Table-V**.

Table V: Number of sectors classified under different categories

Sl. No.	Type of sector	Total number of sectors/sub-sectors	Red	Orange	Green	White	Blue
1.	Industrial Sectors	**359**	**107**	**120**	**81**	**51**	-
2.	Essential Environmental Services (ESS)						
2.a.	ESS for domestic waste	**9**	**-**	**-**	-	-	**9**
2.b.	ESS for industrial waste	**9**	**9**	**-**	-	-	-
3.	Service/Infrastructure Development Sectors	**37**	**7**	**15**	**13**	**2**	-
4.	Others/Special Category Sectors	**5**	**2**	**2**	`-	**1**	-
	Total	**419**	**125**	**137**	**94**	**54**	**9**

3.2. Usage of classification of sectors

The classification of sectors may be used for the following purposes:

i. **Consent management:** SPCBs/PCCs may grant Consent to Operate (CTO) to red, orange, and green categories of industries for validity up to 5 years, 10 years, and 15 years, respectively as per existing provisions which would be later governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023/Water Act, as amended. The validity of blue category sectors will be 2 years more than the category based on PI.

ii. **Inspection frequency:** SPCBs/PCCs may prioritize their environmental surveillance programs based on the categories of sectors. SPCBs/PCCs are required to ensure inspection of red, orange, and green category of industries at least once in six-months, one-year, and two-years, respectively. Common facilities and 17 categories of industries are to be inspected at least once in every three-months.

iii. **Siting criteria:** The categorization may be used as a tool for deciding the location/siting of an industry in a particular location.

iv. **Development of cluster:** The classification will help in planning of sector specific cluster, based on scoring of various pollutants and development of adequate environment management infrastructure facility, accordingly.

v. **Sector specific plans for pollution control:** The plans for control of pollution may be prepared and implemented on priority for the sectors having higher pollution index and overall higher pollution load.

vi. **Levying environmental compensation:** Pollution index may be used for determining and levying environmental compensation on industries violating the environmental norms.

vii. **A tool for progressive environmental management:** Industrial units may adopt cleaner technologies, cleaner fuels, etc. which may result in reduction of pollution index, thus, moving to lower pollution potential category. It will provide incentives to industries in terms of less consent renewal fees, less environmental surveillance/compliance burden, more validity period for consents/authorizations, etc.

3.3 Classification of left-out/new sectors

The revised methodology of classification (2025) and list of sectors classified by CPCB is required to be adopted and implemented by all SPCBs/PCCs. In case of any new or left-out

sector, the SPCB/PCC may categorize the sector at its own level. For this purpose, a committee headed by the Member Secretary, SPCB/PCC and comprising of at least two senior cadre engineers/scientists of the SPCB/PCC (as nominated by the Member secretary of the concerned SPCB/PCC) may be constituted to examine the matter and classify the sector in accordance with the methodology prescribed by CPCB. The State Level Committee may also co-opt subject experts, industrial association representative, etc., as member, as per requirement. CPCB has also developed a tool to assess the Cumulative Pollution Index and category of any sector, which is available on CPCB website (https://cpcb.nic.in/categorization-of-industrial-sectors/).

In addition, all SPCBs/PCCs are required to submit list of all such sector classified under white category to CPCB in the prescribed format (**Annexure-V**), for notification as per provisions of Jan Vishwas (Amendment of Provisions) Act, 2023.

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4

Incentives to unit in a sector for adopting measures resulting to better environmental performance

A methodology has been strategized to provide incentives to the unit in a sector which are dedicated to reduce environmental impacts from their operations/process. The objective can be achieved by 100% treatment and reuse of wastewater generated, having complete dependency on cleaner fuel alternatives (such as PNG, LPG, compressed biogas, propane, butane, electricity etc. for meeting energy requirement), implementation & achievements of targets of sector-specific charters of CPCB/SPCB for environmental management, EPR obligations and use of cleaner process/cleaner technology to eliminate generation of toxic/hazardous pollutants.

The units fulfilling the following eligibility criteria may submit their formal proposal to the concerned SPCB/PCC for consideration:

4.1 Eligibility Criteria

- The unit should have completed at least one year of completion of production/operations with demonstrated, verifiable steps and submitted audit report from institute of repute for considering the unit for the purpose by concerned SPCB/PCC. To facilitate verification, the unit must have properly maintained logbooks/bills for production, electricity consumption, fuel, water consumption, wastewater treatment and use of treated wastewater.
- The unit should be located in conforming area with applicable Environment Clearance, Consent to Establishment (CTE) and Consent to Operate (CTO) and hazardous/bio-medical waste authorization from SPCB/PCC.
- Unit should comply with all the norms/conditions stipulated under EC, CTO and Guidelines/Rules issued by CPCB.

- In case, unit using ground water resource, it should have valid permission/NOC and also required to install electronic flowmeter.
- No penalty or legal obligation is imposed/pending against unit for violation of environmental norms. Records for last 5 years may be verified. In case establishment period of the unit is less than 5 years, the past records since the start of production may be verified.
- Unit should not be involved in any sort of accident/incident resulting into emission /discharge into the environment. Records for last 5 years may be verified.

All such units, interested in availing incentives are required to demonstrate and prove their initiatives to the Committee (to be constituted at the level of concerned SPCB/PCC), comprising of members as mentioned in **Table VI**.

Table VI: Structure of Committee to evaluate the request of units adopting measures resulting in better environmental performance

Sl. No.	Members	Role
1	Member Secretary, SPCB/PCC	Chairman
2	Subject expert from Indian Institute of Technologies (IITs) or National Institute of Technologies (NITs) or any other institute/university of repute.	Member
3	Expert from CSIR institute/laboratories, having expertise in industrial process and pollution control technologies/ environmental management	Member
4	Two officials of concerned SPCB/PCC, as nominated by the Member Secretary, SPCB/PCC	Member

4.2. Evaluation Criteria

The committee shall scrutinize the proposals based on the eligibility criteria. The basis of evaluation will be- (i) Measures taken for treatment and reuse of wastewater to reduce freshwater consumption, (ii) Use of alternative cleaner fuel to reduce emissions, and (iii) Use of cleaner technology/ cleaner production which results in reduction in pollution/hazardous waste generation (iv) Recycling units identified for EPR obligations and has fulfilled all requirement including Environmentally Sound Management Facility for recycling.

The unit is required to demonstrate the successful implementation of measures by annual submission of third-party audit report (through institute of repute) regarding performance of environmental management measures. The Committee members may also inspect unit, collect samples, and get it analysed, check logbooks, electricity/water bills, examine system feasibility through mass-balances, ensure real-time submission of environment data to SPCB/PCC server, etc. The check and balances to examine the industry claims are summarized in **Table VII.**

Table VII: Checks and balances to assess the adequacy of environment management measures

Criteria	Checks and balances
I. Wastewater Management	
Installation of wastewater recovery system resulting into treatment and 100% reuse of treated wastewater in industrial process.	• Unit must have adequate operational Effluent Treatment Plant (ETP). The freshwater requirement of the unit has shown proportionate reduction. • There should not be any flow/ponding of wastewater inside the premises or discharge outside from the premises. Further, there should not be any by-pass. • Electronic flowmeters and Pan-tilt-zoom (PTZ) camera should have been installed with connectivity for continuous transmission of data to SPCB/PCC and CPCB servers (as applicable). • Recirculation system should be clearly mapped and visible for inspection and flow meter should be installed at required locations with records. • Mass/water balance based on actual production need to be checked. The claim regarding reduction in freshwater consumption should have concurrency with the readings of flow meters, water bill, log-books, etc. • Treated wastewater should not be used for horticulture or agriculture purposes. • Sludge generated from treatment of wastewater should be managed properly as per the authorization issued by the concerned SPCB/PCC and timely submission of Form-IV as per the requirement of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
II. Air Pollution Management	
100% fuel dependency on cleaner fuels, such as- Piped Natural Gas (PNG), Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG) Liquefied Petroleum Gas (LPG), Compressed	• No other fuel (coal, pet-coke, furnace oil, etc.) should be stored/used in the unit premises. Diesel for Gensets (as an auxiliary power source) may be allowed. Preference may be given to the units using gas based Gensets. • Adequate facility for stack monitoring (port holes, zig-zag ladder etc.) should be available with provision of OCEMS (as applicable).

Biogas (CBG), propane, butane, etc.	• Use of upgraded air pollution control devices with higher efficiency for the reduction of emissions. • Adoption of cleaner technology, advanced pollution control systems etc. to control fugitive/emissions • Use of alternate cleaner raw material for generation of less pollution. • Use of renewable energy as an alternate to conventional fuel/power should be considered.
III. Waste Management	
The unit has adopted cleaner technology/ cleaner production which results in reduction in pollution/ hazardous waste generation	• Reduction in generation of pollution/waste due to adoption of cleaner technology/change in raw material etc. • Mass balance based on actual production need to be checked. There should be concurrency in generation of hazardous waste, utilization, disposal, etc. with respect to net reduction in generation.
IV. EPR Targets (for recycling facilities)	
Recycling units identified for EPR obligations and has fulfilled all requirement including Environmentally Sound Management Facility for recycling.	• Complying with the requirement of EPR obligation identified by CPCB from time to time.

4.3. Re-assessment of Pollution Index (PI)

The purpose of giving star category is to classify the unit in the sector as star performing units. The category of the unit may be re-assessed as detailed below:

A. For Industries, Service/Infrastructure facilities and Essential Environmental Services Sectors for management of waste.

The pollution index of the units in any sector which have proven reduction in trade effluent generation and/or air pollution management and/or waste management measures, can be calculated based on submission of same with the supporting documents for considering the modified score based on the same methodology.

The revised cumulative pollution index (PI) will be calculated with modified air/water/waste scores as discussed in the methodology given in previous section. If revised, cumulative PI results to change in the category of unit in the sector, the nomenclature for revised category will be as per the **Table VIII**.

Table VIII: Nomenclature for revised category

Change in category	Nomenclature of revised category
Red to Orange	Red*
Orange to Green	Orange*
Green to White	Green*

B. Essential Environmental Service Sectors for Domestic/Household Waste- "Blue Category Sectors":

Units under Blue Category are required to reduce their existing PI score by 25%, by meeting evaluation criteria/check and balances, as mentioned in **Table III** to qualify for change in category to Blue*.

4.4 Incentives to the units for better environmental management

Units which have demonstrated the successful implementation of environmental management measures and verified by the Committee, shall be eligible for the incentives, as listed in the **Table IX**.

Table IX: Incentives to units for better environmental performance

Category	Incentives
Red*	• CTO may be granted for the validity of max. 10 years. • Prescribed random environmental surveillance inspection frequency may be once a year, considering the change in category.
Orange*	• CTO may be granted for the validity of max. 15 years. • Prescribed random environmental surveillance inspection frequency may be once in two years, considering the change in category.
Green*	• CTO may be granted for the validity of max. 20 years. • Prescribed random environmental surveillance inspection frequency may be once in four years, considering the change in category and given incentives twice the original category.
Blue*	• CTO may be granted with additional 3 years validity period. • Prescribed random environmental surveillance inspection frequency may be once in 3 months.

In case of non-compliance(s) observed in future, the State Board can remove the star status and for calculation of EC, the PI of original category shall be considered.

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5 Implementation pathway/guidelines

The revised methodology and classification of sectors will be implemented in prospective manner. For this purpose, following guidelines may be referred:

i. All pending application for consideration of CTE/CTO and future such application shall be processed as per the revised methodology of classification. In case CTE granted before the revised classification, applicability of CTO will be as per new classification.

ii. New classification will be applicable to existing units at the time of renewal of CTO or within one year from the date of directions issued by CPCB regarding implementation of revised classification, whichever is earlier. The annual fees or cumulative fees for the remaining period shall be as per the revised category.

iii. SPCBs/PCCs may grant Consent to Operate (CTO) to units under red, orange, and green categories for maximum validity up to 5 years, 10 years, and 15 years, respectively as per existing provisions which would be later governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023/Water Act, as amended. SPCBs/PCCs may grant Consent to Operate (CTO) to units under Blue Category sectors with additional 2 years validity, considering their role as Essential Environmental Services for management of waste generated from domestic/household activities.

iv. Requirement of intimation/consent for white category of industries, shall be governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023//Water Act, as amended.

v. All sectors irrespective of category shall follow guidelines for pollution control, if any, issued by SPCB/PCC/CPCB time to time.

vi. Siting of units shall be only in the conforming area as per the guidelines of CPCB/SPCB/PCC. Further, as per the Section 17(1)(n) of the Water Act, 1974 and the Section 17(1)(h) of the Air Act, 1981, SPCB/PCC may also frame policies/advisory with respect to the location of any industry/operations, the carrying on of which is likely to cause air/water pollution, considering the scale/type of industries and sensitivity of area. Siting of units in eco-sensitive area will be governed by their respective notifications.

vii. The classification of sectors shall not be linked to sanction of loans/finance of bank proceedings.

viii. In the matter of Taz Trapezium Zone (TTZ), for air pollution scores of 10 and 20 (as per 2016 methodology), equivalent scores of 30 and 60 (as per 2025 methodology), respectively, may be considered for sectoral guidelines/opinion from NEERI (Ref: Order dated 08.12.2021, in the matter of M.C. Mehta v/s Union of India, Writ Petition (Civil) No.13381/1984, before Hon'ble Supreme Court).

ix. As per CPCB directions dated 12.12.2019, issued under Section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981, SPCBs/PCCs are required to ensure inspection of red, orange, and green category of industries at least once in six-months, one-year, and two-years, respectively. Common waste treatment facilities and 17 categories of industries are to be inspected at least once in every three-months. (Ref: Order dated 05.11.2019, in the matter of Shailesh Singh v/s State of Haryana & Ors., OA No.639/2018, before Hon'ble National Green Tribunal, Principal Bench).

x. The sectors which are classified under white or green category and if such sectors have installed Genset(s) of higher capacity which are classified under orange/green category, then such sector will be considered under higher category.

xi. All Industrial units are encouraged to adopt measures such as cleaner technology/cleaner production, cleaner raw material, cleaner fuel etc., for better environmental management. If such measures result into overall reduction of pollution

index, request regarding change in category of such sectors/units may be made to concerned SPCB/PCC as detailed under Section 8 of this report.

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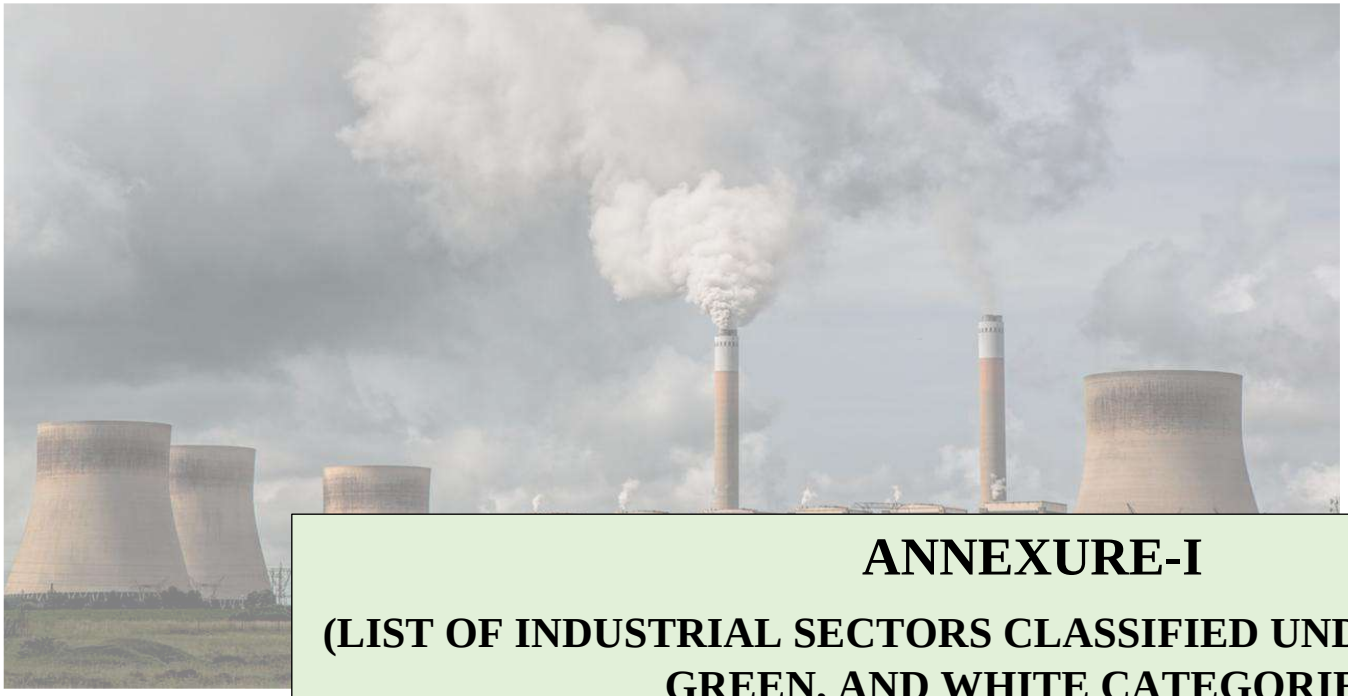
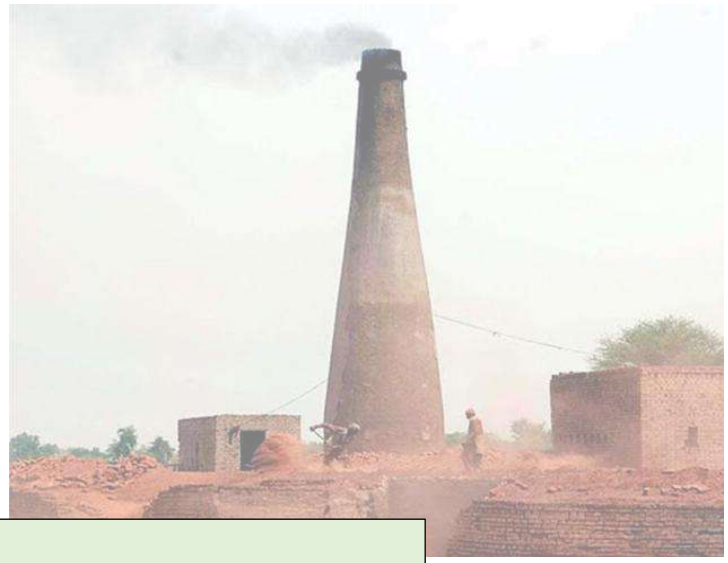




ANNEXURE-I

(LIST OF INDUSTRIAL SECTORS CLASSIFIED UNDER RED, ORANGE, GREEN, AND WHITE CATEGORIES)

LIST OF INDUSTRIAL SECTORS

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
	~A~															
1	Manufacturing of **Automobiles** (integrated facilities)	20	30	25	**75**	0	25	0	**25**	25	20	**45**	83.8	Red	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 or may have stand-alone units. In such cases, after thorough inspection of such units by concerned SPCB, re-categorization of the industry shall be made accordingly.	IPC-V
2	**Asbestos** and asbestos based industries	10	30	25	**65**	35	30	30	**95**	25	30	**55**	98	Red	Asbestos is carcinogenic and banned in many countries.	IPC-II
3	**Almirah**, Grill Manufacturing (Dry Mechanical Process)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
	~B~															
4.0	**BAKERY**, CONFECTIONERY AND SWEETS PRODUCTS															
4.1	Bakery, confectionery, sweets with production capacity ≥ 1 TPD	25	0	20	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
4.2	Bakery, confectionery, sweets with production capacity ≥ 1 TPD. (using cleaner/gaseous fuel)	25	0	20	**45**	25	0	10	**35**	0	0	**0**	54.6	Green		IPC-III
5.0	**BRICK** MANUFACTURING															
5.1	Brick kilns using coal as fuel	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
5.2	Brick kilns using biomass as fuel	0	0	0	**0**	25	25	15	**65**	0	0	**0**	65	Orange		IPC-V
5.3	Tunnel brick kilns (gas fired)	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
6.0	MANUFACTURING OF AUTOCLAVED AERATED CONCRETE (AAC) **BRICKS/BLOCKS.**															
6.1	AAC bricks/blocks manufacturing using coal as fuel (12 TPD and above)	0	0	0	**0**	25	25	30	**80**	0	0	**0**	80	Red		IPC-V
6.2	AAC bricks/blocks manufacturing using coal as fuel (less than 12 TPD)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
6.3	AAC bricks/blocks manufacturing using biomass as fuel	0	0	0	**0**	25	25	20	**70**	0	0	**0**	70	Orange		IPC-V
6.4	AAC bricks/blocks manufacturing using gas as fuel	0	0	0	**0**	25	25	15	**65**	0	0	**0**	65	Orange		IPC-V
7.0	FLY ASH **BRICKS / BLOCK** MANUFACTURING															
7.1	Fly ash bricks/ block manufacturing (with boiler)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
7.2	Fly ash bricks/ block manufacturing (without boiler)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
8.0	MANUFACTURING OF NON-ALCOHOLIC **BEVERAGES**															
8.1	Wastewater generation ≥ 100 KLD	25	20	30	**75**	25	0	25	**50**	0	0	**0**	81.3	Red		IPC-III
8.2	Wastewater generation < 100 KLD	25	20	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
9.0	**BATTERY** MANUFACTURING															
9.1	Lead-acid **Battery** manufacturing (excluding assembling and charging of lead acid **Battery** in micro-scale)	0	30	20	**50**	35	30	25	**90**	25	10	**35**	94.3	Red		IPC-V
9.2	Dry cell **Battery** (excluding manufacturing of electrodes) and assembling & charging of acid lead battery on micro scale	0	30	15	**45**	25	25	10	**60**	25	10	**35**	76	Orange		IPC-V
9.3	**Battery** manufacturing without boiler (excluding lead acid battery)	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		IPC-V
10	**Briquette** manufacturing (coal/biomass/coke)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green	The process involves mixing, mechanized compression and drying.	IPC-II
11	Assembly of **Bicycles**, **Baby** carriages and other small non motorizing vehicles	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
12	**Bailing** (hydraulic press) of waste papers	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
13	**Bio fertilizer** and bio-pesticides without using inorganic chemicals	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
14	**Block** making of printing without foundry (excluding wooden block making)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
15	Flavoured **Betel** nuts production/ grinding (completely dry mechanical operations)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
16	Manufacturing of shoe **Brush** and wire **Brush**	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
	~C~															
17.0	MANUFACTURING OF INDUSTRIAL **CARBON** INCLUDING ELECTRODES AND GRAPHITE BLOCKS, ACTIVATED **CARBON**, **CARBON BLACK**															
17.1	Carbon black manufacturing	20	15	20	**55**	25	30	30	**85**	30	20	**50**	92.9	Red		IPC-I
17.2	Industrial carbon including electrodes & graphite blocks and calcined pet coke	20	15	20	**55**	25	25	25	**75**	30	10	**40**	86.9	Red		IPC-II
17.3	Activated carbon manufacturing (with steam activation)	20	15	20	**55**	25	25	15	**65**	0	0	**0**	74.6	Orange		IPC-V
18.0	INORGANIC **CHEMICALS**															
18.1	Basic inorganic chemicals and electro chemicals and its derivatives including manufacturing of acid	10	30	25	**65**	30	30	20	**80**	20	20	**40**	90.5	Red		IPC-I
18.2	Phosphorous and its compounds, including phosphorous rock processing	20	30	20	**70**	35	25	10	**70**	10	30	**40**	86.5	Red		IPC-I
18.3	Chlorates, per-chlorates & peroxides	20	30	20	**70**	30	20	25	**75**	20	20	**40**	88.8	Red		IPC-I
18.4	Chlorine, fluorine, bromine, iodine, and their compounds	10	30	25	**65**	35	20	10	**65**	20	20	**40**	83.4	Red		IPC-I
19	Coke oven plant, coal liquefaction, coal tar distillation and fuel gas-making	30	30	30	**90**	25	30	35	**90**	25	50	**75**	98.3	Red		IPC-II
20.0	**CEMENT** PLANTS															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
20.1	With co-processing with CPP (Captive Power Plant)	20	25	35	**80**	35	30	35	**100**	10	50	**60**	100	Red		IPC-II
20.2	With co-processing without CPP	20	0	20	**40**	35	30	35	**100**	30	20	**50**	100	Red		IPC-II
20.3	Without co-processing with CPP	10	25	35	**70**	35	30	35	**100**	10	50	**60**	100	Red		IPC-II
20.4	Without co-processing without CPP	0	0	0	**0**	25	30	35	**90**	30	10	**40**	92	Red		IPC-II
20.5	Stand-alone grinding units with CPP	20	25	35	**80**	25	30	35	**90**	10	50	**60**	97	Red		IPC-II
20.6	Stand-alone grinding units without CPP	0	0	0	**0**	25	30	0	**55**	30	10	**40**	64	Orange		IPC-II
20.7	Bulk terminals for storage and packaging of cement	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-II
21.0	**CHLOR** ALKALI															
21.1	Chlor alkali	10	20	25	**55**	30	25	25	**80**	20	20	**40**	89.5	Red		IPC-I
21.2	Chlor alkali using washed salt	10	20	15	**45**	30	25	25	**80**	20	10	**30**	87.5	Red		IPC-I
21.3	Chlor alkali using cleaner/gaseous fuel	10	20	25	**55**	30	25	10	**65**	20	20	**40**	81.6	Red		IPC-I
21.4	Chlor alkali using cleaner/gaseous fuel and washed salt	10	20	15	**45**	30	25	10	**65**	20	10	**30**	78.1	Orange		IPC-I
22	Manufacturing of **Compact** disc **Computer** (CD/DVD) / cassette manufacturing / reel manufacturing	0	15	15	**30**	30	0	0	**30**	20	10	**30**	51	Green		IPC-V
23.0	MANUFACTURING OF **COIR/COIR** PITH AND **COIR** PRODUCTS															
23.1	Coir bleaching and dyeing/printing units	25	0	25	**50**	25	25	20	**70**	0	0	**0**	77.5	Orange		IPC-V
23.2	Coir fibre/pith processing units generating effluent	25	0	20	**45**	0	25	0	**25**	0	0	**0**	51.9	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
23.3	Coir fibre/pith processing and/or Manufacturing of coir products from coir (only dry process)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
24.0	**CERAMICS**															
24.1	Ceramics/ Glass /Earthen potteries and tile manufacturing using coal/oil fired kilns (fuel consumption: 12 TPD and above)	0	0	0	**0**	25	25	30	**80**	0	0	**0**	80	Red		IPC-V
24.2	Ceramics/ Glass /Earthen potteries and tile manufacturing using coal/oil fired kilns (fuel consumption: less than 12 TPD)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
24.3	Ceramics/ Glass /Earthen potteries and tile manufacturing (using gas fired kilns)/tunnel kiln	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
24.4	Ceramics/ Glass /Earthen potteries and tile manufacturing (using only electrical kiln)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
25	**Coal Washeries**	20	25	30	**75**	0	25	0	**25**	0	0	**0**	78.1	Orange		IPC-II
26	Liquid floor **Cleaner**, black phenyl, liquid soap, glycerol mono-stearate manufacturing	25	25	15	**65**	0	20	0	**20**	0	0	**0**	68.5	Orange		IPC-V
27	Phenyl/toilet **Cleaner** formulation and bottling	10	0	15	**25**	0	20	0	**20**	0	0	**0**	32.5	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
28	**Cashew** nut processing	20	0	15	**35**	25	20	15	**60**	0	0	**0**	67	Orange		IPC-III
29.0	**COFFEE** SEEDS PROCESSING INDUSTRY															
29.1	Coffee seeds processing (wet process)	35	0	20	**55**	25	0	15	**40**	0	0	**0**	64	Orange		IPC-III
29.2	Coffee seeds processing with eco-pulper	20	0	15	**35**	25	0	15	**40**	0	0	**0**	50.5	Green		IPC-III
30	Manufacturing of **Candy**	10	0	15	**25**	0	0	0	**0**	0	0	**0**	25	Green		IPC-V
31	**Cardboard** or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
32	Manufacturing of precast **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)	0	0	15	**15**	0	25	0	**25**	0	0	**0**	30.6	Green		IPC-V
33	Manufacturing of **Ceramic Colour** by mixing & blending only (not using boiler and wastewater recycling process)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
34.0	**CHILLING** PLANT, COLD STORAGE AND ICE-MAKING															
34.1	Chilling plant	20	15	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-IV
34.2	Cold storage	0	15	15	**30**	0	0	0	**0**	0	0	**0**	30	Green		IPC-V
34.3	Ice Making	0	20	15	**35**	0	0	0	**0**	0	0	**0**	35	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
35	Decoration of **Ceramic Cup**s and plates by electric furnace	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
36	Ready mix **Cement Concrete**	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
37	**CO_2** recovery plant	0	0	0	**0**	0	0	0	**0**	20	10	**30**	30	Green	Exhausted molecular sieves are generated as hazardous waste.	IPC-V
38	Assembly of air **Coolers/Conditioners**, repairing and servicing	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
39	**Chalk** making from plaster of Paris (only casting without boilers etc. - sun drying / electrical oven)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
40	Standalone manufacturing of **Concrete** admixtures up to 1000 MT per Month capacity by physical mixing (without boiler and reactor and no generation of wastewater)	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White	The sector may become green category if it generates wastewater. The unit needs to be re-classified as per the methodology in case the capacity exceeds 1000 MT per Month.	IPC-V
41	Used **Cooking** oil (UCO) collection centers	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
~D~																
42.0	**DYES, DYE** INTERMEDIATES AND PIGMENT PRODUCTIONS															
42.1	Dyes, Dye Intermediates and Pigments produced by chemical synthesis	35	30	25	**90**	30	20	25	**75**	30	20	**50**	96.3	Red		IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
42.2	Natural Dye and Pigments requiring acidic/ alkaline/ solvent extraction	30	30	20	**80**	25	20	25	**70**	20	10	**30**	90	Red		IPC-I
42.3	Natural Dye and Pigments not require acidic/ alkaline/ solvent extraction	30	20	20	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-I
43.0	SYNTHETIC **DETERGENT** AND SOAPS															
43.1	Synthetic detergents and soaps (wastewater generation ≥ 100 KLD)	20	20	30	**70**	25	0	25	**50**	25	10	**35**	82.8	Red		IPC-I
43.2	Synthetic detergents and soaps (wastewater generation < 100 KLD)	20	20	25	**65**	25	0	25	**50**	25	10	**35**	79.9	Orange		IPC-I
43.3	Synthetic detergents and soaps (only formulation)	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-I
43.4	Soap manufacturing (handmade -without steam boiling / boiler)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
DISTILLERIES AND FERMENTATION SECTORS																
44.0	**DISTILLERIES** AND FERMENTATION INDUSTRIES															
44.1	Distillery (Molasses based)	35	25	35	**95**	25	25	35	**85**	0	0	**0**	97.1	Red		IPC-III
44.2	Distillery (Grain based)	35	25	30	**90**	25	25	25	**75**	0	0	**0**	93.8	Red		IPC-III
44.3	Distillery (Grain based) with Distiller's Dried Grains with Soluble (DDGS) as by-product	25	25	20	**70**	25	25	25	**75**	0	0	**0**	83.8	Red		IPC-III
44.4	Standalone yeast manufacturing units	35	25	35	**95**	25	20	25	**70**	0	0	**0**	96.8	Red		IPC-III
44.5	Breweries and malteries industry (with fermentation)-Wastewater generation ≥ 100 KLD	30	15	30	**75**	25	0	25	**50**	0	0	**0**	81.3	Red		IPC-III
44.6	Breweries and malteries industry (with fermentation)-Wastewater generation < 100 KLD	30	15	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
44.7	Potable alcohol by blending, bottling of alcohol products	20	0	25	**45**	0	0	0	**0**	0	0	**0**	45	Green		IPC-III
45	**Diesel** pump repairing and servicing (complete mechanical dry process)	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White		IPC-V
~E~																
46	Manufacturing of **Explosives**, detonators, fuses, etc.	25	30	15	**70**	0	30	0	**30**	30	10	**40**	80.5	Red	Explosives manufacture contribute to release of hazardous pollutants, including generation of other toxic chemicals. Accident/safety hazard is also associated with such sector during manufacturing and usages.	IPC-I
47	Manufacturing of coated **Electrode**	0	15	15	**30**	0	25	0	**25**	0	0	**0**	38.8	Green	Process involves preparation of core wire / rod, preparation of dry mix, preparation of wet mix, application of coating by extrusion, baking of coated electrodes.	IPC-V
48	**Emery** powder (fine dust of sand) manufacturing	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green	Fugitive emissions from grinding operations.	IPC-V
49	**Electric** lamp (bulb) and CFL manufacturing by assembling only	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
50	**Electrical** and electronic item assembling (completely dry process)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
51	**Engineering** and fabrication units (dry process without any heat treatment / metal surface finishing operations / painting)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
								~F~								
52.0	**FIBRE** GLASS (FIBRE REINFORCED PLASTIC) PRODUCTION															
52.1	Fibre glass (containing lead) production and processing (excluding moulding)	0	0	0	**0**	35	0	25	**60**	25	20	**45**	69	Orange		IPC-V
52.2	Fibre glass (without lead) production and processing (excluding moulding)	0	0	0	**0**	30	0	25	**55**	25	20	**45**	65.1	Orange	The use of styrene in most methods of fibre glass production causes hazardous air pollution that is harmful to breathe at excessive levels.	IPC-V
53	Manufacturing of **Firecrackers** including improved crackers/green crackers, etc.	0	0	0	**0**	35	30	0	**65**	30	10	**40**	72	Orange	Various hazardous chemicals are used in the manufacturing process. Accident/safety hazard is also associated with such sector during manufacturing and usages.	IPC-V
54.0	SYNTHETIC **FIBRES** MANUFACTURING															
54.1	Synthetic fibres-PSF & PFY, generated from petrochemical	35	30	35	**100**	30	25	35	**90**	30	20	**50**	100	Red		IPC-I
54.2	Synthetic fibres including rayon, tyre cord, viscose filament yarn/staple fibre, acrylic fibres	25	20	25	**70**	30	20	25	**75**	20	10	**30**	87.5	Red		IPC-I
54.3	Synthetic fibres including rayon, tyre cord, viscose filament yarn/staple fibre, acrylic fibres using cleaner/gaseous fuel	25	20	25	**70**	30	20	10	**60**	20	10	**30**	83.5	Red		IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
55.0	**FERTILIZERS** PRODUCTION															
55.1	Fertilizers (Urea)	10	30	35	**75**	30	30	20	**80**	20	30	**50**	92.5	Red		IPC-I
55.2	Fertilizers (Calcium Ammonium Nitrate/Ammonium Nitrate)	10	30	25	**65**	30	25	25	**80**	20	20	**40**	90.5	Red		IPC-I
55.3	Fertilizers (NPK)	10	30	25	**65**	30	25	25	**80**	20	20	**40**	90.5	Red		IPC-I
55.4	Fertilizers (Straight Phosphatic Fertilizers)	10	30	25	**65**	30	25	25	**80**	20	20	**40**	90.5	Red		IPC-I
55.5	Fertilizer (granulation /formulation / blending) generating wastewater through floor washings, cooling towers etc.	10	30	15	**55**	30	30	0	**60**	10	10	**20**	75	Orange		IPC-I
55.6	Fertilizer (granulation /formulation / blending) not generating wastewater	0	0	0	**0**	30	30	0	**60**	10	10	**20**	64	Orange		IPC-I
56.0	**FOOD** AND **FOOD PROCESSING** INCLUDING FRUITS AND VEGETABLE PROCESSING															
56.1	Wastewater generation ≥ 10 KLD	25	0	25	**50**	25	0	25	**50**	0	0	**0**	62.5	Orange		IPC-III
56.2	Wastewater generation < 10 KLD (without boiler)	25	0	15	**40**	0	0	0	**0**	0	0	**0**	40	Green		IPC-III
57.0	**FISH** FEED, POULTRY FEED AND CATTLE FEED															
57.1	Fish feed, poultry feed and cattle feed (with boiler)	0	20	15	**35**	25	25	25	**75**	0	0	**0**	79.4	Orange		IPC-V
57.2	Fish feed, poultry feed and cattle feed (without boiler)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
58	**Fish** processing and packing (excluding chilling of fishes)	25	25	20	**70**	0	20	0	**20**	0	0	**0**	73	Orange		IPC-IV
59.0	MANUFACTURING OF MODULAR WOODEN **FURNITURE**															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
59.1	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)	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
59.2	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 (Without boiler)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
60.0	CARPENTRY & WOODEN **FURNITURE** MANUFACTURING															
60.1	Carpentry & wooden furniture manufacturing with spray painting (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
60.2	Carpentry & wooden furniture manufacturing without spray painting (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
61	**Foam** manufacturing	0	0	0	**0**	35	0	0	**35**	20	10	**30**	44.8	Green	Emissions of VOCs and HAPs. Raw materials are polyurethane, latex etc.	IPC-V
62	**Flour** mills (dry process)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green	Separate classification for domestic flour mills may not require.	IPC-V
63.0	STEEL **FURNITURE** INDUSTRY															
63.1	Steel furniture with spray painting	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green	Obnoxious gases from welding.	IPC-V
63.2	Steel furniture without spray painting	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~G~															
64.0	MANUFACTURING OF **GLUE** AND **GELATIN**															
64.1	Manufacturing of glue and gelatin using coal/liquid fuel	25	20	15	**60**	25	20	25	**70**	10	10	**20**	82	Red		IPC-I
64.2	Manufacturing of glue and gelatin by using biomass/cleaner fuel	25	20	15	**60**	25	20	15	**60**	10	10	**20**	76	Orange		IPC-I
65.0	MANUFACTURING OF **GLASS** (INCLUDING PRINTING OR ETCHING OF **GLASS** SHEET USING HYDROFLUORIC ACID)															
65.1	Manufacturing of glass (Oil/coal fired)	0	15	15	**30**	25	25	25	**75**	0	0	**0**	78.8	Orange		IPC-V
65.2	Manufacturing of glass (gas fired)	0	15	15	**30**	25	25	10	**60**	0	0	**0**	66	Orange		IPC-V
66	Producer **Gas** plant using conventional coal **Gasification**	20	25	15	**60**	25	0	25	**50**	30	10	**40**	78	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
67.0	COMPRESSED **BIOGAS** (CBG)/BIO-CNG PLANTS															
67.1	CBG plants based on Municipal Solid Waste (MSW) as feed	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82	Red		UPC-II
67.2	CBG plants based on process waste (industrial/ process liquid effluent & solid waste like press mud, organic sludge, molasses, etc.) as feed	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82	Red		IPC-III
67.3	CBG plants based on crop residue (paddy straw /wheat straw /corn sweet sorghum/ Napier grass, etc.) as feed	30	25	20	**75**	0	20	0	**20**	0	0	**0**	77.5	Orange		IPC-III
67.4	CBG plants based on animal waste (dairy farms, poultry farms, and other animal waste) as feed	30	25	20	**75**	0	20	0	**20**	0	0	**0**	77.5	Orange		IPC-III
67.5	CBG plants producing Fermented Organic Manure (FOM) & Liquid Fermented Organic Manure (LFOM) as by-products	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White	CBG plants producing FOM & LFOM as by-products in conformity with requirements of Gazette Notification No. 2051 dated 14.07.2020 & No. 1972 dated 01.06.2021, respectively, and utilizing entire FOM & LFOM as a fertilizer or manure on land and also not discharging any waste-water, to be considered under White category, subject to verification by SPCB on case-to-case basis.	IPC-III
68.0	STANDALONE PRODUCTION OF **HYDROGEN** AND/OR **AMMONIA** (WITHOUT CAPTIVE POWER PLANT USING FOSSIL FUEL)															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
68.1	Integrated unit for production of Ammonia through Hydrogen generated by pyrolysis/gasification	20	25	20	**65**	20	25	25	**70**	30	20	**50**	87.3	Red	i. Pyrolysis of biomass will generate syn gas and other condensable gases having hydrocarbons and other impurities. ii. Purification of gas will generate wastewater having high organic content and tarry residue as hazardous waste. iii. The process will generate fugitive emissions and due to pyrolysis operation.	IPC-I
68.2	Integrated unit for production of ammonia through Hydrogen generated by electrolysis using renewable energy (capacity ≥ 15 TPD)	10	25	35	**70**	0	20	0	**20**	30	20	**50**	80.5	Red	i. Ammonia manufacturing process (Haber process) and associated safety hazards remain same as per the chemical properties of ammonia. ii. Wastewater generation due to the production of hydrogen through electrolysis and condensation of ammonia, other scrubbed liquid etc. iii.Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
68.3	Integrated unit for production of Ammonia through hydrogen generated by electrolysis using renewable energy (Capacity < 15 TPD)	10	25	20	**55**	0	20	0	**20**	30	10	**40**	68.5	Orange	i. Ammonia manufacturing process (Haber process) and associated safety hazards remains same as per the chemical properties of ammonia. ii. Wastewater generation due to production of hydrogen through electrolysis and condensation of ammonia, other scrubbed liquid etc. iii.Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I
68.4	Hydrogen production through pyrolysis/gasification	20	25	20	**65**	20	25	25	**70**	30	10	**40**	85.8	Red	i. Pyrolysis of biomass will generate syn gas and other condensable gases having hydrocarbons and other impurities. ii. Purification of gas will generate wastewater having high organic content and tarry residue as hazardous waste. iii.The process will generate fugitive emissions and due to pyrolysis operation.	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
68.5	Hydrogen production through electrolysis using raw/seawater and renewable energy (capacity ≥ 2.5 TPD)	0	20	35	**55**	0	0	0	**0**	30	10	**40**	64.0	Orange	i. Type of electrolysers may include Alkaline Water Electrolyser (AWE), Proton Exchange Membrane (PEM), Solid Oxide Electrolyser Cell (SOEC) and Anion Exchange Membrane (AEM), etc. ii. Generation of DM reject, cooling tower blowdown, draining of alkaline/electrolyser water during maintenance, etc. as wastewater. iii. Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I
68.6	Hydrogen production through electrolysis using raw/sea water and renewable energy (capacity < 2.5 TPD)	0	20	20	**40**	0	0	0	**0**	30	10	**40**	52.0	Green	i. Type of electrolysers may include Alkaline Water Electrolyser (AWE), Proton Exchange Membrane (PEM), Solid Oxide Electrolyser Cell (SOEC) and Anion Exchange Membrane (AEM), etc. ii. Generation of DM reject, cooling tower blowdown, draining of alkaline/electrolyser water during maintenance, etc. as wastewater. iii. Generation of ETP sludge, exhausted membranes, molecular sieves, spent catalysts, etc. as hazardous waste.	IPC-I
68.7	Hydrogen production through electrolysis (using	0	0	0	**0**	0	0	0	**0**	0	10	**10**	10.0	White	i. DM water as feed water for electrolyser and cooling/chilling	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
	renewable energy) on BOO/BOOT/BOT, mode etc., located in the premises of end user industry and directly using de-mineralized water & other utilities (cooling tower, ETP, etc.) sourced from end user industry														water requirement to be met by the end user industry. ii. Wastewater and other waste generated during O&M shall also be managed by the end user industry.	
69	**Glue** from starch (physical mixing) with Gas/ electrically operated oven /boiler.	0	0	0	**0**	25	0	10	**35**	0	0	**0**	35	Green		IPC-V
70	**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)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
71	Compressed oxygen **Gas** from crude liquid oxygen (without use of any solvents and by maintaining pressure & temperature only for separation of other **Gases**)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
72	**Glass** and ampules and vials making from **Glass** tubes	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
73	**Ground** nut decorticating	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
74	**Medical Oxygen**	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White	The sector may become green category if it generates wastewater	IPC-V
	~H~															
75.0	**HOT** MIX PLANTS															
75.1	Hot mix plants using oil as fuel	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
75.2	Hot mix plants using gaseous as fuel	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
76	**Hazardous** waste pre-processing/processing facility including spent acid processing, spent solvent recovery, etc.	25	30	15	**70**	25	25	15	**65**	30	20	**50**	87.3	Red		WM-II
77	**Handloom**/ carpet weaving (without dying and bleaching operation)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~I~															
78	**Ice** cream manufacturing units	25	25	20	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-IV
79	Printing **Ink** Manufacturing	20	30	15	**65**	0	20	10	**30**	30	10	**40**	77.3	Orange	In the process pigments, binders and solvents are used. VOCs are generated.	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
80	Manufacturing of scientific and mathematical **Instrument** (assembling only)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
~J~																
81.0	**JUTE** PROCESSING															
81.1	Jute processing (with dyeing / with boiler)	25	20	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III
81.2	Jute processing (without dyeing / without boiler)	20	0	20	**40**	0	0	0	**0**	0	0	**0**	40	Green		IPC-III
81.3	Manufacturing of products from jute (without dyeing/ without boiler)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-III
~L~																
82	**Lime** manufacturing (using lime kiln)	0	0	0	**0**	25	0	30	**55**	0	0	**0**	55	Orange		IPC-V
83	**Leather** foot wear and **Leather** products (excluding tanning and hide processing)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White	Fumes due to use of adhesives / gums.	IPC-IV
84	Manufacturing of optical **Lenses** (using electrical furnace)	0	20	15	**35**	0	0	0	**0**	0	0	**0**	35	Green		IPC-V
85	**Leather** cutting and stitching (more than 10 machine and using motor)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
~M~																

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
86	**Mobile** towers using genset(s)	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green	i. The used oil/waste oil generated during repair and maintenance need to be disposed through authorized hazardous waste recycler by service provider/OEM. ii. Order dated 24.08.2017 in the related matter with OA No. 83(THC) OF 2012 (Bharti Infratel Ltd.) may be referred for issuance of composite consent in case of mobile towers.	UPC-I
87.0	**MILK** PROCESSES AND DAIRY PRODUCTS															
87.1	Milk processes and dairy products (integrated project)	30	25	30	**85**	25	20	30	**75**	0	0	**0**	90.6	Red		IPC-IV
87.2	Dairy and dairy products (Small scale units), using coal/biomass as fuel (Wastewater generation ≥ 100 KLD)	25	25	30	**80**	25	0	25	**50**	0	0	**0**	85	Red		IPC-IV
87.3	Dairy and dairy products (Small scale units), using coal/biomass as fuel (Wastewater generation < 100 KLD)	25	25	20	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-IV
87.4	Dairy and dairy products, (Small scale units), using PNG as fuel	25	25	20	**70**	0	0	10	**10**	0	0	**0**	71.5	Orange		IPC-IV
88.0	**MINING** AND ORE BENEFICIATION															
88.1	Open-cast coal mining	10	25	35	**70**	25	30	35	**90**	10	70	**80**	97.5	Red		IPC-II
88.2	Underground coal mining	0	25	35	**60**	25	30	35	**90**	0	0	**0**	93	Red		IPC-II
88.3	Mining of major minerals and ore beneficiation	20	30	35	**85**	25	30	35	**90**	25	70	**95**	99.4	Red	Includes captive limestone mining.	IPC-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
88.4	Mining of minor minerals (except Sand/riverbed material mining)	10	0	20	**30**	25	25	25	**75**	0	0	**0**	78.8	Orange		IPC-II
88.5	Grinding, processing, and screening of minor minerals	0	0	0	**0**	25	30	0	**55**	0	0	**0**	55	Orange		IPC-II
89	Manufacturing of **Mirror** from sheet glass	0	0	0	**0**	30	20	0	**50**	25	10	**35**	58.8	Orange		IPC-V
90	**Mineral** processing, industries involving ore sintering, pelletisating, grinding & pulverization	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-II
91	**Malteries** (without fermentation)	30	15	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III
92	Manufacturing of **Mosquito** repellent & coil	0	0	0	**0**	30	0	25	**55**	0	0	**0**	55	Orange	Toxic fumes may be released.	IPC-V
93	Organic **Manure** (physical mixing)	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20	White		IPC-V
94	Packing of powdered **Milk**	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
METALS AND METALLURGICAL SECTORS																
95.0	**IRON & STEEL** (PRIMARY PROCESSING FROM ORE, INTEGRATED STEEL PLANTS AND SPONGE IRON UNITS)															
95.1	Integrated iron and steel plants	25	30	35	**90**	25	30	35	**90**	25	50	**75**	98.3	Red		IPC-II
95.2	Stand-alone sintering/palletisation	0	0	0	**0**	25	30	35	**90**	0	0	**0**	90	Red		IPC-II
95.3	Sponge iron with CPP (Captive Power Plant)	20	25	35	**80**	25	30	35	**90**	10	50	**60**	97	Red		IPC-II
95.4	Sponge iron without CPP	20	15	30	**65**	25	30	35	**90**	10	50	**60**	96.3	Red		IPC-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
95.5	Stand-alone coke oven gas plants	25	30	30	**85**	25	30	35	**90**	25	50	**75**	98	Red		IPC-II
96.0	**ALUMINIUM** PROCESSING															
96.1	Aluminium Refinery	10	30	35	**75**	25	25	35	**85**	10	70	**80**	96.6	Red		IPC-II
96.2	Aluminium Smelter	10	30	35	**75**	30	25	35	**90**	25	70	**95**	99.1	Red		IPC-II
97	**Copper Smelter**	10	30	35	**75**	30	25	35	**90**	10	70	**80**	97.8	Red		IPC-II
98	**Zinc smelter**	10	30	35	**75**	30	25	35	**90**	10	70	**80**	97.8	Red		IPC-II
99.0	**FERROUS AND NON-FERROUS METAL** SECONDARY PROCESSING/REPROCESSING UNITS INVOLVING DIFFERENT FURNACES THROUGH MELTING, REFINING, CASTING, ALLOY-MAKING															
99.1	All Ferrous and Non-ferrous metal secondary processing/reprocessing units involving different furnaces through melting, refining, casting, alloy-making (using coal/liquid fuels)	0	15	15	**30**	25	25	25	**75**	25	10	**35**	83.1	Red		IPC-V
99.2	Ferrous and Non-ferrous metal (excluding lead, nickel, and manganese) secondary processing/reprocessing units involving different furnaces through melting, refining, casting, alloy-making (using cleaner fuels/electricity)	0	15	15	**30**	25	25	10	**60**	10	10	**20**	70	Orange		IPC-V
100	Aluminium & copper extraction from scrap using an oil-fired furnace (dry process only)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
101.0	INDUSTRY OR PROCESS INVOLVING **METAL** SURFACE TREATMENT OR PROCESS/HEAT TREATMENT															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
101.1	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	25	30	20	**75**	30	25	0	**55**	25	30	**55**	88.8	Red		IPC-V
101.2	Plasma electrolytic polishing (electroplating)	25	30	15	**70**	30	25	0	**55**	0	0	**0**	78.3	Orange		IPC-V
101.3	Heat treatment using furnace (without cyaniding)	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-V
101.4	Heat treatment with any of the new technology like ultrasound probe, induction hardening, ionization beam, gas carburizing etc.	0	15	15	**30**	0	25	0	**25**	0	0	**0**	38.8	Green		IPC-V
102.0	FORGING OF **FERROUS AND NON- FERROUS METALS**															
102.1	Forging of ferrous and non-ferrous metals using liquid fuel	0	0	0	**0**	25	25	20	**70**	30	10	**40**	76	Orange		IPC-V
102.2	Forging of ferrous and non-ferrous metals using gaseous fuel	0	0	0	**0**	25	25	10	**60**	30	10	**40**	68	Orange		IPC-V
102.3	Forging of ferrous and non-ferrous metals using electricity	0	0	0	**0**	25	25	0	**50**	30	10	**40**	60	Orange		IPC-V
102.4	Forging of ferrous and non-ferrous metals (cold forging, without any heat treatment)	0	0	0	**0**	0	0	0	**0**	30	10	**40**	40	Green		IPC-V
103.0	ROLLING **MILLS**															
103.1	Rolling and pickling	25	30	15	**70**	25	30	25	**80**	25	10	**35**	90.5	Red		IPC-V
103.2	Rolling mills (oil and coal fired)	0	15	15	**30**	25	0	25	**50**	0	0	**0**	57.5	Orange		IPC-V
103.3	Rolling mills (gas fired)	0	15	15	**30**	25	0	10	**35**	0	0	**0**	44.8	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
103.4	Cold rolling mill (without heat treatment)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
104.0	**FOUNDRY OPERATIONS**															
104.1	Cupola furnace	**0**	**0**	**0**	**0**	25	25	25	**75**	10	10	20	77.5	Orange		IPC-V
104.2	Induction furnace/arc furnace	0	0	0	**0**	25	30	0	**55**	10	10	**20**	59.5	Orange		IPC-V
105.0	**WIRE** DRAWING AND **WIRE** NETTING															
105.1	Wire drawing and wire netting (with pickling)	25	30	15	**70**	30	25	0	**55**	10	10	**20**	81.3	Red		IPC-V
105.2	Wire drawing and wire netting (without pickling and with heat treatment)	0	0	0	**0**	25	0	20	**45**	10	10	**20**	50.5	Green		IPC-V
105.3	Wire drawing and wire netting (without pickling and without heat treatment)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
106	**Die-casting** /extrusion process only	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-V
107	Manufacturing of aluminium utensils from aluminium circles pressing/ Brass and bell **Metal** utensils manufacturing from circles (dry mechanical operation only)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green	Emissions during buffing	IPC-V
108	Manufacturing of **Metal** caps containers etc	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

~N~

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
109	Formulation/palletisation of camphor tablets, **Naphthalene** balls from camphor/ naphthalene powders.	0	0	0	**0**	35	20	0	**55**	0	0	**0**	55	Orange	Emissions of benzene, hydrocarbons etc. are expected.	IPC-V
110	Organic and inorganic **Nutrients** by physical mixing (without boiler and without any reactor)	0	0	0	**0**	0	0	0	**0**	10	10	**20**	20	White	The sector may become green category if it generates wastewater	IPC-V
111.0	**ORGANIC** CHEMICALS INCLUDING HALOGENATED HYDROCARBONS															
111.1	Organic chemicals including halogenated hydrocarbons (using solid/liquid fuel)	30	30	25	**85**	35	0	30	**65**	30	20	**50**	93.6	Red		IPC-I
111.2	Organic chemicals including halogenated hydrocarbons (using cleaner fuel)	30	30	25	**85**	35	0	10	**45**	30	20	**50**	92.1	Red		IPC-I
112	**Oil** and gas extraction (offshore & onshore extraction through drilling wells), Coal Bed Methane (CBM) drilling and shale gas, including group gathering stations (GGS), etc.	25	30	15	**70**	20	25	0	**45**	30	10	**40**	82.8	Red		IPC-I
113.0	EDIBLE **OIL** MILLS															
113.1	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils	25	25	20	**70**	25	0	20	**45**	0	0	**0**	76.8	Orange		IPC-III
113.2	Oil mills Ghani and extraction without boiler (no refining/ hydrogenation)	10	25	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
								~P~								
114.0	**POWER** GENERATION PLANTS															
114.1	Power plants based on coal	0	15	35	**50**	35	25	35	**95**	10	70	**80**	98.3	Red		IPC-II
114.2	Power plants based on liquid fuels	0	15	35	**50**	25	25	35	**85**	30	20	**50**	92.5	Red		IPC-II
114.3	Biomass-based power plants	0	15	30	**45**	25	25	25	**75**	10	50	**60**	88.1	Red		IPC-II
114.4	Nuclear energy-based power plants (> 220 MW)	0	30	35	**65**	25	0	25	**50**	25	20	**45**	81.6	Red	Overall safety aspects related with radioactivity is regulated by Atomic Energy Regulatory Board (AERB).	IPC-II
114.5	Nuclear energy-based power plants (up to 220 MW)	0	30	35	**65**	25	0	25	**50**	25	10	**35**	79.9	Orange	Overall safety aspects related with radioactivity is regulated by Atomic Energy Regulatory Board (AERB).	IPC-II
114.6	Gas-based power plants	0	15	35	**50**	25	0	20	**45**	0	0	**0**	61.3	Orange		IPC-II
115.0	**PULP & PAPER** (AGRO & WOOD)															
115.1	Manufacturing of bleached chemical pulp, papers, and paperboards	30	30	35	**95**	30	0	35	**65**	30	30	**60**	98.1	Red		IPC-III
115.2	Unbleached or Totally Chlorine Free (TCF) bleaching for manufacturing of chemical pulp, papers, and paperboards	30	20	35	**85**	30	0	35	**65**	10	30	**40**	92.9	Red		IPC-III
115.3	Bleached grades of chemical pulp, paper, and paperboard having Totally Chlorine Free (TCF) bleaching	30	20	35	**85**	30	0	35	**65**	10	30	**40**	92.9	Red		IPC-III
116.0	**PULP AND PAPER** (RECYCLED FIBRE/WASTE PAPER BASED)															
116.1	Pulp & Paper (With bleaching)	30	15	35	**80**	25	0	25	**50**	10	30	**40**	89	Red		IPC-III
116.2	Pulp & Paper (Without bleaching, capacity ≥15 TPD)	25	15	35	**75**	25	0	25	**50**	10	30	**40**	86.3	Red		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
116.3	Pulp & Paper (Without bleaching; plant capacity <15 TPD)	25	15	20	**60**	25	0	25	**50**	10	10	**20**	74	Orange		IPC-III
117.0	MANUFACTURING OF **PAINTS**, VARNISHES															
117.1	Manufacturing of solvent-based paints/varnish	35	30	20	**85**	25	20	25	**70**	25	30	**55**	94.4	Red	The process may cause considerable emissions of volatile organic compounds (VOC)	IPC-I
117.2	Manufacturing of water-based paints	25	30	20	**75**	25	20	25	**70**	20	20	**40**	88.8	Red		IPC-I
117.3	Manufacturing of powder coatings	0	15	15	**30**	20	30	25	**75**	10	20	**30**	82.5	Red		IPC-I
117.4	Manufacturing of paint and varnishes (only blending and mixing)	20	30	15	**65**	0	20	0	**20**	30	20	**50**	77.3	Orange		IPC-I
118.0	**PESTICIDE** INDUSTRIES															
118.1	Pesticide technical (organic chemicals based)	30	30	20	**80**	30	25	25	**80**	30	30	**60**	94	Red		IPC-I
118.2	Pesticide technical (inorganic chemicals based like Zinc Phosphide and Aluminium Phosphide)	20	30	20	**70**	30	25	25	**80**	20	20	**40**	91	Red		IPC-I
118.3	Pesticide formulation industries (Liquid formulation only) having boiler/thermopack	20	30	20	**70**	25	20	25	**70**	20	20	**40**	86.5	Red		IPC-I
118.4	Pesticide formulation industries (Liquid formulation only) without having boiler/thermopack	20	30	20	**70**	0	20	0	**20**	20	20	**40**	79	Orange	Considering that dry formulation industries can also generate effluent because of equipment cleaning, the water pollution score is given	IPC-I
118.5	Pesticide formulation industries (having both liquid and dry formulation or dry formulation only) without having boiler / thermopack	20	30	20	**70**	30	20	0	**50**	20	20	**40**	83.5	Red	Considering that dry formulation industries can also generate effluent because of equipment cleaning, the water pollution score is given	IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
118.6	Pesticide formulation industries (having both liquid and dry formulation or dry formulation only) having boiler / thermopack	20	30	20	**70**	30	20	25	**75**	20	20	**40**	88.8	Red	Considering that dry formulation industries can also generate effluent because of equipment cleaning, the water pollution score is given	IPC-I
119	**Photographic** film and its chemicals	20	20	15	**55**	30	0	25	**55**	20	10	**30**	74.1	Orange	Silver salts and other chemicals are used	IPC-I
120	**Petroleum** oil refineries	35	30	30	**95**	35	20	35	**90**	20	20	**40**	98.3	Red		IPC-I
121.0	**PETROCHEMICALS**															
121.1	Petrochemicals (Naphtha cracker.)	30	30	30	**90**	35	25	35	**95**	30	20	**50**	98.5	Red		IPC-I
121.2	Petrochemicals (Gas cracker)	30	30	30	**90**	35	25	25	**85**	30	20	**50**	96.8	Red		IPC-I
121.3	Petrochemicals (without cracker)	25	30	20	**75**	25	25	15	**65**	20	20	**40**	88.1	Red		IPC-I
121.4	Petrochemicals (without cracker and using cleaner/gaseous fuel)	25	30	20	**75**	25	25	10	**60**	20	20	**40**	87.5	Red		IPC-I
122.0	MANUFACTURING OF LUBRICATING OILS, GREASE AND **PETROLEUM**-BASED PRODUCTS															
122.1	Manufacturing of lubricating oils, grease, and petroleum-based products	20	15	15	**50**	25	20	10	**55**	30	10	**40**	75.3	Orange	Such unit uses distillation columns/ boilers etc	IPC-I
122.2	Manufacturing of lubricating oils, grease, and petroleum-based products (only blending)	0	0	0	**0**	0	25	0	**25**	10	10	**20**	32.5	Green		IPC-I
123.0	**PHARMACEUTICAL** INDUSTRY															
123.1	Pharmaceuticals manufacturing	35	30	30	**95**	35	25	35	**95**	30	20	**50**	98.6	Red		IPC-I
123.2	Pharmaceuticals manufacturing using cleaner/gaseous fuel	35	30	30	**95**	35	25	10	**70**	30	20	**50**	98	Red		IPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
123.3	Pharmaceuticals (Formulation)	20	15	15	**50**	25	0	25	**50**	30	10	**40**	72.5	Orange		IPC-I
123.4	Pharmaceuticals (Formulation) using cleaner/gaseous fuel	20	15	15	**50**	25	0	10	**35**	30	10	**40**	68.8	Orange		IPC-I
123.5	Vaccine manufacturing	20	15	15	**50**	25	0	35	**60**	30	10	**40**	78	Orange		IPC-I
123.6	Vaccine manufacturing using cleaner/gaseous fuel	20	15	15	**50**	25	0	10	**35**	30	10	**40**	68.8	Orange		IPC-I
123.7	Pharmaceutical R&D facilities	20	15	15	**50**	25	0	25	**50**	30	10	**40**	72.5	Orange		IPC-I
123.8	Ayurvedic or Unani medicines manufacturing	20	15	15	**50**	25	0	25	**50**	30	10	**40**	72.5	Orange		IPC-I
123.9	Ayurvedic or unani medicines manufacturing using cleaner fuel	20	15	15	**50**	25	0	10	**35**	0	0	**0**	58.8	Orange		IPC-I
123.10	Ayurvedic or unani medicines manufacturing (Without boiler)	20	15	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-I
124	Digital **Printing** on flex /vinyl, PVC etc. (more than 5 machines)	0	0	0	**0**	20	0	0	**20**	30	10	**40**	46	Green		IPC-V
125	Spray **Painting**, Paint baking, Paint shipping	0	0	0	**0**	0	25	0	**25**	30	10	**40**	47.5	Green	Emissions in the form of VOCs and HC are generated.	IPC-V
126	**Plywood**/board manufacturing (including Veneer and laminate) with biomass fired boiler / thermic fluid heater (without resin plant)	20	20	15	**55**	25	20	25	**70**	0	0	**0**	78.3	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
127	**Printing** press (newspaper, books, magazines, etc./ Gravure printing	20	0	15	**35**	20	0	0	**20**	30	10	**40**	56.5	Orange		IPC-V
128	Manufacturing of bi-axially oriented **Polypropylene** (PP) film along with metalizing operations	0	15	15	**30**	0	0	0	**0**	0	0	**0**	30	Green	Mainly extrusion process involving	IPC-V
129	**Pulse**/Dal Mills	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
130	Insulation and other coated **Papers** (excluding paper or pipe manufacturing)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
131	**Packaging** materials manufacturing from non-asbestos fibre, vegetable fibre yarn	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
132	**Polythene** and plastic processed products manufacturing (virgin/compostable plastic)	0	15	15	**30**	0	20	0	**20**	0	0	**0**	37	Green		IPC-V
133	**Poultry**, piggery, and hatchery	0	0	0	**0**	30	20	0	**50**	0	0	**0**	50	Green		IPC-V
134	**Puffed** rice (muri) (using gas)	0	0	0	**0**	25	0	10	**35**	0	0	**0**	35	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
135	Biscuits trays etc from rolled **PVC** sheet (using automatic vacuum forming machines)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
136	Fountain **Pen** manufacturing by assembling only	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
137	Glass **Putty** and sealant (by mixing with machine only)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
138	Manufacturing of **Paper** Pins, U-clips, etc.	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
139	Solar **Power** generation through solar photovoltaic cell and wind power	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~R~															
140	Synthetic **Rubber** excluding molding	20	15	15	**50**	20	0	25	**45**	20	10	**30**	68.8	Orange	Most synthetic rubber is created from two materials, styrene, and butadiene.	IPC-I
141.0	**REFRACTORIES**															
141.1	Refractories based on coal/liquid fuel (fuel consumption: 12 TPD and above)	0	0	0	**0**	25	25	30	**80**	0	0	**0**	80	Red		IPC-V
141.2	Refractories based on coal/liquid fuel (fuel consumption: less than 12 TPD)	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75	Orange		IPC-V
141.3	Refractories based on cleaner fuels	0	0	0	**0**	25	25	10	**60**	0	0	**0**	60	Orange		IPC-V
142.0	**RUBBER** PRODUCTS MANUFACTURING															

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
142.1	Tyre and tube manufacturing	0	15	15	**30**	25	25	25	**75**	0	0	**0**	78.8	Orange		IPC-V
142.2	Tyres and tubes vulcanization/ hot retreading	0	15	15	**30**	25	20	10	**55**	0	0	**0**	61.8	Orange	Emissions of PM, VOCs and obnoxious odour are generated.	IPC-V
142.3	Rubber goods industry (with solid fuel/oil-based boiler)	0	15	15	**30**	25	0	25	**50**	0	0	**0**	57.5	Orange		IPC-V
142.4	Rubber goods industry (with gas-based boiler)	0	15	15	**30**	25	0	10	**35**	0	0	**0**	44.8	Green		IPC-V
143.0	SYNTHETIC **RESINS**															
143.1	Synthetic resins manufacturing	20	15	15	**50**	25	20	25	**70**	20	10	**30**	82	Red		IPC-I
143.2	Synthetic resins manufacturing (using only gaseous fuel)	20	15	15	**50**	25	20	10	**55**	20	10	**30**	73	Orange		IPC-I
144	Blending of melamine **Resins** & different powder, additives by physical mixing, including phenolic resin (without boiler)	0	15	15	**30**	0	30	0	**30**	20	10	**30**	51	Green		IPC-I
145.0	**RICE** MILLS															
145.1	Parboiled rice mill (with soaking and steam/drier)	25	0	20	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange		IPC-V
145.2	Raw rice mill (Without soaking and steam/drier)/ hullers)	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
146	**Repairing** of electric motors and generators (dry mechanical process)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
147	Manufacturing of plastic or cotton **Rope**	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
148	Tyre **Retraders**	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		WM-III
RECYCLING AND REPROCESSING SECTOR																
149.0	INDUSTRIES ENGAGED IN **RECYCLING/REPROCESSING/ RECOVERY/REUSE** OF HAZARDOUS WASTE UNDER SCHEDULE IV OF H&OW(M & TBM) RULES, 2016 - ITEMS, NAMELY, SPENT CATALYSTS CONTAINING NICKEL, CADMIUM, ZINC, COPPER, ARSENIC, VANADIUM, AND COBALT, INCLUDING DRY BATTERY (EXCEPT LEAD), AND CLEARED METAL CATALYST.															
149.1	Hydro & pyro metallurgy	0	30	15	**45**	35	25	25	**85**	25	10	**35**	91	Red		WM-II
149.2	Hydro & pyro metallurgy (using cleaner/gaseous fuels & without crushing of materials)	0	30	15	**45**	35	25	10	**70**	25	10	**35**	82	Red		WM-II
149.3	Pyro metallurgy (using coal/liquid fuels)	0	0	0	**0**	35	25	25	**85**	20	10	**30**	87.3	Red		WM-II
149.4	Pyro metallurgy (using cleaner/gaseous fuels)	0	0	0	**0**	35	25	10	**70**	20	10	**30**	74.5	Orange		WM-II
149.5	Hydro metallurgy	0	30	15	**45**	30	25	0	**55**	25	10	**35**	73	Orange		WM-II
150.0	E-WASTE DISMANTLING / **RECYCLING**															
150.1	Industry engaged in recycling of e-waste generated from the electrical and electronic Equipment (EEE) listed in the E-Waste (Management) Rules 2022 using pyro/ hydro/ electro-metallurgical processing and recycling of plastic separated from Waste EEE	30	30	20	**80**	35	25	15	**75**	25	20	**45**	92	Red		WM-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
150.2	Industry engaged in recycling of e-waste generated from the electrical and electronic equipment (EEE) listed in the E-Waste (Management) Rules 2022 (PCB processing limited to only mechanical processing and separation without pyro/ hydro/ electro-metallurgical processing), production of Al, Cu, and other metals from non-PCB sources and/or recycling of plastic separated from Waste EEE.	0	15	15	**30**	20	25	15	**60**	25	10	**35**	73	Orange		WM-III
150.3	Industry engaged in dismantling (only) of e-waste, generated from the electrical and electronic equipment (EEE) listed in the E-Waste (Management) Rules 2022	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		WM-III
150.4	E-waste refurbishing centres	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		WM-III
151.0	INDUSTRIES ENGAGED IN **RECYCLING/REPROCESSING/ RECOVERY/REUSE** OF HAZARDOUS WASTE (Items as per Schedule IV of H&OW(M & TBM) Rules, 2016.)															
151.1	Lead Recycling (Lead Acid Batteries with Acids; Lead Scrap Recycling) Rotary Furnace/ Pit Furnace (Mandir/Canopy Bhatti)	0	30	20	**50**	35	30	25	**90**	20	20	**40**	94.5	Red	This also includes 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.”	WM-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
151.2	Lead Recycling (Drained Lead Acid Batteries; Lead Scrap Recycling) Rotary Furnace/Mandir Bhatti on Cleaner Fuel	0	30	15	**45**	35	30	10	**75**	20	10	**30**	84.4	Red	This also includes, 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."	WM-II
151.3	Isolated storages (as defined under Manufacture, Storage, and Import of Hazardous Chemicals Rules, 1989 as amended)	10	25	15	**50**	20	25	0	**45**	30	10	**40**	71.3	Orange		IPC-I
151.4	Paint and ink sludge / residues recycling	20	25	15	**60**	0	20	0	**20**	30	10	**40**	72	Orange		WM-II
151.5	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste, excluding lead, paint, and ink sludge	0	30	15	**45**	35	0	25	**60**	20	10	**30**	75	Orange	This includes items namely - Brass Dross, Copper Dross, Copper Oxide Mill Scale, Copper everts, Cake & Residues, Waste Copper and copper alloys in 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 form.	WM-II

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
151.6	Refining of used oil by hydro-treating/using solvent extraction	10	25	25	**60**	25	0	25	**50**	20	20	**40**	78	Orange		WM-II
151.7	Refining of used oil by using thin film evaporation/vacuum distillation with clay treatment	10	25	15	**50**	25	0	15	**40**	20	10	**30**	67.5	Orange		WM-II
151.8	Recycling / reprocessing of waste oil	20	25	15	**60**	25	0	15	**40**	20	10	**30**	74	Orange		WM-II
152.0	**RECYCLING** OF PLASTIC WASTE															
152.1	Manufacturing of flakes/staple fibre/strip from the recycling of PET bottles	20	15	25	**60**	0	20	0	**20**	0	0	**0**	64	Orange		IPC-I
152.2	Plastic waste processing (manufacturing of flakes/granules)	20	15	15	**50**	0	20	0	**20**	0	0	**0**	55	Orange	Process using In-built heaters.Washwater and fugitive emission.	UPC-II
153.0	SCRAPING FACILITIES FOR **RECYCLING** END-OF-LIFE VEHICLES, WAGONS, AND COACHES															
153.1	Collection, Depollution and Dismantling Centers (Without shredding)	0	30	15	**45**	0	30	0	**30**	25	10	**35**	62.9	Orange		WM-II
153.2	Collection, Depollution, Dismantling and shredding Centers	0	30	15	**45**	0	30	0	**30**	25	10	**35**	62.9	Orange		WM-II
153.3	Common Shredders (Standalone)	0	0	0	**0**	0	30	0	**30**	25	10	**35**	44.8	Green		WM-II
153.4	Collection Centers (Without depollution, dismantling and shredding)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		WM-II
	~S~															
154	**Sugar** (excluding khandsari/jaggery)	30	25	35	**90**	25	0	25	**50**	30	10	**40**	94.5	Red	Generates large volume of wastewater.	IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
155	**Ship** breaking industries	0	0	0	**0**	0	30	0	**30**	30	20	**50**	57.5	Orange	Ship breaking releases a large number of pollutants, including toxic waste, used/waste oil, poly-chlorinated biphenyls, and heavy metals.	WM-III
156	**Slaughterhouse** / **Slaughterhouse** (with rendering plant)/ integrated slaughtering unit, meat processing units, bone mill, processing of animal horns, hoofs and other body parts	30	25	30	**85**	25	20	25	**70**	0	0	**0**	90.3	Red		IPC-IV
157	Manufacturing of **Silica** gel	10	25	20	**55**	30	0	20	**50**	25	10	**35**	74.1	Orange		IPC-I
158	Manufacturing of Iodized **Salt** from Crude / Raw Salt	10	20	15	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange	Process may involve boiling in evaporators (multiple effect evaporators), centrifuging, iodization, mixing, etc.	IPC-V
159	Manufacturing of **Starch** / Sago / Sorbitol	20	25	25	**70**	25	0	25	**50**	0	0	**0**	77.5	Orange		IPC-III
160	**Stone** crushers	0	0	0	**0**	25	30	0	**55**	0	0	**0**	55	Orange		IPC-V
161	**Stone** crushing/grinding/washing & screening of riverbed material(s)	10	0	25	**35**	25	30	0	**55**	0	0	**0**	62.9	Orange		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
162.0	MANUFACTURING OF **SURGICAL** AND MEDICAL PRODUCTS															
162.1	Manufacturing of **Surgical** and medical products	10	25	15	**50**	25	0	10	**35**	0	0	**0**	58.8	Orange		IPC-V
162.2	Surgical and medical products assembled only (with effluent-generating processes)	10	25	15	**50**	0	0	0	**0**	0	0	**0**	50	Green		IPC-V
162.3	Surgical and medical products assembled only (without effluent-generating processes)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
163.0	**SEMICONDUCTOR** MANUFACTURING INDUSTRIES															
163.1	Semiconductor fabs manufacturing	25	30	35	**90**	35	30	0	**65**	25	10	**35**	95	Red	i. Toxic wastewater is generated due to presence of Hydrofluoric acid (HF), Mixed Nitric HF ($HF+HNO_3$), Phosphoric acid, Sulphuric acid (H_2SO_4), Hydrogen Peroxide, Isopropyl alcohol (IPA) / Methanol (Methanol Only), Stripper EKC-265 /ACT N396 (ACT N396 Only), BHF – 63 U, Choline etchant, etc. ii. The air pollutants which are being emitted during the manufacturing process are SiH_4, PH_3, B_2H_6, HF, HBr, DCS, NF_3, SF_6, BCl_3, Cl_2, HCL, NH_3, $C2F_6$, CHF_3, CF_4, C_4F_8, C_2F_6 etc. iii. Process waste, used oil etc. are generated as hazardous waste.	WM-III
163.2	Display fabs manufacturing	25	30	35	**90**	25	30	0	**55**	25	10	**35**	94.5	Red		WM-III
163.3	Sensor fabs manufacturing/ Compound semiconductors/ silicon photonics	25	30	35	**90**	25	30	0	**55**	25	10	**35**	94.5	Red		WM-III
163.4	Semiconductor Assembly, Testing, Marking and Packaging Facility (ATMP)	0	0	0	**0**	0	25	0	**25**	25	10	**35**	43.1	Green		WM-III
164	**Saw** mills	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
165	**Spice** grinding	0	0	0	**0**	0	30	0	**30**	0	0	**0**	30	Green		IPC-V
166	Cutting, **Sizing** and polishing of marble, granite and other stones	10	0	20	**30**	0	30	0	**30**	0	0	**0**	40.5	Green		IPC-V
167	Manufacturing of **Solar** module/ non-conventional energy apparatus	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~T~															
168.0	**TANNERIES**															
168.1	Tanneries (Raw to finish)	35	30	25	**90**	0	20	0	**20**	25	30	**55**	93.8	Red		IPC-IV
168.2	Tanneries (Raw to wet blue)	35	30	25	**90**	0	20	0	**20**	25	30	**55**	93.8	Red		IPC-IV
168.3	Tanneries (Wet blue to finish)	35	30	20	**85**	0	20	0	**20**	25	30	**55**	90.6	Red		IPC-IV
168.4	Vegetable tanning	20	25	25	**70**	0	20	0	**20**	20	10	**30**	77.5	Orange		IPC-IV
169.0	MANUFACTURING OF **TOOTH** POWDER, TOOTHPASTE, TALCUM POWDER AND OTHER COSMETIC ITEMS															
169.1	Manufacturing of toothpaste and other cosmetic items	20	25	20	**65**	25	0	25	**50**	0	0	**0**	73.8	Orange		IPC-V
169.2	Manufacturing of tooth powder, talcum powder	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
170.0	**THERMOMETER** MANUFACTURING															
170.1	Glass (mercury based) thermometer manufacturing	10	30	15	**55**	25	0	10	**35**	25	10	**35**	70.8	Orange	Process involves making of 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.	IPC-V
170.2	Digital thermometer manufacturing	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
171	Manufacturing of **Teflon**-based products	10	0	15	**25**	25	25	25	**75**	0	0	**0**	78.1	Orange	Due to spraying applications, emissions (HC) are generated	IPC-V
172	**Thermocol** manufacturing (with boiler)	0	20	15	**35**	25	0	25	**50**	0	0	**0**	58.8	Orange		IPC-V
173.0	MANUFACTURING OF **TOBACCO** PRODUCTS INCLUDING CIGARETTES AND TOBACCO PROCESSES															
173.1	Manufacturing of tobacco products including cigarettes and tobacco processes (with boiler)	20	0	15	**35**	25	20	25	**70**	0	0	**0**	75.3	Orange		IPC-III
173.2	Manufacturing of tobacco products including cigarettes and tobacco processes (without boiler)	20	0	15	**35**	0	20	0	**20**	0	0	**0**	41.5	Green		IPC-III
174	**Transformer** repairing/ manufacturing (dry process only)	0	0	0	**0**	0	25	0	**25**	30	10	**40**	47.5	Green		IPC-V
175	**Tyre** Pyrolysis Oil Industries-Applicable for advanced batch automated process / continuous TPO units	10	0	15	**25**	25	25	25	**75**	0	0	**0**	78.1	Orange		WM-III
176	**Tamarind** powder manufacturing	10	15	15	**40**	25	0	10	**35**	0	0	**0**	50.5	Green	Dried tamarind fruits are cleaned, soaked, and boiled in steam jacketed kettle. Then pulp is extracted in pulper and dried in drum type drier.	IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
177.0	**TEA** PROCESSING AND BLENDING															
177.1	Tea processing (with boiler)	10	0	15	**25**	25	0	25	**50**	0	0	**0**	56.3	Orange		IPC-III
177.2	Tea processing (without boiler)	10	0	15	**25**	0	0	0	**0**	0	0	**0**	25	Green		IPC-III
177.3	Blending and packing of tea	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
TEXTILE SECTOR																
178.0	**TEXTILE** INDUSTRY															
178.1	Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing, and colouring, including the garment and apparel manufacturing industry	30	30	30	**90**	25	0	35	**60**	30	20	**50**	95.5	Red		IPC-III
178.2	Yarn to grey fabric manufacturing with water jet machines	20	25	25	**70**	0	0	0	**0**	0	0	**0**	70	Orange		IPC-III
178.3	Garment and apparel manufacturing industry including Doubling / Reeling / TFO-Two for one unit (dry process)-with boiler	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-III
178.4	Garment and apparel manufacturing industry including Doubling / Reeling / TFO-Two for one unit (dry process)-without boiler	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-III
179.0	**SAREE/FABRIC PRINTING** BY SCREEN / WOODEN BLOCK /HAND BLOCK															
179.1	Saree/fabric printing by screen / wooden block/hand block	25	0	25	**50**	25	0	20	**45**	30	10	**40**	71.3	Orange		IPC-III
179.2	Hand block printing without effluent generation	0	0	0	**0**	25	0	20	**45**	0	0	**0**	45	Green		IPC-III

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
180.0	**TEXTILE** SPINNING**,** SIZING AND WEAVING MILLS															
180.1	Textile spinning, sizing and weaving mills (wastewater generation≥ 10 KLD)	10	20	20	**50**	25	0	15	**40**	0	0	**0**	60	Orange		IPC-III
180.2	Textile spinning, sizing and weaving mills (wastewater generation <10 KLD)	10	20	15	**45**	25	0	10	**35**	0	0	**0**	54.6	Green		IPC-III
181	**Power looms** (without dye and bleaching)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-III
182.0	REPROCESSING OF WASTE **TEXTILE** FABRIC															
182.1	Integrated facility for reprocessing of waste textile fabric (including washing, bleaching, dyeing etc.)	30	30	20	**80**	25	25	15	**65**	0	0	**0**	86.5	Red		IPC-III
182.2	Reprocessing of waste textile fabric (dry process)	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-III
183	**Cotton and woollen Hosiers** making (Dry process only without any dying / washing operation)	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0	White		IPC-V
	~W~															
184	Seasoning of **Wood** in steam heated chamber	0	0	0	**0**	25	0	25	**50**	0	0	**0**	50	Green		IPC-V
185	Pulverization of bamboo and scrap **Wood**	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25	Green		IPC-V
186	Distilled **Water** (without boiler) with electricity as source of heat	0	20	20	**40**	0	0	0	**0**	0	0	**0**	40	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
187	Purification of **Water** and packaging (mineralized/non-mineralized water)	0	20	25	**45**	0	0	0	**0**	0	0	**0**	45	Green	RO Rejects.	IPC-V

ANNEXURE-II

(LIST OF ESSENTIAL ENVIRONMENTAL SERVICES)

LIST OF ESSENTIAL ENVIRONMENTAL SERVICES

i. Essential Environmental Services for Industrial Waste Management

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**COMMON EFFLUENT TREATMENT PLANT (CETP)**															
1.1	CETP having MEE/spray drier	30	30	35	**95**	25	0	25	**50**	25	50	**75**	98.1	Red		IPC-VII
1.2	CETP (without having MEE/spray drier), Common MEE/common spray driers	25	30	30	**85**	0	0	0	**0**	25	30	**55**	89.1	Red		IPC-VII
1.3	Common Sewage-Effluent Treatment Plant (CSETP)	25	30	30	**85**	0	0	0	**0**	25	20	**45**	88.4	Red		WQM-I & IPC-VII
2.0	Effluent conveyance projects	20	30	35	**85**	0	0	0	**0**	25	10	**35**	87.6	Red	Such projects during O&M operation will generate deposited sludge, spillage etc. in addition regular operation of handling of effluent and its disposal.	IPC-VII
3.0	**COMMON HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITY**															
3.1	Integrated facility (Secured landfill and incinerator)	35	30	15	**80**	25	25	15	**65**	30	70	**100**	100.0	Red		WM-II
3.2	Only secured landfill	35	30	15	**80**	0	25	0	**25**	25	70	**95**	97.6	Red		WM-II
3.3	Only incinerator	35	30	15	**80**	25	25	15	**65**	30	70	**100**	100.0	Red		WM-II
4.0	**COMMON BIO-MEDICAL WASTE TREATMENT FACILITY (CBWTF)**															
4.1	CBWTF	20	25	20	**65**	35	20	25	**80**	20	20	**40**	90.5	Red		WM-I
4.2	CBWTF using cleaner/gaseous fuel	20	25	20	**65**	35	20	10	**65**	20	20	**40**	83.4	Red		WM-I

ii. LIST OF BLUE CATEGORY SECTORS- Essential Environmental Services for Domestic/Household Activities:

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**MUNICIPAL SOLID WASTE MANAGEMENT FACILITY**															
1.1	Municipal Solid Waste Management Facility (Sanitary landfill/ Integrated Sanitary landfill with material recycling facility/ refused derived fuel, etc.)	35	30	15	**80**	35	25	0	**60**	0	0	**0**	86.0	Blue		UPC-II
1.2	Waste to energy power plants	0	15	30	**45**	35	25	35	**95**	10	50	**60**	97.6	Blue		UPC-II
1.3	Bio-mining of legacy waste projects	35	30	25	**90**	35	25	0	**60**	0	0	**0**	93.0	Blue		UPC-II
1.4	Municipal Solid Waste Bio-methanation plant (Quantity of MSW ≥ 5 TPD)	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82.0	Blue		UPC-II
1.5	Municipal Solid Waste Composting Facility (Quantity of MSW ≥ 5 TPD)	30	25	15	**70**	0	30	0	**30**	0	0	**0**	74.5	Blue		UPC-II
1.6	Municipal Solid Waste Material Recovery Facility (Quantity of MSW ≥ 5 TPD)	20	25	15	**60**	0	30	0	**30**	0	0	**0**	66.0	Blue		UPC-II
2.0	Construction and Demolition (C&D) Waste Processing Plants	10	0	15	**25**	25	25	0	**50**	0	0	**0**	56.3	Blue	Wastewater of high TDS of inorganic nature is generated.	UPC-I
3.0	**SEWAGE TREATMENT PLANT**															
3.1	Sewage Treatment Plant (5 MLD and above)	20	0	35	**55**	0	20	0	**20**	0	0	**0**	59.5	Blue		WQM-I
3.2	Sewage Treatment Plant (less than 5 MLD)	20	0	25	**45**	0	20	0	**20**	0	0	**0**	50.5	Blue		WQM-I

ANNEXURE-III

(LIST OF SERVICE/INFRASTRUCTURE DEVELOPMENT SECTORS CLASSIFIED UNDER RED, ORANGE, GREEN, AND WHITE CATEGORIES)

SERVICE/INFRASTRUCTURE DEVELOPMENT SECTORS

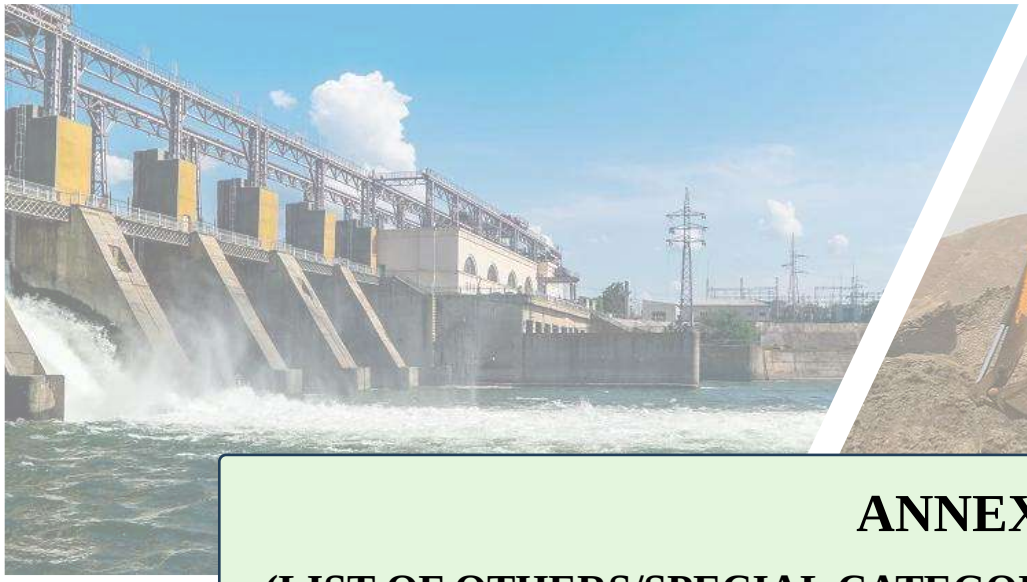
S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**STANDALONE GENERATOR SET** (Genset)															
1.1	Genset(s) of total capacity ≥ 1 MVA, using liquid fuel	0	0	0	**0**	25	0	25	**50**	30	10	**40**	60.0	Orange	i. Standalone genset(s) of total capacity less than 1000 KVA may not require additional classification. The used oil/waste oil generated during repair and maintenance need to be disposed through authorized hazardous waste recycler by service provider/OEM. ii. Projects such data centers etc. having pollution potential due to gensets only, may be classified based on the capacity and fuel used.	UPC-I
1.2	Genset(s) of total capacity ≥ 1 MVA, using cleaner/gaseous fuel	0	0	0	**0**	25	0	10	**35**	30	10	**40**	50.5	Green		UPC-I
2.0	Airports	20	0	35	**55**	25	0	25	**50**	30	10	**40**	75.3	Orange	Airports generates mainly domestic sewage as wastewater. Emissions and generation of hazardous waste due to overall operations in airport are considered.	UPC-I
3.0	**HEALTH CARE FACILITIES (HCFS, AS DEFINED UNDER BIO-MEDICAL WASTE MANAGEMENT RULES, 2016)**															
3.1	HCFs with captive incinerator, irrespective of number of beds	20	0	15	**35**	35	20	25	**80**			**50**	88.5	Red	Sector generates bio-medical waste. As per methodology scores assigned to H.	WM-I
3.2	more than 1000 bedded HCFs	20	0	35	**55**	0	0	0	**0**			**100**	100.0	Red		WM-I
3.3	501 to 1,000 bedded HCFs	20	0	30	**50**	0	0	0	**0**			**80**	85.0	Red		WM-I
3.4	201 to 500 bedded HCFs	20	0	30	**50**	0	0	0	**0**			**60**	70.0	Orange		WM-I
3.5	51 to 200 bedded HCFs	20	0	20	**40**	0	0	0	**0**			**50**	60.0	Orange		WM-I
3.6	11 to 50 bedded HCFs	20	0	20	**40**	0	0	0	**0**			**40**	52.0	Green		WM-I
3.7	Up to 10 bedded HCFs	20	0	15	**35**	0	0	0	**0**			**30**	44.8	Green		WM-I
3.8	Non-bedded HCFs	0	0	0	**0**	0	0	0	**0**			**25**	25.0	Green		WM-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
4.0	**HOTELS/BANQUET HALLS HAVING ROOM FACILITY**															
4.1	Hotels (above 3 star) or having 100 & above rooms	20	25	30	**75**	25	0	25	**50**	0	0	**0**	81.3	Red		UPC-I
4.2	Hotels (above 3 star) or having 100 & above rooms (based on cleaner /gaseous fuel)	20	25	30	**75**	25	0	10	**35**	0	0	**0**	79.4	Orange		UPC-I
4.3	Hotels (up to 3 star) or having more than 20 rooms but less than 100 rooms.	20	25	20	**65**	25	0	25	**50**	0	0	**0**	73.8	Orange		UPC-I
4.4	Up to 20 rooms	10	25	15	**50**	0	0	10	**10**	0	0	**0**	52.5	Green		UPC-I
5.0	**RAILWAY LOCOMOTIVE WORK SHOP/ INTEGRATED ROAD TRANSPORT WORKSHOP/ AUTHORIZED SERVICE CENTERS**															
5.1	Railway locomotive work shop/ Integrated road transport workshop/ Authorized service centers (wastewater generation ≥ 10 KLD)	20	25	25	**70**	30	25	0	**55**	30	10	**40**	84.3	Red		IPC-V
5.2	Railway locomotive work shop/ Integrated road transport workshop/ Authorized service centers (wastewater generation <10 KLD)	20	25	15	**60**	30	25	0	**55**	30	10	**40**	79.0	Orange		IPC-V
6.0	**RAILWAY STATIONS**															
6.1	Railway Stations (Wastewater Generation ≥ 5 MLD)	20	0	35	**55**	25	0	25	**50**	30	10	**40**	75.3	Orange	Wastewater generating from public toilets, public taps, platform, and apron washing, coach cleaning, laundry, restaurants etc. Emissions and generation of hazardous waste due to overall operations are considered.	UPC-I
6.2	Railway Stations (Wastewater Generation ≥ 100 KLD, but < 5 MLD)	20	0	15	**35**	0	0	0	**0**	0	0	**0**	35.0	Green	Wastewater generating from various domestic uses as public toilets, public taps, platforms, and apron washing, restaurants etc.	UPC-I

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
7.0	**RAILWAY SIDINGS**															
7.1	Railway sidings / Mineral stock yard	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25.0	Green	Fugitive emissions due to loading, unloading, storage and transportation of the minerals.	UPC-I
7.2	Railway sidings only for defence purpose	0	0	0	**0**	0	0	0	**0**	0	0	**0**	0.0	White		UPC-I
8.0	**PORTS AND HARBOURS**															
8.1	Ports and harbours, jetties and dredging operations	20	30	25	**75**	0	25	0	**25**	30	20	**50**	84.4	Red		WM-I
8.2	Ports and harbours (only containers handling)/ Captive jetties	20	25	20	**65**	0	25	0	**25**	30	10	**40**	76.4	Orange		WM-I
9.0	Automobile service stations/ workshops	20	25	20	**65**	20	0	0	**20**	30	10	**40**	75.5	Orange		IPC-V
10.0	**BUILDING CONSTRUCTION PROJECTS**															
10.1	Building construction project ≥ 20,000 sq. m. built-up area	20	0	25	**45**	25	0	25	**50**	0	0	**0**	61.3	Orange	i. During the construction phase, the sector is mainly air polluting. However, in post construction phase it is mainly water polluting due to generation of sewage. Consent to Establish/Operate to be taken as per EC conditions, as applicable. ii. Building construction project ≥ 5,000 sq. m., but < 20,000 sq. m. built-up area (with connectivity to terminal STP) may not require separate classification. iii. For projects < 5000 the wastewater shall be managed according to on-site sanitation methods as mentioned in the Manual on Sewerage and Sewage Treatment System (2013), published by the	UPC-I
10.2	Building construction project ≥ 5,000 sq. m., but < 20,000 sq. m. built-up area (without connectivity to terminal STP)	20	0	20	**40**	0	0	0	**0**	0	0	**0**	40.0	Green		UPC-I

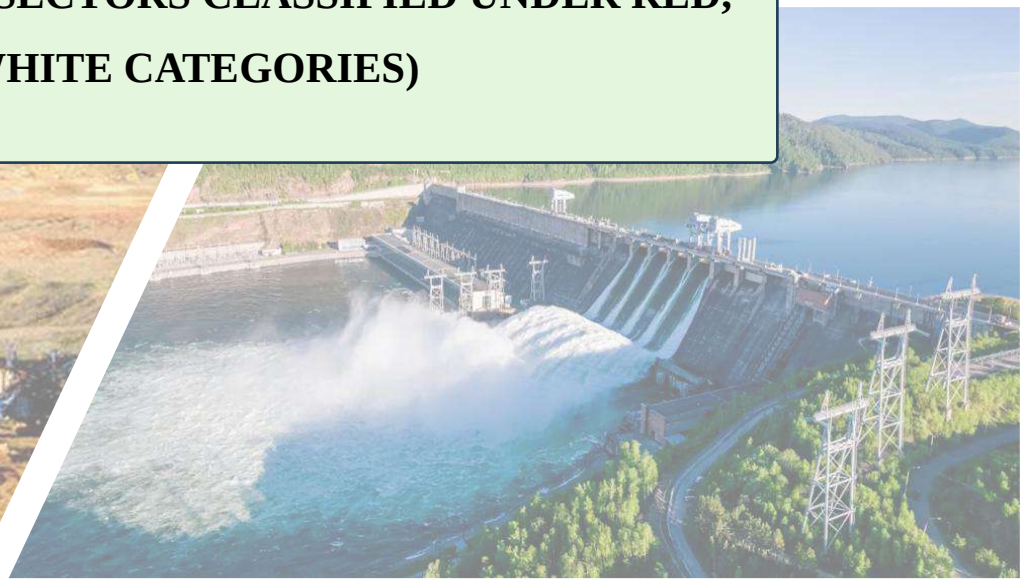
S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
															Central Public Health and Environmental Engineering Organisation (CPHEEO), and as amended from time to time.	
11.0	Standalone mechanized laundry (using boiler)	20	0	20	**40**	25	0	25	**50**	0	0	**0**	60.0	Orange		IPC-V
12.0	New highway construction project	0	0	0	**0**	25	25	25	**75**	0	0	**0**	75.0	Orange	Such projects involve use of hot mix plants, ready-mix concrete plants, construction activities generating fugitive emissions, etc.	UPC-I
13.0	**DAIRY FARM**															
13.1	Dairy Farm (having more than 500 animals)	30	25	25	**80**	0	20	0	**20**	0	0	**0**	82.0	Red	Dairy farms having less than 15 animals do not require separate classification.	IPC-IV
13.2	Dairy Farm (having 101 to 500 animals)	30	25	20	**75**	0	20	0	**20**	0	0	**0**	77.5	Orange		IPC-IV
13.3	Dairy Farm (having 15 to 100 animals)	30	25	15	**70**	0	20	0	**20**	0	0	**0**	73.0	Orange		IPC-IV
14.0	Gold Assaying & Hallmarking Centres	0	0	0	**0**	35	0	0	**35**	25	10	**35**	46.4	Green	Lead oxide, nitrous fumes are generated during cupellation and parting acid treatment, respectively contributing to the air emissions.The hazardous waste is generated during fire assay in the form of spent cupels bearing lead, spent acid, scrubbed water etc.	IPC-V
15.0	Facility of handling, storage, and transportation of food grains in bulk	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25.0	Green		IPC-V
16.0	Flyash export or disposal operations	0	0	0	**0**	0	25	0	**25**	0	0	**0**	25.0	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
17.0	Oil and gas transportation pipeline (excluding pipeline covered under definition of isolated storage of hazardous chemicals, as per Manufacture, Storage, and Import of Hazardous Chemicals Rules, 1989)	0	0	0	**0**	25	0	10	**35**	0	0	**0**	35.0	Green		IPC-I
18.0	Gaushalas	20	0	15	**35**	0	20	0	**20**	0	0	**0**	41.5	Green		IPC-IV
19.0	Household bio-digesters/gobar-gas (cow-dung) plants based on biodegradable wastes, etc.	0	0	0	**0**	0	20	0	**20**	0	0	**0**	20.0	White		IPC-V



ANNEXURE-IV

(LIST OF OTHERS/SPECIAL CATEGORY SECTORS CLASSIFIED UNDER RED, ORANGE, GREEN, AND WHITE CATEGORIES)



OTHERS/SPECIAL CATEGORY SECTORS

S. No.	Sector	W1	W2	W3	PI_W	A1	A2	A3	PI_A	H1	H2	PI_H	Pollution Index (PI)	Category	Remarks	Concerned Division
1.0	**HYDEL POWER PLANTS INCLUDING PUMPED STORAGE PROJECTS**															
1.1	Hydel power plants (Capacity > 50 MW)													Red	PI may be considered as 90.	IPC-II
1.2	Mini Hydel power plants (Capacity from more than 25 MVA and up to 50 MW)													Orange	PI may be considered as 67.5.	IPC-II
1.3	Mini Hydel power plants (Capacity ≤ 25 MW)													White	PI may be considered as 12.5.	IPC-II
2.0	**SAND / RIVERBED MATERIAL MINING FROM RIVERBED AND ITS FLOODPLAINS** (excluding manual excavation)															
2.1	Mining lease area more than 5 hectares or Mining lease area up to 5 hectares which is part of cluster mining													Red	i. Sand / riverbed material mining from riverbed and its floodplains may cause ecological disturbances, erosion of riverbed, change in hydro-geological conditions & river ecosystem, etc.	IPC-II
2.2	Standalone mining lease area up to five hectares in areas (not a part of any cluster mining)													Orange	ii. Cluster mining means that the distance of mining lease area is less than 500 m from periphery of another lease area. iii. This categorization is made considering the ecological damages and not based on pollution potential/index. iv. Cluster mining as defined in 'Enforcement & Monitoring Guidelines for Sand Mining, 2020', issued by MoEF&CC. v. PI may be considered as 90 and 67.5 for red and orange category, respectively.	IPC-II

ANNEXURE-V

FORMAT FOR SUBMISSION OF INFORMATION BY SPCBS/PCCS REGARDING SECTORS CLASSIFIED UNDER WHITE CATEGORY

S. No.	Sector	Water Pollutant Score (PI_W)				Air Pollutant Score (PI_A)				Waste Pollutant Score (PI_H)			Pollution Index (PI)	Remarks (including brief description of process and pollution potential)
		W1	W2	W3	W	A1	A2	A3	A	H1	H2	H		

A tool for progressive environmental Management

CPCB

Central Pollution Control Board

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

रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

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अधिसूचना

नई दिल्ली, 8 अप्रैल, 2016

का.आ. 1357(अ).—ठोस अपशिष्ट प्रबंधन नियम, 2015 का प्ररुप 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 गईं 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 क्रमश: राज्य सरकार द्वारा यथा अधिसूचित तीर्थ, धार्मिक तथा ऐतिहासिक महत्व के स्थानों और जिसमें औद्योगिक अपशिष्ट, परिसंकटमय अपशिष्ट, परिसंकटमय रसायन, जैव चिकित्सा अपशिट, 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 जनित्रों 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 ढ़ंग 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-पुन:उपभोज्य, 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. **''ठेकेदार''** 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 बिखरी 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 है;

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 कॉरूगेटेड बक्सों इत्यादि के किसी उत्पादक के उत्तरदायित्व अभिप्रेत है;

22. **''सुविधा''** से ऐसा कोई स्थापन अभिप्रेत है जिसमें ठोस अपशिष्ट प्रबंध प्रक्रियाएं अर्थात् पृथक्करण पुन:प्राप्ति, 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 पुन:प्राप्ति, संग्रहण, गौण भंडारण, काटना, गट्ठा बनाना, दलन, लदाई, उतराई, परिवहन, प्रसंस्करण तथा निपटान से संबंधित सभी क्रियाकलाप भी हैं;

26. **''निष्क्रिय''** से ऐसा अपशिष्ट अभिप्रेत है जो जैव अपघटनीय, पुन:चक्रणीय 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 व्यष्टि, 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 म्युनिसपल कॉरपोरेशन, नगर निगम, म्युनिसपल कौंसिल, नगरपालिका, नगरपालिका परिषद, म्युनिसपल 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 विर्निदिष्ट किसी अन्य अवस्थान से संगृहीत करना, उठाना या हटाना अभिप्रेत है;

35. **"प्रसंस्करण"** से कोई वैज्ञानिक प्रक्रिया जिसके द्वारा ठोस अपशिष्ट को पुन: उपयोग, पुन: 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 व्युत्पन 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 है, 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, कृंतकनाशी, 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. **"पृथककरण"** से ठोस अपशिष्ट के विभिन्न संघटकों अर्थात जैविक निम्नीकरण अपशिष्ट जिसके अंतर्गत कृषि और दुग्धपालन अपशिष्ट अजैविक निम्नीकरण अपशिष्ट जिसके अंतर्गत पुन:चक्रणयोग्य अपशिष्ट, गैर पुन:चक्रणयोग्य दाह्य योग्य अपशिष्ट, स्वास्थ्यकर अपशिष्ट और गैर चक्रण योग्य कूड़ाकरकट अपशिष्ट, घरेलू परिसंकटमय अपशिष्ट तथा संनिर्माण और विध्वंस अपशिष्ट भी है, की छंटाई और पृथक 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 पुन:चक्रणयोग्य विभिन्न संघटकों और प्रवर्गों जैसे कागज, प्लास्टिक, गत्ता, धातु, कांच आदि को समुचित पुन:चक्रण सुविधा में पृथक करना अभिप्रेत है;

48. **"स्थिरीकरण"** से जैव निम्नीकरण अपशिष्ट को जैवीय अपघटन को स्थायी अवस्था में परिवर्तित करना अभिप्रेत है जहां वह निक्षालन या अरूचिकर 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 दुर्गध, 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 सपंरिवर्तित 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, पुन:उपयोग, पुनर्चक्रण, पुन: 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 है;

(2) इसमें प्रयुक्त जिन शब्दों और पदों का अर्थ परिभाषित नहीं किया गया है, परंतु जो पर्यावरण (सरंक्षण) अधिनयम 1986, जल (प्रदूषण निवारण और नियंत्रण) अधिनियम, 1974 जल (प्रदूषण निवारण और नियंत्रण) उपकर अधिनियम 1977 तथा वायु (प्रदूषण निवारण और नियंत्रण) अधिनयम, 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 अर्थात जैव निम्नीकरणयोग्य, गैर निम्नजीकरणयोग्य 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 पृथककरण 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 छिलको, 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 प्राधिकरणद्वारा 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) केंद्रीय 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 कर्त्तव्य.- (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;

(ड.) 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 कर्त्तव्य.- (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 संर्वधन 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 प्रबंध 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, पुन:उपयोग, 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 है, राज्य या संघ राज्य क्षेत्र में प्रत्येक शहर की मास्टर प्लान में ठोस अपशिष्ट प्रसंस्करण और निपटान सुविधाएं स्थापित करने के लिए प्रावधान है;

(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 ग्रुप 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 प्रसंसकरण 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 कर्त्तव्य.- 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 आबंटन 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 कर्त्तव्य.- 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;

(ड.) 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 छ: 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 जाएंगी;

(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 वाणिजियक 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 संग्रहणकर्ताओं 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;

(ड.) 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 फैंके 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 पार्कों और बगीचों में करना;

(थ) पृथक किए गए जैव निम्नीकरणीय अपशिष्ट का परिवहन प्रसंस्करण सुविधाओं जैसे कंपोस्ट प्लांट, जैव मिथेनिकरण संयंत्र या ऐसी कोई सुविधा तक करना। ऐसे अपशिष्ट के स्थल पर प्रसंस्करण को अधिमान्यता दी जानी चाहिए;

(द) क्रमवर्ती प्रसंस्करण सुविधा या सामग्री पुन:प्राप्ति 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 अध्यधीन 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 डाईजेशन 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-I 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 है, 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 जागरुकता 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 पुन:उपयोग;

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. स्त्रोत पर पृथक्कृत अपशिष्टों का अलग-अलग डिब्बों में भंडारण करना;

viii. अपशिष्ट चुनने वालों, अपशिष्ट संग्राहकों, पुन:चक्रणकर्ताओं 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 विशिष्टयों का अनुपालन किया जाएगा। तथापि, अवशिष्टों का यथासंभव पुनर्चक्रण या पुनप्रयोग 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 । और अनुसूची ।। के अधीन यथा विर्निदिष्ट पर्यावरणीय मानकों को मॉनीटर करना तथा शर्त 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 एयरबेस 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;

(ड.) 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 यथाविर्निदिष्ट 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 प्रोद्यौगिकियों 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 प्रोद्यौगिकी 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 व्युत्पन ईंधन से सौ कि.मी. के अंदर अवस्थित औद्योगिक इकाईयों और ठोस अपशिष्ट आधारित ऊर्जा संयंत्रों के कर्तव्य.- ईंधन का प्रयोग करने वाली और ठोस अपशिष्ट आधारित कचरा व्युत्पन ईंधन संयंत्र से सौ कि.मी. के भीतर अवस्थित सभी औद्योगिक इकाइयां इस प्रकार उत्पन्न कचरा व्युत्पन 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 मॉनीटरी 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 फैंकने से प्रतिषिद्ध करने तथा पर्यटकों को गलियों में या पहाड़ियों से नीचे न फैंकने 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 फेंकने 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।

(ड.) 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 प्ररुप-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 अवशिष्ट 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 प्ररुप III में स्थानीय निकाय को वार्षिक रिपोर्ट प्रस्तुत की जाएगी।

(2) स्थानीय नगरीय निकाय प्ररुप 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 प्ररुप V में तैयार करेगी और प्रत्येक वर्ष के 31 जुलाई तक केंद्रीय प्रदूषण नियंत्रण बोर्ड और शहरी विकास मंत्रालय को प्रस्तुत करेगी ।

(4) केंद्रीय 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 प्रसंसकरण या सुविधा केंद्र या भराव भूमि स्थल पर कोई दुर्घटना होने की दशा में, तब सुविधा का प्रभारी अधिकारी प्ररुप 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),(यङ्ग),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 दुरूपयोग 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 पहुंच 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 (अधिमानत: कर्मकारों 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 $1x10^{-7}$ 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 $1x10^{-7}$ 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 मॉनीटरी 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 अर्थात 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। मॉनीटरी 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^{6+} 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$_3$ के रूप में	45.0
(10)	पीएच (pH)	6.5-8.5
(11)	लोहा	0.3
(12)	कुल कठोरता (सीएसीओ$_3$ के रूप में)	300.0
(13)	क्लोराइड	250
(14)	विलीन ठोस	500
(15)	फेनोलिक यौगिक (सी$_6$एच$_5$ओएच के रूप में)	0.001
(16)	जस्ता	5.0
(17)	सल्फेट (एसओ$_4$ 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 मॉनीटरी 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;

(ड.) 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 पश्चात्वर्ती देखरेख के लिए मानदंड. – (1) भूमि भरण स्थल की बंदी-पश्च देखरेख कम से कम पंद्रह वर्षों के लिए की जाएगी और दीर्घकालिक मॉनीटरी 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 मॉनीटरी करना;

(ग) भरण स्थल में और इसके आसपास भू-जल की मॉनीटरी करना;

(घ) मानकों के अनुरूप भूमि भरण गैस संग्रहण प्रणाली का अनुरक्षण और प्रचालन करना।

(2) पंद्रह वर्ष की बंदी-पश्च मॉनीटरी 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। पहाडी 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।

ञ. 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 (जलोढ़ 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 नालों 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 अस्थाई प्रसंस्करण स्थल या अस्थायी भूमि भरण स्थलों की दिशा में विपथित करने की व्यवस्था की जाएगी, जिनका संयंत्र के ठीक-ठाक हो जाने पर पुन: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 पुन:परिचालित 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^{3})	<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 ($के_2$ओ 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 केल्डाल नाइट्रोजन (एन के रूप में) मिग्रा/ली, अधिकतम	100	--	--

6.	जैव रासायनिक ऑक्सीजन मांग (27^0 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 ($सी_6एच_5$ 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)	(3)
विवित्त-कण	50 मिग्रा/एनएम^3	मानक का अर्थ आधे घंटे के औसत मान से है
एचसीएल	50 मिग्रा/एनएम^3	मानक का अर्थ आधे घंटे के औसत मान से है
एसओ2	200 मिग्रा/एनएम^3	मानक का अर्थ आधे घंटे के औसत मान से है
सीओ	100 मिग्रा/एनएम^3	मानक का अर्थ आधे घंटे के औसत मान से है
	50 मिग्रा/एनएम^3	मानक का अर्थ दैनिक औसत मान से है
कुल जैविक कार्बन	20 मिग्रा/एनएम^3	मानक का अर्थ आधे घंटे के औसत मान से है
एचएफ	4 मिग्रा/एनएम^3	मानक का अर्थ आधे घंटे के औसत मान से है
एनओएक्स (एनओ2 के रूप में व्यक्त एनओ और एनओ2)	400 मिग्रा/एनएम^3	मानक का अर्थ आधे घंटे के औसत मान से है
कुल डाइऑक्सिन और फ्यूरन	0.1 एनजी टीईक्यू/एनएम^3	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^3	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^3	मानक का अर्थ 30 मिनट और 8 घंटे के बीच कहीं भी नमूना लिए गए समय से है।
एसबी+एएस+पीबी+सीआर+ सीओ+सीयू+एमएन+एनआई+वी+ उनके यौगिक	0.5 एमजी/एनएम^3	मानक का अर्थ 30 मिनट और 8 घंटे के बीच कहीं भी नमूना लिए गए समय से है।
नोट : 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 पुन:संयोजित 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।

(ड.) 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 सीओ2 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 एतददारा 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.	**ठोस अपशिष्ट का प्रसंस्करण/पुनर्चक्रण/शोधन** 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.	**ठोस अपशिष्ट का निपटान** 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 :

प्ररुप-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 अध्यधीन 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)

प्ररुप-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 पृथककृत स्वरूप में भंडारित किया जाता है	हां/नहीं
	यदि हां, तो स्रोत पर अपशिष्ट का पृथककरण 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/नही
	क्या प्रत्येक सफाई कर्मचारी को अपशिष्ट का संग्रहण करने के लिए हैंडकार्ट/तिपहिया साइकिल दी जाती है	हां/नही
	क्या हैंडकार्ट/तिपहिया साइकिल में कंटेनर लगा है	हां/नही
	क्या संग्रहण का साधन प्रयोग किए गए संग्रहण/अपशिष्ट भंडारण के कंटेनरों समकालिक है	हां/नही
	द्वितीयक अपशिष्ट भंडारण सुविधाएं	
	शहर/नगर में अपशिष्ट भंडारण डिपो की संख्या और प्रकार	संख्या क्षमता घन मीटर में
	खुले अपशिष्ट भंडारण स्थल	
	चिनाई किए गए बिन	

	सीमेंट कंक्रीट सिलिंडर के बिन ढलाव/ढ़के हुए कक्ष/स्थान ढ़के 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		
	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 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 यात्रिक 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 (कृपया टिक करें या जोड़ें)	अपशिष्ट का परिवहन करने में लगाए गए फेरों की संख्या
	पशु गाड़ी ट्रैक्टर नॉन टीपिंग ट्रक टीपिंग ट्रक डम्पर प्लेसर अवशिष्ट संग्राहक कम्पैक्टर अन्य जेसीबी - लोडर	
	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 आपूर्तित 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 ढ़कने का काम दैनिक आधार पर किया जाता है	हां/नहीं
	यदि नहीं, तो भरण स्थल पर जमा अपशिष्ट को ढ़कने की बारंबारता	
	ढ़कने के लिए प्रयुक्त सामग्री	
	क्या ढ़कने 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 :

प्ररुप-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/नही
	क्या प्रत्येक सफाई कर्मचारी को अपशिष्ट का संग्रहण करने के लिए हैंडकार्ट/तिपहिया साइकिल दी जाती है	हां/नही
	क्या हैंडकार्ट/तिपहिया साइकिल में कंटेनर लगा है	हां/नही
	क्या संग्रहण का साधन प्रयोग किए गए संग्रहण/अपशिष्ट भंडारण के कंटेनरों समकालिक है	हां/नही
	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/ढ़के हुए कक्ष/स्थान ढ़के 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 बिनों की संख्या	बारंबारता	बिनों 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 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 यात्रिक 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	

	पशु गाड़ी ट्रैक्टर नॉन टीपिंग ट्रक टीपिंग ट्रक डम्पर प्लेसर अवशिष्ट संग्राहक कम्पैक्टर अन्य जेसीबी - लोडर	
	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 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 आपूर्तित दहनशील अपशिष्ट	
	ठोस अपशिष्ट आधारित विद्युत संयंत्रों को आपूर्तित 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 ढ़कने का काम दैनिक आधार पर किया जाता है	हां/नहीं
	यदि नहीं, तो भरण स्थल पर जमा अपशिष्ट को ढ़कने की बारंबारता	
	ढ़कने के लिए प्रयुक्त सामग्री	
	क्या ढ़कने 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 :

प्ररुप-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	बायो गैस	आरडीएफ/गुटिकाकरण

प्रचालनरत प्रसंस्करण सुविधा

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

संस्थापनाधीन/योजनाकृत प्रसंस्करण सुविधा

क्रम सं.	कम्पोस्टिंग	वर्मी-कम्पोस्टिंग	बायो 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:

प्ररुप-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 3rd June, 2015 in the Gazette of India, part II, Section3, 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 3rd 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 suthority, 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" m**eans 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 F8orm 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 2for 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, card-boards, 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 burry 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 authorizsd 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 utlisation 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 canes, tetra packs, fruit peel, wrappers, etc., or burn or burry 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 1 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 30th 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 31st 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 30th 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 orLocal 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 30th 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 30th 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 31stday 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 31st 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 planin 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 x 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 x 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^{6+})	0.05
	Copper	0.05
	Cyanide	0.05
	Lead	0.05
	Mercury	0.001
	Nickel	-
	Nitrate as NO_3	45.0
	pH	6.5-8.5
	Iron	0.3
	Total hardness (as $CaCO_3$)	300.0
	Chlorides	250
	Dissolved solids	500
	Phenolic compounds (as C_6H_5OH)	0.001
	Zinc	5.0
	Sulphate (as SO_4)	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 :-'

(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.

(i). 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. Odurnuisance 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^3)	<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_20_5) percent by weight, minimum	0.4	10.4
Total Potassium (as K_20), 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 27^0 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_6H_5OH) 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)**
Particulates	50 mg/Nm^3	Standard refers to half hourly average value
HCl	50 mg/Nm^3	Standard refers to half hourly average value
SO2	200 mg/Nm^3	Standard refers to half hourly average value
CO	100 mg/Nm^3	Standard refers to half hourly average value
	50 mg/Nm^3	Standard refers to daily average value
Total Organic Carbon	20 mg/Nm^3	Standard refers to half hourly average value
HF	4 mg/Nm^3	Standard refers to half hourly average value
NOx (NO and NO2 expressed as NO2)	400 mg/Nm^3	Standard refers to half hourly average value
Total dioxins and furans	0.1 ng TEQ/Nm^3	Standard refers to 6-8 hours sampling. Please refer guidelines for 17 concerned congeners for toxic equivalence values to arrive at total toxic equivalence.
Cd + Th + their compounds	0.05 mg/Nm^3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.
Hg and its compounds	0.05 mg/Nm^3	Standard refers to sampling time anywhere between 30 minutes and 8 hours.

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

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 concentation 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 fcaility.

(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 CO2 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 950^0C 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 (y) 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.	**Processing/recycling/treatment of solid waste** (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.	**Disposal of solid waste** 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, 2016will 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	% % 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^3 bins 2 to 5 m^3 bins Above 5m^3 containers Bin-less city	No. Capacity in m^3
	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 (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 ,	Qty. raw material processed Qty. final product produced Qty. sold Qty. 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 Whether Weigh bridge facility available	Yes / No Yes / No
	Vehicles and equipments used at landfill (specify) Manpower deployed at landfill site	Bulldozer, Compacters etc. available 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

CALENDAR YEAR:	**DATE OF SUBMISSION OF REPORT:**

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			Yes/No		
	Whether each sanitation worker is given handcart/tricycle for collection of waste			Yes/No		
	Whether handcart / tricycle is containerized			Yes/No		
	Whether the collection tool synchronizes with collection/ waste storage containers utilized			Yes/No		
.	Secondary Waste Storage facilities					
	No. and type of waste storage depots in the city/town	No. Capacity in m^3				
	Open waste storage sites					
	Masonry bins					
	Cement concrete cylinder bins					
	Dhalao/covered rooms/space					
	Covered metal/plastic containers					
	Upto 1.1 m3 bins					
	2 to 5 m3 bins					
	Above 5m3 containers					
	Bin-less city					
	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
Place: ……..	State Pollution Control Board/
	Pollution Control Committee

PART B

Towns/cities

Total number of towns/cities

Total number of ULBs

Number of class I & 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.

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केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार.
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA.

Central Pollution Control Board
'Parivesh Bhawan 'East Arjun Nagar, Delhi-110032

File No.: CM-11/6/2025-LAW-HO-CPCB –HO **18.3.2025**

OFFICE ORDER

Sub: Constitution of Expert Committee for assessment of the *impact of waste to* energy projects on the environment and public health in the matter of Writ Petition(s)(Civil) No(s). 13029/1985, M.C Mehta Vs. Union of India & Ors

1. **Background:**

Hon'ble Supreme Court vide order dated 24.02.2025, in the matter of Writ Petition(s)(Civil) No(s). 13029/1985, M.C Mehta Vs. Union of India & Ors., directed interalia the following, reproduced herein below:

Para 3: Another important issue flagged by the learned senior counsel appointed as Amicus Curiae is that the percentage of segregation waste is very low in Municipal Corporation of Delhi area, Gurugram and Faridabad. The State of Uttar Pradesh has not furnished any figures. As rightly submitted by the learned Amicus Curiae, the segregation of waste at source is of vital importance for the environment. ***If there is no proper segregation, even waste to energy projects will cause more pollution***

Para 6: We direct the ***Central Pollution Control Board to submit a report to this Court on the impact of waste to energy projects on the environment and public health.***

Para 7. The affidavit by the NCR States shall be filed by end of March, 2025. No further time shall be granted. ***The Central Pollution Control Board shall also file a report by end of March, 2025****. The affidavits and the report will be considered on 2nd April, 2025 at 3.00 P.M.*

In this context, an Expert Committee comprising of the following members has been constituted by CPCB to assess the ***impact of waste to energy projects on the environment and public health as per Directions of the Hon'ble Supreme Court***:

S. N	Name of Official	Organization	Role
1.	Prof. Mukesh Sharma	Indian Institute of Technology, Kanpur	Member
2.	Dr.K.V.George, Chief Scientist & Head, Environmental Resource Planning and Management, Division	National Environmental Engineering , Research Institute (NEERI), Nagpur	Member
3.	Representative from Delhi Pollution Control Committee	Delhi Pollution Control Committee	Member
4.	Director & Divisional Head (UPC-II) , CPCB	Central Pollution Control Board	Member Convenor

2. **Terms of Reference:**

i. To assess impact of waste to energy projects on the environment and public health
ii. The committee may take into consideration the Environmental Impact Assessment (EIA) reports of the Waste-to-Energy (WtE) plants, facilities available at Waste-to-Energy Plants, Segregation of waste, Stack Emission, Ambient Air Quality, etc.
iii. Report of the committee be submitted on or before 26/3/2025 to CPCB.

3. **Tenure of the Expert Committee:**

The tenure of the committee will be until 26/3/2025 and may be further extended by CPCB, if required.

4. **Reimbursement of TA/DA:**

The TA/DA and sitting fee for attending the meeting shall be paid to the ex -officio members, as applicable and in accordance with the rules (under NGT EC fund) , and shall be borne by the Central Pollution Control Board (CPCB).

This issues with the approval of the Competent Authority, CPCB.

Divy

(Divya Sinha)
Director & Divisional Head, UPC-II

Encl : As above
Copy to:

1. **All Committee members: for information & necessary action, Please**
2. **DH, Law Section : For information , Please**
3. **PS to MS : For kind information to 'MS' Please**
4. **PS to CCB : For kind information to 'CCB', Please**

Divy.

(Divya Sinha)

Annexure VI

Process Flow Diagram of Four WtE Plants in Delhi

(i) WTE Bawana

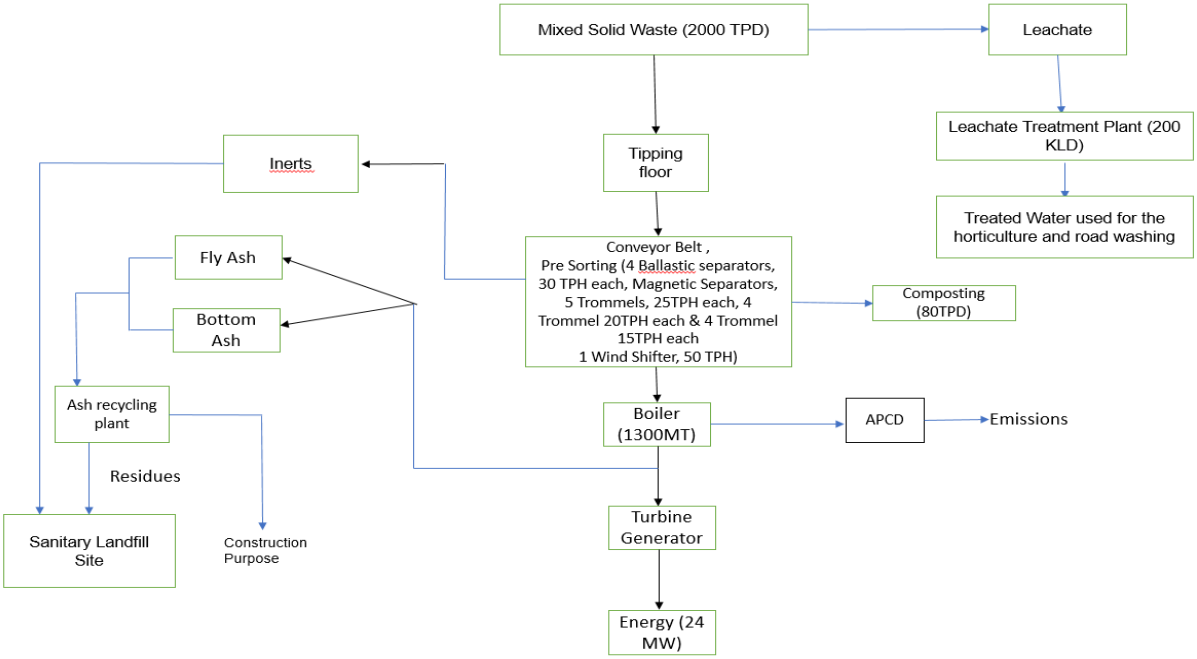

Figure: Process flow diagram of Bawana WtE

(ii) WTE Ghazipur

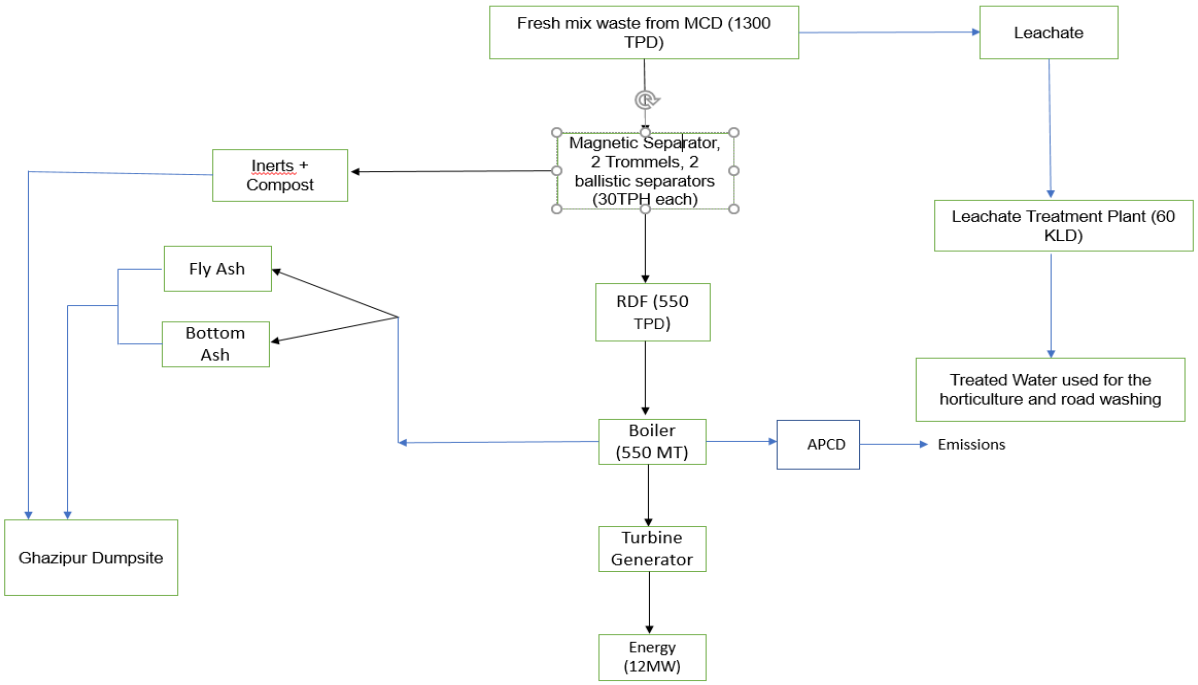

Figure: Process flow diagram of Ghazipur WtE

(iii) WTE Okhla

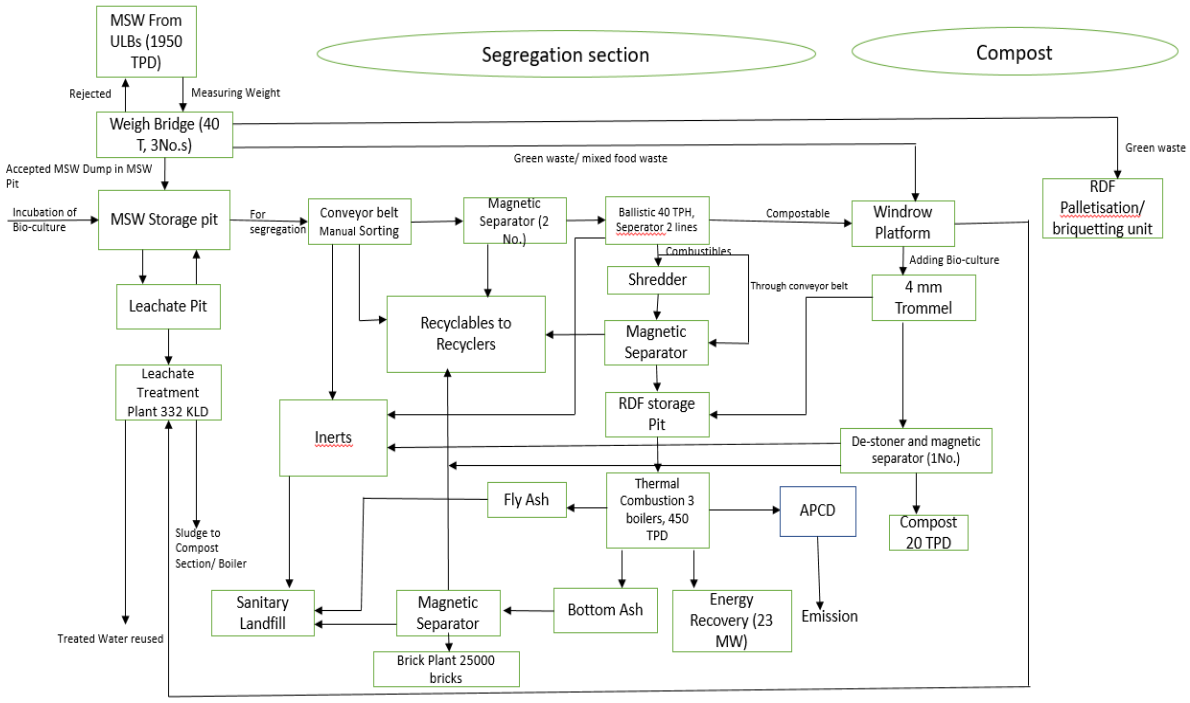

Figure: Process flow diagram of Okhla WtE

(iv) WTE Tehkhand

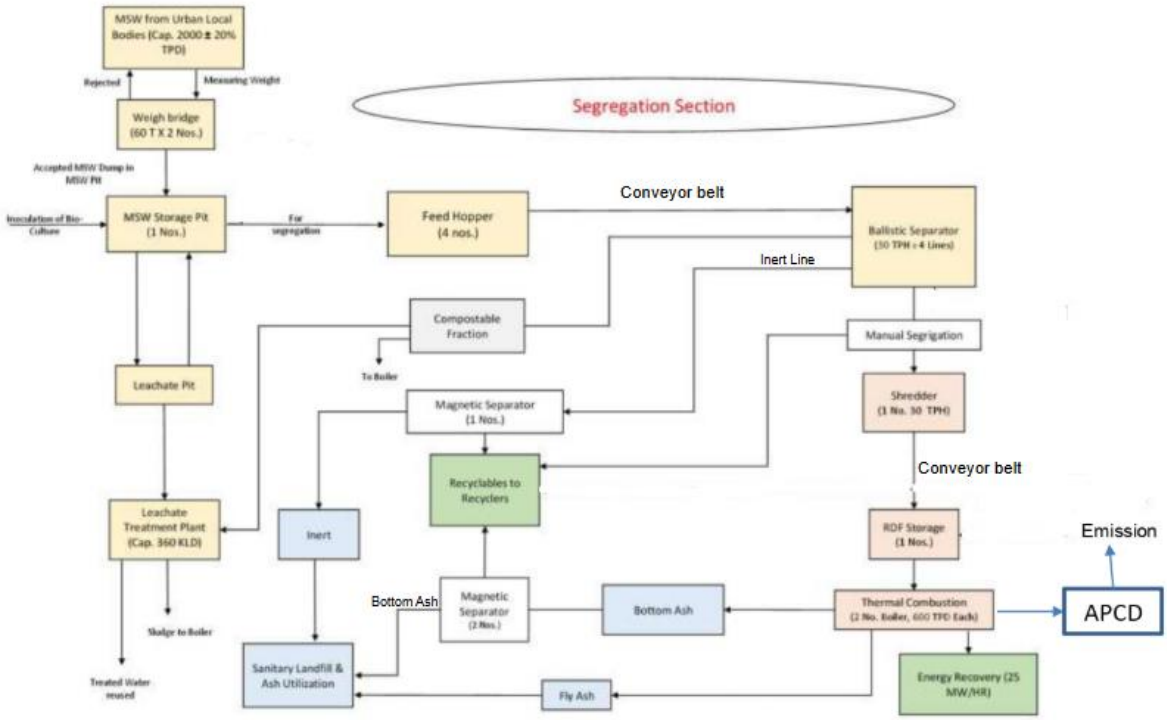

Figure: Process flow diagram of Tehkhand WtE

Annexure VII

Flow Diagram of Air Pollution Control Devices (APCD) at Four WtE Plants in Delhi

(i) WTE Bawana

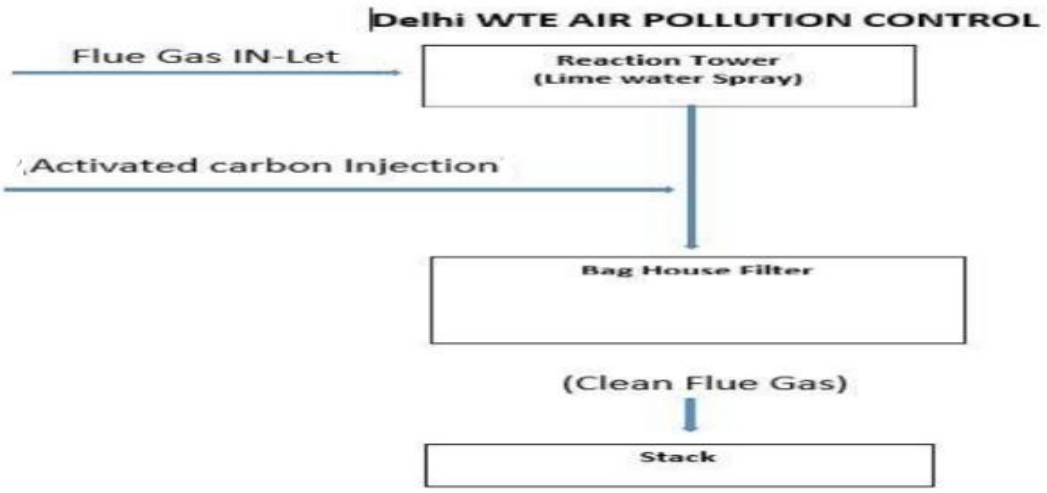

***Figure:** Flow diagram of APCD in Bawana WtE plant*

(ii) WTE Ghazipur

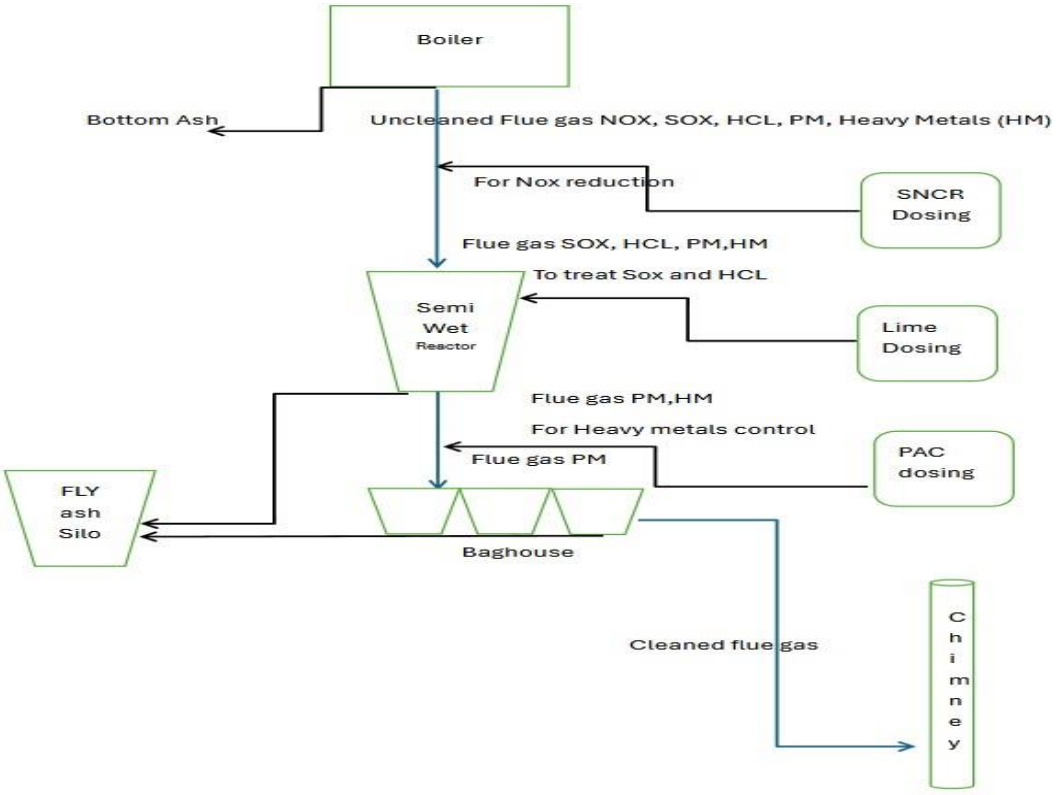

***Figure:** Flow diagram of APCD in Ghazipur WtE plant*

(iii) WTE Okhla

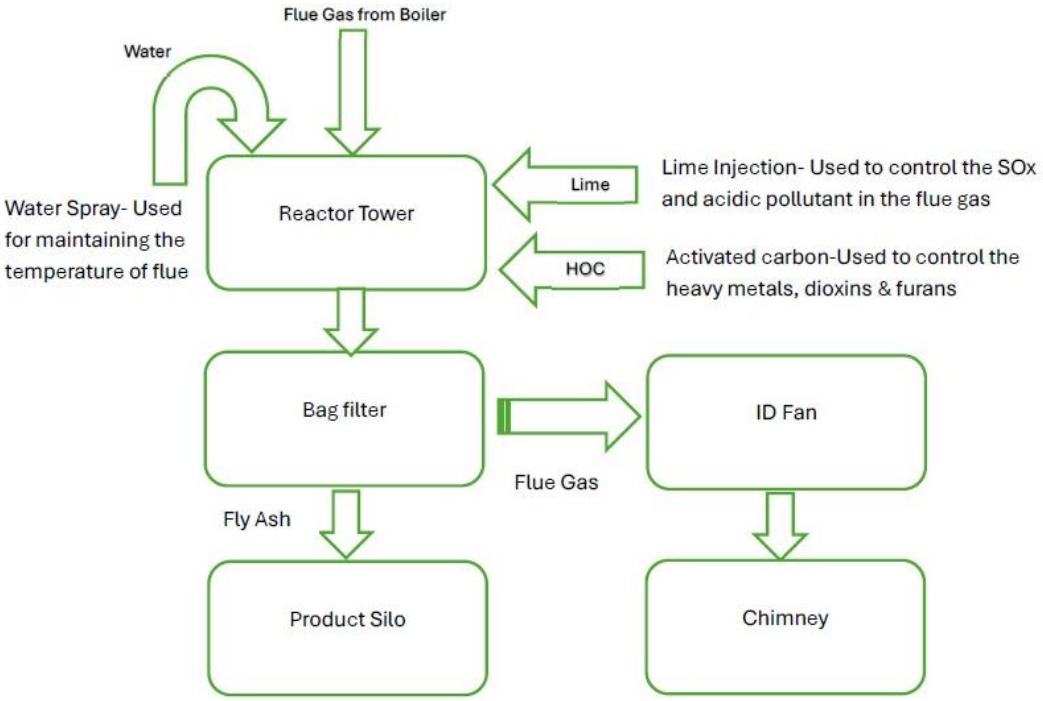

***Figure:** Flow diagram of APCD in Okhla WtE plant*

(iv) WTE Tehkhand

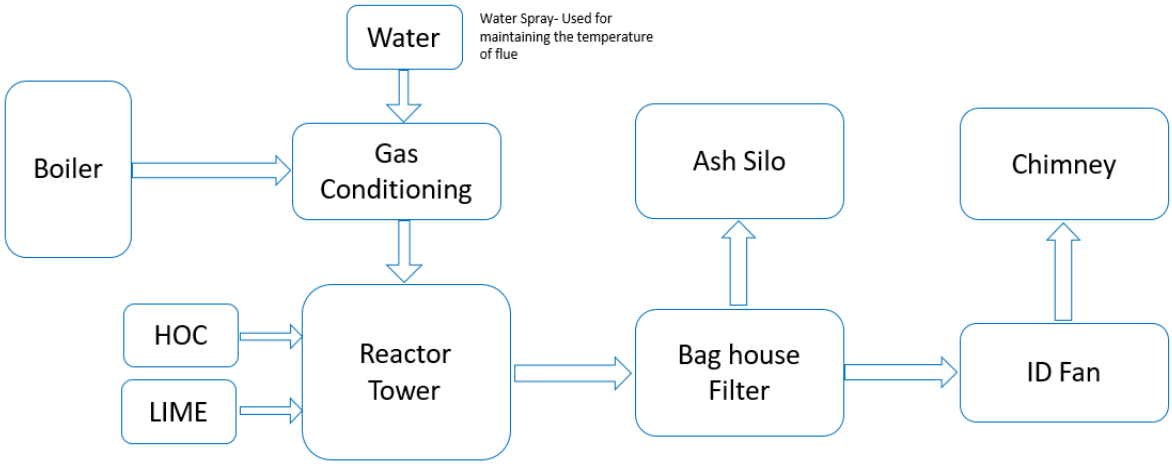

***Figure:** Flow diagram of APCD in Tehkhand WtE plant*