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Ministry of Environment, Forest and Climate Change

NOTIFICATION

New Delhi, the 3rd June, 2015

Draft Rules

G.S.R. 452(E).- The following draft of the rules, which the Central Government proposes to issue 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 Wastes (Management and Handling) Rules, 2000 except as respects things done or omitted to be done before such suppression, it is hereby published for the information of the public likely to be affected thereby; and the notice is hereby given that the said draft notification shall be taken in to consideration on or after the expiry of a period of sixty days from the date on which copies of this notification as published in the gazette of India are made available to public;

Objections or suggestions on the proposals contained in the draft notification, if any may be addressed, within the period so specified, to the Secretary, Ministry of Environment, Forest and Climate Change, Indira ParyavaranBhawan, Jorbagh Road, New Delhi- 110 003 or electronically at e-mail addressed : bnsinha@gov.in, shard.sapra@nic.in;

The objections and suggestion which may be received from any person with respect to the said draft rules before the expiry of the period so specified shall be considered by the Central Government.

Draft Rules

1. Short title and commencement.-(1) These rules may be called **Solid Waste Management Rules, 2015**;

(2) They shall come into force on the date of their final publication in the Official Gazette.

2.Application - These rules shall apply to every urban local body, all statutory towns, outgrowths in urban agglomerations as declared by the registrar general & census commissioner of India, **notified areas/notified industrial townships, notified area committees, area under indian railways, defense cantonments, special economic zones in the country and every waste generator.**

3.Definitions –(1) In these rules, unless the context otherwise requires.-

(i) **"aerobic composting"** means a controlled process involving microbial decomposition of organic matter in the presence of oxygen;

(ii) "**anaerobic digestion"** means a controlled process involving microbial decomposition of organic matter in absence of oxygen;

(iii) **"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 body”, or any other agency responsible for processing and disposal of solid waste;

(iv) **“biodegradablewaste "** means any organic material that can be degraded by micro-organisms into simpler stable compounds;

(v) **"biomethanation"** means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;

(vi) “**buffer zone**” means a zone of no development which shall be maintained around landfills, processing and disposal facilities of solid waste;

(vii) "**composting"** means a controlled process involving microbial decomposition of organic matter;

(viii) "**construction**" means the process of erecting of building or built facility or other structure, or building of infrastructure includingalteration in these entities.

(ix) "**construction and demolition waste**" means the waste comprising of building materials, debris and rubble resulting from construction, re-modelling, repair and demolition of any civil structure;

(x) “**contractors**” 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.

(xi) **“co-processing”** means use of solid waste 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;

(xii) **“de-construction”** means a planned selective demolition in which salvage, re-use and recycling of the demolished structure is maximized.

(xiii) **“demolition”** means breaking down or tearing down buildings and other structures either manually or using mechanical force (by various equipment) or by implosion using explosives.

(xiv) "**disposal"** means the final and safe disposal of solid waste on land as specified in Schedule I to prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;

(xv) **“domestic hazardous waste”** domestic hazardous wastes means waste contaminated with hazardous chemicals or infectious waste such as discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles, gauge and syringes, etc. generated at

the household level;

(xvi) **“dry waste”** means waste other than food waste and inert and includes recyclable waste, non recyclable waste, combustible waste and sanitary waste;

(xvii) **“dump sites”** means a land utilised by urban local body for unscientific disposal of solid waste without following the principles of sanitary land filling;

(xviii) **“facility”** means any establishment wherein the solid waste management processes namely segregation, recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out;

(xix) **"form"** means a form appended to these rules;

(xx) **“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;

(xxi) **“inerts”** means wastes which are not bio-degradable, recyclable or combustible and includes non recyclable fraction of construction and demolition waste, street sweeping or dust and silt removed from the surface drains;

(xxii) **“incineration”** means an engineered process involving burning or combustion of solid waste to thermally degrade waste materials at high temperatures;

(xxiii) **“institutional generator”** means and includes occupier of the institutional buildings such as building occupied by central government departments, state government departments, public or private sector companies, hospitals, schools, colleges, universities or other places of education, organization, academy, hotels and restaurants;

(xxiv) "**leachate"** means the liquid that seeps through solid waste or other medium and has extracts of dissolved or suspended material from it;

(xxv) “**materials recovery facility (MRF)**” means a facility where non-compostable solid waste can be temporarily stored by the urban local body or any person authorised by the urban local body to facilitate segregation, sorting and recovery of various components of waste by informal sector of waste pickers or any other work force engaged for the purpose before the waste is delivered or taken up for its processing or disposal;

(xxvi) **“non-biodegradable waste”** means any waste that cannot be degraded by micro organisms into simpler stable compounds;

(xxvii) **"operator of a facility"** means a person or entity, who owns or operates a facility

for handling solid waste which includes the urban local body and any other entity or agency appointed by the urban local body;

(xxviii) "**prescribed authority**" means the Authority declared as State Pollution Control Board or Pollution Control Committee for Union Territory under rule 4 and made responsible to perform the duties and undertake responsibilities as specified in rule 5;

(xxix) "**primarycollection"** 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 urban local body;

(xxx) "**processing"** means the process by which solid waste is transformed into new or recycled products;

(xxxi) "**recycling"** means the process of transforming segregated solid waste into a new product or raw material for producing new products;

(xxxii) **"redevelopment"** means rebuilding of old residential or commercial buildings at the same site, where the existing buildings and other infrastructures have become dilapidated;

(xxxiii) **"refuse derived fuel"** means segregated combustible fraction of solid waste other than chlorinated plastics in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting combustible components of solid wastethat can be used as fuel;

(xxxiv) "**residual waste"** means and includes the waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing ;

(xxxv) **"sanitaryland 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;

(xxxvi) **"sanitary waste"** means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste;

(xxxvii) **"schedule"** means the Schedule appended to these rules;

(xxxviii)**"secondary collection"** means collection of solid waste deposited at secondary waste storage depots or bins for onward transportation of the waste to the processing or disposal facility;

(xxxix) **"secondary storage"** means the temporary containment of solid waste at a public place in a covered bin or container in a manner so as to prevent littering, vectors, stray animals and odour;

(xl) **"segregation"** means sorting and separate storage of various components of solid waste namely biodegradable wastes or wet waste, non biodegradable wastes or dry waste-including recyclable waste, combustible waste sanitary waste and non recyclable inert waste, domestic hazardous wastes, e-waste and construction and demolition wastes;

(xli) **"service provider"** means an authority providing public utility services like water, sewerage, electricity, telephone, roads, drainage etc.

(xlii) **"solid waste"** means and includes solid or semi-solid domestic waste including 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, construction and demolition waste and treated bio-medical waste excluding industrial hazardous waste, bio-medical waste and e-waste generated in an area under urban local body;

(xliii) **"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;

(xliv) **"street vendor"** means a 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;

(xlv) **"tipping fee"**means a fee or support price determined by the urban local body or any state agency authorized by the state government to be paid to the concessionaire or operator for handling one or more components of solid waste

(xlvi) **"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;

(xlvii) **"treated bio-medical wastes"** means the wastes generated in hospitals and health care institutions which have been prescribed as treated *in accordance with Bio-medical Waste (Management and Handling) Rule1998, as amended from time*

to time;

(xlviii) **"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;

(xlix) **"user fee"** means a fee imposed through a bye-law by the urban local body on the waste generator

(l) **"urban local body"** for the purpose of these rules means and includes themunicipal corporation, nagarnigam, municipal council, nagarpalika, nagarpalikaparishad, municipal board, nagarpanchyat, town panchayat, notified area committeeor any other local body constituted under the relevant statutes where management of solid waste is entrusted to such agency including the body in notified industrial township, notified area, villages declared outgrowth in urban agglomeration by the Registrar General and Census Commissioner of India from time to time;

(li) **"viability gap funding"** means financial support determined by the urban local body or authorisedState Government or Central Government agency to be paid to the concessionaire or operator of a solid waste processing facility based on the output quantity of compost, biogas produced or energy or power generated so as to cover or partly cover the difference between market price of the output and its production cost plus reasonable profit margin;

(lii) "**vermi composting"** means the process of conversion of bio-degradable waste into compost using earth worms;

(liii) "**waste generator**" means and includes every person or group of persons or residential and commercial establishments including Indian Railways and Defense cantonments which generate solid waste;

(liv) **"waste picker"** means a person or groups of persons engaged in collection of reusable and recyclable solid waste from the source of waste generation as well as picking up of wastes from the streets, bins, 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.

CHAPTER 1

Management of Solid Waste excluding Construction and Demolition waste

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

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

(b) wrap securely the used sanitary waste as and when generated in a newspaper or suitable bio-degradable wrapping material and place the same in the domestic bin meant for non bio-degradable waste or dry waste;

(c) store separately construction and demolition waste in his own premises, as and when generated and shall dispose off as per these rules; and

(d) store separately horticulture waste and garden waste in his premises and dispose of the same as may be prescribed by urban local body from time to time.

(2) No waste generator shall throw the waste generated by him on the street, open spaces, drain or water bodies.

(3) All waste generators shall pay such user fee or charge or fines as may be specified in the bye-laws of the urban local bodies for solid waste management.

(4) No person shall organise an event or gathering likely to generate solid waste at unlicensed place without intimating the urban local body at least three working days in advance and such person or the organizer of such event shall arrange for segregation of waste at source and ensure handing over of segregated waste to the placed designated by urban local body or to waste collection agency authorised by the urban local body.

(5) Every institutional generators of solid waste shall segregate and store the waste generated by them in three separate streams namely bio-degradable or wet waste, non bio-degradable or dry waste and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste processing or disposal facilities or deposition centers either at its own or through the authorised waste collection agency.

(6) Every waste generator shall pay the user fee as may be prescribed by the urban local body from time to time, to the waste collector or any person authorized by the urban local body and the charges shall be imposed for the sustainability of the solid waste management systems.

5. Prescribed Authorities.-The following shall be the Prescribed Authorities under these:-

(i) Secretary–in-charge, Urban Development Department, in States or Union Territory.
(ii) Commissioner or Director of Municipal Administration or Director of Local Bodies in States or Union Territories.
(iii) District Magistrate or District Collector or Deputy Commissioner of District in State or Union Territory.
(iv) Central Pollution Control Board.
(v) Urban Local Body.
(vi) State Pollution Control Board.

6. Duties of Ministry of Environment and Forest and Climate Change.-(1)The Ministry of Environment, Forest and Climate Change shall be responsible for enforcement of these rules in the country.

(2) The Ministry of Environment, Forest and Climate Change shall monitor the activities undertaken by central pollution control board, state pollution control boards and the pollution control committee committees for enforcement of the provisions of the rules.

(3) The Ministry of Environment, Forest and Climate Change shall constitute a central monitoring committee under the chairmanship of secretary (environment, forest and climate change) comprising of ministry of urban development, central pollution control board and at least three representatives each from state pollution control boards, urban development departments of state governments/ union territories, urban local bodies and subject experts to monitor and review the implementation of the rules and the committee constituted so shall meet at least once a year.

7.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 urban 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 in consultation with stakeholders;

(c) guide and 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 urban local bodies;

(e) undertake training and capacity building of urban local bodies and other stakeholders;and

(f) provide technical guidelines and project finance to states, UTs and urban local bodies on solid waste managementto facilitate meeting timelines and standards.

8. Duties of Department of Fertilisers, Ministry of Chemicals and Fertilisers.- (1) the Department of Fertilisers through appropriate mechanisms may,-

(a) incentivize the sale of city compost; and

(b) ensure promotion of co-marketing of compost with chemical fertilizers in the ratio of 3 to 4 bags: 6 to 7 bags by the fertilizer companies or whatever quantity is made available to the companies.

9. Duties of the Secretary–in-charge, State Urban Development Department.-

(1) The Secretary, State Urban Development Department who is in-charge of Urban Local Bodies in the State or Union Territory 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, which shall be consistent with these rules, national policy on solid waste management and national urban sanitation policy of the ministry of urban development within one year from the date of notification of these rules;

(b) shall lay emphasis on waste reduction, reuse, recycling, recovery and optimum utilization of various components of solid waste to ensure minimization of waste going to the landfill and minimise impact of solid waste on human health and environment in the state policy and solid waste management strategy;

(c)ensure implementation of provisions of these rules by all urban local bodies;

(d) delegate powers to Commissioner/ Director of Municipal Administration/ Director of Local Bodies to monitor the performance of local bodies under their control;

(e) ensure identification and allocation of suitable land to the urban 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/cities through Metropolitan and district planning committees or town and country planning department;

(f) direct the town planning department of the state and urban local bodies to ensure that a separate space for segregation, storage and 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 more than 10,000 square meter;

(g) facilitate establishment of common regional sanitary land fill for a group of cities and towns

falling within 50 km (or more) radius from the regional facility on a cost sharing basis and ensure professional management of such sanitary landfills;

(h) direct the town planning department of the state to ensure that master plan of every city in the State or Union Territory has 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

(i) arrange for training and capacity building of urban local bodies in managing solid waste.

10. Duties of Commissioner or Director of Municipal Administration or Director of Local Bodies.-(1)Under the supervision and control of Secretary-in-charge of State Urban Development shall,-

(a) ensure implementation of these rules by all urban local bodies falling under his control;

(b) undertake training and capacity building of urban local bodies for management of solid waste; and

(c) facilitate establishment of common regional sanitary land fill for a group of cities and towns falling within a radial distance of fifty kilometer or more from the regional facility on a cost sharing basis and ensure professional management of such sanitary landfills.

11.Duties of District Magistrate or District Collector or Deputy Commissioner.-The District Magistrate or District Collector or Deputy Commissionershall, -

(a) facilitate identification and allocation of suitable land for setting up solid waste processing and disposal facilities to Urban Local Bodies 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) extend support to Secretary-in-charge of State Urban Development in implementation of these rules by all urban local bodies; and

(c) review the performance of urban local bodies, at least once in a quarter and take corrective measures in consultation with Commissioner or Director of Municipal Administration or Director of local bodies and secretary-in-charge of the State Urban Development.

12. 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 urban local bodies;

(b) formulate the standards of ground water, ambient air, leachate in respect of all solid waste processing facilities including composting, incineration, land filling;

(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 prescribedenvironmental standards for solid waste processing facilities or treatment technologiesand 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;

(f) monitor through State Pollution Control Boards or Pollution Control Committees the implementation of these rules by urban 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 indicative 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 5 tons per day of solid waste;

(i) publishguidelines, from time to time, on environmental aspects of processing and disposal of solid waste to enable urban local bodies to comply with the provisions of the rules; and

(j) provide guidance to States or Union Territories on inter-state movement of waste.

13.Duties and Responsibilities of urban local bodies.-(1) The urban local bodies 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 get it approved from the State Government or Union Administration or agency authorised by the State Government or Union Administration;

(b) frame bye-laws, incorporating the provisions of these rules and ensure timely implementation;

(c) prescribe from time to time user fee as deemed appropriate and collect the fee from the waste generators for the sustainability of collection, transportation, processing and disposal of solid waste;

(d) direct waste generators not to litter, to segregate the waste at source as prescribed under these rules and hand over the segregated waste to the waste collector;

(e) give direction to waste generators, from time to time, to deposit domestic hazardous wastes at waste deposition centre established by urban local bodies for its safe disposal at hazardous waste disposal facility;

(f) develop infrastructure for segregation, collection, transportation, storage, processing and disposal of solid waste in their respective jurisdiction either at its own or through public private partnership mode;

(g) arrange for day to day Collection of segregated bio-degradable and non bio-degradable solid waste or wet waste or dry waste from the door step of all households including slums and informal settlements, commercial, institutional and other non residential premises;

(h) collect waste from markets in waste of vegetable, fruit, meat and fish market on day to day basis and promotion of setting up of decentralised compost plant or bio-methanation plant at suitable locations in the markets;

(i) separately collect 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. Such waste shall not be mixed with the wet, dry or any other form of solid waste;

(j) separately collect horticulture, parks and garden waste with focus on on-site processing in the parks and gardens;

(k) transport segregated bio-degradable (wet waste) to the processing facilities like compost plant, bio-methanation plant or any such facility;

(l) transport non-bio-degradable (dry waste) including wrapped sanitary waste to the respective processing facility or material recovery facilities (MRF) or secondary storage facility;

(m) transport inert waste (non recyclable, street sweepings and silt collected from the surface drains) directly to disposal facility;

(n) transport horticulture and garden waste to the appropriate processing facility;

(o) transport construction and demolition waste as per the provisions contained un chapter 2 of these rules;

(q) 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;

(r) establish domestic hazardous waste deposition or delivery centres in city or town in a manner that one centreis set up for thearea of twentysquare kilometers or part thereof and notify the timings of receiving domestic hazardous waste at such centres;

(s) ensure safe storage, transportation of the domestic hazardous waste to the hazardous waste disposal facility or as may be directed by the state pollution control board/ committee;

(t) involve communities in municipal waste management and promotion of decentralised processing of waste;

(u) facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure in house or with private sector participation or through any agency for optimum utilization of various components of solid waste adopting any of the following technologies and adhering to the guidelines issued by the ministry of urban development and central pollution control board from time to time and standards prescribed by central pollution control baord and preference shall be given to decentralise processing to minimise cost and environmental impacts:

(i) bio-methanation, microbial composting facility, vermi composting, anaerobic digestion or any other appropriate processing for bio-stabilisation of wet biodegradable wastes;

(ii) waste to energy processes for conversion of dry non recyclable combustible fraction of waste into energy or supply as feedstock to solid waste or refused derived fuel based power plants or cement kilns or like; and

(iii) construction and demolition waste processing facility for optimum utilization of construction and demolition waste making aggregates, bricks, paver blocks or any other useful product.

(v) undertake in house or through any other authorised agency, construction, operation and maintenance of Sanitary landfill and associated infrastructure as per Schedule 1 for disposal of residual wastes as permitted under the rules and the CPCB guidelines issued from time to time;

(w) 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 urban 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;

(x) make an application in Form-I, for grant of authorisation for setting up waste processing, treatment, recycling or disposal facility including landfills from the State Pollution Control Board or the Pollution Control Committee, as the case may be;

(y) submit application for renewal of authorisation at least sixty days before the expiry of the

validity of authorisation;

(z) close down, remediate wherever feasible and cap the existing dumpsites, which are not engineered landfill sites as per the provision of these Rules within the time frame prescribed under rule 8;

(za) prepare and submit annual report in Form IV on the status of compliance of these rules during the calendar year on or before the 30th April of the succeeding year to the Commissioner or Director Municipal Administration who in turn shall send the same to the Secretary-In-charge of State Urban Development Department and to the respective State Pollution Control Board or Pollution Control Committee by the 31st May of every year;

(zb) 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;

(zc) ensure that the operator of a facility provides personal protection equipment namely uniform, fluorescent jacket, hand gloves, appropriate foot wear and masks to all workers for handling solid waste and its use by the workforce shall be ensured;

(zd) prior to the approval of building plan of a group housing society or market complex, ensure that the plan has provisions for setting up of waste collection centers for segregated collection and storage of wastes;and

(ze) frame bye-laws and prescribed criteria for levy of spot fines to person who litters or fails to comply with the provisions of these rules and delegate powers to appropriate officers or urban local bodies to levy spot fines as per the bye laws framed; and

(zf) create public awareness through Information, Education and Communication (IEC) campaign and educate the waste generators on the following:

i. not to litter;
ii. minimise generation of waste;
iii. reuse the waste to the extent possible;
iv. practice segregation of wet bio–degradable waste, dry recyclable and combustible wastes and domestic hazardous wastes at source;
v. wrap securely used sanitary waste as and when generated in a newspaper or suitable bio-degradable wrapping material and place the same in the domestic bin meant for non bio-degradable waste;
vi. storage of segregated waste at source;
vii. handover segregated waste to waste pickers, recyclers or waste collection agencies;and
viii. pay monthly user fee or charge to waste collectors or urban local bodies or any other person authorized by the urban local body for sustainability of solid waste management.

14 Duties of State Pollution Control Board or Pollution Control Committee.- (1)TheState Pollution Control Board or Pollution Control Committee shall.-
enforce these rules in their State through urban local bodies in their respective jurisdiction and monitor 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;

(a) monitor, environmental standards and adherence to condition as specified under the Schedule I and Schedule II;

(b) examine the proposal and make such inquiries as deemed fit, after the receipt of the application for the same in Form I from the urban local body;

(c) take into consideration, while examining the proposal the requirement of consent under Water and Air Acts, 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 and any other agencies as deemed appropriate who shall be given four weeks time to give their views, if any;

(d) issueauthorisation within a period of sixty days in Form II to the urban local body or an operator of a facility stipulating compliance criteria and standards as specified in Schedules I and II including other conditions, as may be necessary.

(e) theauthorisationissued under clause (e) shall initially be valid for a period of three years to enable the urban local body or operator of the facility to demonstrate the operation of the plant as per the conditions of grant of authorisation, environmental clearance, consents for establishment, and contract conditions with the urban local body.

(f) the authorisationissued under clause (e) shall be suspended or cancelled by the state pollution control board any time, if the urban local body or operator of the facility fails to operate the facility as per the conditions stipulated:-

(g) Provided that no such authorisation shall be suspended or cancelled without giving notice to the urban local body or operator, as the case may be.

(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 may, 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 approvedand 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; and

(5) The State Pollution Control Board or the Pollution Control Committee shall give directions to urban 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 Committeeshall regulate Inter-State movement of waste.

15. Management of solid waste.–The urban local body shall adhere to the following compliance criteria in the matter of solid waste segregation at source, primary collection, cleaning of streets and surface drains, secondary storage, transportation, processing and the disposal of solid waste at the facilities to be set up by the urban local body on their own or through an agency or an operator of a facility.

Sl. No.	**Parameters**	**Compliance criteria**
(1.)	**Storage of segregated solid waste at source**	(1) Littering and open burning of solid waste shall be prohibited by all Urban Local Bodies within the area covered under their jurisdiction within six months from the date of the notification of these rules. (2) To facilitate compliance, the following steps shall be taken by the urban local body, namely: - (a) create public awareness on- (i) reducing the generation of waste; (ii) reusing the waste material to the extent possible; (iii) processing food waste through home composting or community composting; (iv) separately store bio-degradable wastes or wet waste and non bio-degradable including recyclable and combustible wastes or dry waste; (v) encouragingwaste pickers to take away segregated

		recyclable material stored at source; (vi) wrapping securely sanitary napkins/pads, tampons, infant and adult diapers, condoms, and menstrual cups before putting in domestic bin meant for non bio-degradable waste; (vii) storing separately domestic hazardous wastes such as contaminated paint drums, pesticide cans, Compact florescent lamps, tube lights, used Ni.cd batteries, used needles and syringes and health care waste; and (viii) storing separately construction and demolition waste at the source of waste generation. (b) mandate citizens to store segregated wastes at source in separate domestic or trade bins and hand over these wastes separately to designated waste collectors for recycling, processing and disposal of solid waste.
(2)	**Collection of solid wastes**	(1) organise door to door collection of segregated bio-degradable or wet and non bio-degradable or dry solid wastes on a daily basis at pre informed timings from all residential and non residential premises including slums and informal settlements using motorised vehicles or containerized tricycles, handcarts or any other device which is suitable for collection of segregated waste without necessitating deposition of waste on the ground and multiple handling of waste; (2) bio-degradable wastes from fruits and vegetable markets, meat and fish markets, horticulture waste from parks and gardens, shall be collected separately and to the extent feasible market waste may be processed or treated within the market area and horticulture waste within parks and gardens to make optimum use of such wastes and minimise the cost of collection and transportation of such waste; (3) large institutional premises, residential complexes shall be motivated and incentivized to process bio-degradable waste within their campus to the extent it is feasible to do so; (4) construction and demolition wastes or debris shall be separately collected and processed by the urban local body or agency appointed by it for the purpose of its processing and disposal without mixing the same with bio-degradable, recyclable or non recyclable combustible wastes that shall be collected from the door step;

		(5) dairy waste shall be collected separately and regulated as may be prescribed in the municipal bye-laws; (6) appropriate user fees or charges shall be levied from the waste generator for sustainability of operations of solid waste management.
(3)	**Sweeping of street and cleaning of surface drains**	(1) urban local body shall arrange for cleaning of roads, streets, lanes, bye lanes, surface drains and public places at regular intervals and use containerized tricycles, containerized handcarts, and suitable motorized or non motorized devices for collection of such waste; (2) synchronise with the system of secondary storage and transportation of such waste without necessitating deposition of such waste on the ground; and (3) thewaste shall not be mixed at any stage with the solid waste collected from the door step.
(4)	**Secondary Storage**	(1) segregated solid waste collected from the door step as per 2 above shall, as far as practicable, be transported directly to respective waste processing facility having facility of sorting and recovery of recyclable waste and in absence of such arrangement, the waste collected from the doorstep shall be taken to waste storage depots for secondary storage of waste; (2) waste depots shall have covered containers for separate storage of bio-degradable or wet waste and non bio-degradable or dry waste collected from the doorstep; (3) the street sweepings and silt collected from the surface drains shall not be left or accumulated on roadsides and shall be transported directly to waste disposal facility or shall be temporarily stored in covered bins or containers kept separately for secondary storage of inert wastes at suitable locations for facilitating onward transportation of such waste to the disposal site; if the street sweepings contain bio-degradable or recyclable waste, such waste shall be segregated and sent to respective processing facility; (4) the secondary storage vehicles or containers shall synchronise with transportation system to avoid multiple handling of waste;

		(5) secondary storage of waste in open spaces on the roadsides or open plots or in cylindrical concrete bins or open masonry bins shall be dispensed with; (6) urban local bodies shall where necessary, establish and maintain covered secondary storage facilities in such a manner as they do not create unhygienic and insanitary conditions around it and the following criteria shall be taken into account while establishing and maintaining storage facilities, namely:- (a) storage facilities shall be created and established by taking into account quantities of waste generation in a given area and distance required to be travelled by the waste collectors to deposit the waste at the storage facility; (b) storage facility shall be so placed that it is accessible to users; (c) storage facilities to be set up by urban local bodies or any other agency shall be so designed that waste stored is not exposed to open atmosphere and shall be aesthetically acceptable and user-friendly and shall not be accessible to stray animals and birds; (d) storage facilities shall be a covered bins or containers of appropriate design including flaps and shall have 'easy to operate' design for handling, transfer and transportation of waste and handling during evacuation of waste should be user friendly and not cumbersome; (e) bins for storage of bio-degradable wastes shall be painted green, those for storage of recyclable wastes shall be painted blue and those for storage of street sweepings and silt shall be painted black; (f) the design shall be developed in accordance with local practices and material available to ensure minimal impact on health and environment;

		(g) manual handling of waste shall be minimised and waste handlers shall be given personal protection equipment to avoid direct contact with the waste; (7) Construction & Demolition waste shall be separately stored in enclosed areas or containers separately without mixing this waste with waste collected from door step or street sweepings; (8) bio-medical wastes, industrial wastes, e-waste and domestic hazardous wastes shall not be brought to the secondary waste storage depots or mixed with solid wastes and such wastes shall be handled as specified in specific rules framed for management of such wastes and domestic hazardous waste may be handled as directed by the state pollution control board or pollution control committee; and (9) secondary storage bins if placed shall be cleaned at regular intervals at least once in a month and shall be painted at least once in a year.
(5)	**Material recovery facilities**	The urban local body shall designate temporary storage spaces and setup material recovery facility where non bio-degradable or recyclable solid waste collected from the doorstep shall be temporarily stored by the urban local body or operator of the facility before solid waste processing or disposal is taken up in order to facilitate segregation, sorting and recovery of various components of recyclable waste by informal sector of waste pickers or any other staff or agency engaged by the urban local body for the purpose and such sorting facilities shall be so designed that the solid waste stored is not exposed to open atmosphere and shall be user-friendly.
(6)	**Transportation of solid wastes**	(1) waste collected from the door step in motorised vehicles shall be directly transported to the processing facility through material recovery facility to be set up at the waste processing site or to the transfer station or transfer point or waste storage depots for facilitating, sorting and bulk transfer of waste to the processing facility in large hauling vehicles or containers; (2) vehicles used for transportation of wastes shall be covered and shall have a facility to prevent waste spillage and leachate dropping from the vehicles on the ground en-route to the processing or disposal facility. (3) waste shall not be visible to public, nor exposed to open

		environment preventing their scattering; (4) waste stored at the secondary waste storage depots in covered bins or containers shall be attended daily and waste picked up before container start overflowing; (5) bio-degradable waste stored in green and recyclable and combustible and domestic inert waste stored in blue containers at the waste storage depots shall be transported to respective processing facilities in a segregated manner and the inerts street sweepings and silt collected from the drains shall be stored in black containers and shall not be allowed to be mixed with the waste collected from the door step or those stored in green or blue containers and such inert waste shall be directly taken to waste disposal facility or to the processing facility, if and when created for processing; (6) separate transportation of domestic hazardous waste shall be arranged as directed by the State Pollution Control Board or the pollution control committee, as the case may be; (7) construction and demolition waste shall be transported in covered vehicles separately to construction and demolition waste processing facility; and (8) transportation vehicles shall be covered and so designed that multiple handling of wastes, prior to final disposal, is avoided.
(7)	**Processing of solid wastes**	(1) urban local bodies shall adopt suitable technology or combination of appropriate technologies, with emphasis on decentralised processing to make use of all components of wastes that can be processed so as to minimise burden on landfill. Following criteria shall be adopted, namely.- (a) biodegradable wastes shall be processed by bio-methanation, composting, vermi composting, anaerobic digestion or any other appropriate biological processing for stabilisation of wastes. (b) it shall be ensured that composting or any other end product shall comply with standards as specified in Schedule–II and also ensure that no damage is caused to the environment during this process; (c) to the extent feasible market waste may be processed or treated

		within the market area and horticulture waste within parks and gardens to make optimum use of such wastes and minimise the cost of collection and transportation of such waste; (d) dairy waste shall be used for bio-methanation or vermi-composting or aerobic composting, either separately or with other bio-degradable solid waste; (e) arrangement shall be made to provide segregated recyclable material to the recycling industry through waste pickers or any other agency engaged or authorised by the urban local body for the purpose; (f) residual combustible wastes shall be utilized for supplying as a feedstock for preparing refuse derived fuel (RDF) or for generating energy or power from the waste by adopting proven waste to energy technologies for which emission standards as well as standards for dioxins and furans have been prescribed by the Central Pollution Control Board; (g) non-recyclable plastics and other high calorific content waste may be utilized for co-processing in cement kilns or for polymer or fuel production or manufacturing of products such as door panels and the like nature; (h) construction and demolition and other inert wastes shall be utilized for making bricks, pavement blocks, construction materials such as aggregates; and (i) urban local body or the operator of a facility planning to use other state-of-the- art technologies shall approach the Central Pollution Control Board to get the standards laid down before applying for grant of authorisation.
(8.)	**Disposal of solid wastes**	(1) land filling or dumping of mixed waste shall be stopped soon after the timeline as specified in Rule 10 for setting up and operationalisation of sanitary landfill is over; (2) landfill shall only be permitted for non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and other wastes such as residues of waste processing facilities as well as pre-processing rejects from waste processing facilities and the 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; (3) landfill site shall provide an appropriate facility for sorting, storing and transportation of recyclable material to the processing facility and ensure that such wastes do not get land filled; (5) all old open dumpsites and existing operational dumpsites shall be carefully investigated and analyzed about their potential of bio-mining and bio-remediation and actions shall be taken accordingly in cases where such course of action is found feasible; and (6) in absence of potential of bio-mining and bio-remediationof dumpsite, it shall be scientifically capped as per landfill capping norms to prevent further damage to the environment.

16. Criteria for setting-up solid waste processing and treatment facility.- (1) The urban local body or state agency authorised by urban development department of the State Government or Union Territory Administration shall identify land for setting up the solid waste processing and treatment facilities and notify such sites.

(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 of Central Public Health and Environmental Engineering Organisation, New Delhi.

(3)The operator of the facility shall obtain the approval from the State Pollution Control Board or Pollution Control Committee.

(4)The State Pollution Control Board or Pollution Control Committee shall monitor the setting and operation of the solid waste processing and treatment Facility.

(5)The operator of the facility shall be responsible for the safe and environmentally sound operations of the solid waste processing and treatment facility and its closure and post closure phase as per the guidelines issued by Central Pollution Control Boardfrom time to time and the Manual of Central Public Health and Environmental Engineering Organisation, New Delhi.

(6)The operator of the solid waste processing and treatment facility shall submit annual report in Form III.

17. Criteria and actions to be taken for solid waste management in hilly areas.-In the hilly areas, the duties and responsibilities of the urban local bodies shall be the same as mentioned in rule 13 with additional clauses in rule 14(4) as under:

(a) urban local body shall frame and prohibit citizen from littering wastes on the streets and give strict direction to the tourists not to dispose any non bio-degradable waste such as paper, water

bottles, liquor bottles, soft drink canes, tetra packs, any other plastic or paper waste and any other bio-degradable waste on the streets or down the hills and instead deposit such waste in the litter bins that may be placed by the urban local body at all tourist destinations.
(b) urban 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.

(c) urban local body may levy solid waste management charge from the tourist at the entry point to make the solid waste management services sustainable.

(d) urban local body shall arrange to pick up all such segregated waste deposited in the litterbins on a day to day basis or authorise waste pickers or civil societies or any private agency to do so.

(e) door to door collection of domestic, commercial and other non residentialsolid waste shall be carried out using small covered pick up vans from the areas which are accessible to such vehicles;

(f) waste shall be picked up and transported in a segregated manner and the vehicles shall have special type of horn, to alert the waste generators about its arrival for solid waste collection;

(g) segregated waste collection from narrow lanes and inaccessible hilly areas shall be done using backpacks having small containers upto 50 litre capacity or local traditional load-bearing methods like pack animals, shoulder-poles or head-bands, bag-wheelers;

(h) waste collectors shall be provided protective clothing and mask to avoid direct contact with Solid Waste and a whistle to announce their arrival for waste collection;

(i) waste collected from the doorstep shall be taken to the nearest point identified by the urban local body from the collection area for decentralised processing of bio-degradable waste;

(j) waste picker association, civil societies and private entrepreneurs shall be encouraged to take up the work of door to door collection of segregated waste and decentralised bio-methanation or composting as may be deemed appropriate;

(k) urban local body may provide viability gap funding to such entrepreneurs to ensure that bio-degradable waste get processed in a decentralised manner;

(l) urban local body shall identify and allot suitable space on the hills for setting up decentralised waste processing facilities and step garden system may be adopted for optimum utilization of hill space;

(m) recyclable material, if collected by urban local body may be given away to recyclers for recycling of such waste;

(n) construction of landfill on the hill shall be avoided. If a suitable land could be identified in the plain areas down the hill within 25 kilometers, a transfer station at a suitable enclosed location shall be setup to collect residual waste from the processing facility and inert waste. In case of non-availability of such land, efforts shall be made to adopt zero waste concept and minimise waste going to landfill, it shall be ensured that by properly segregating , recycling and reusing of waste including rejects and inert wastes by converting such wastes into useable products; and

(o) heavyfines may be imposed by the urban local body on those who litter the waste.

18. Criteria for waste to energy process.- (1) Any non recyclable waste having high calorific value of 1000 Kcal or more shall be utilised for generating energy and shall not be disposed of on landfills.

(2) High calorific value waste shall either be directly utilized for energy production or by preparing refuse derived fuel for energy production or give away as feed stock for preparing refuse derived fuel.

(3) High calorific wastes shall be used for co-processing in cement plants or for power generation in independently installed waste to energy power plants.

(4) The urban local body or an operator of facility or an agency designated by them or an independent operator shall submit a proposal on the setting up of 'Waste to Energy' plant to the State Pollution Control Board or Pollution Control Committee for consideration.

(5) The State Pollution Control Board or Pollution ControlCommittee, on receiving a proposal from urban local body or an operator on behalf of these authorities for setting up waste to energy facility other than small facility, treating less than 5 tonnes per day waste, shall examine the same and grant permission.

(6) If the proposal includes the technology other than the one for which standards have been prescribed by the central pollution control board, the State Pollution Control Board or Pollution Control Committee shall forward the proposal with its recommendations to Central Pollution Control Board for prescribing suitable standards.

19. Time frame for implementation.-Necessary infrastructure for implementation of these rules shall be created by the Urban Local Bodies and Prescribed Authorities, as the case may be, on their own directly or by engaging agencies within the time frame specified below:

Sl. No.	**Activity**	**Time limit from the date of notification of rules**

(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 urban local bodies under 0.5 million population and for setting up common regional sanitary landfill facilities or stand alonesanitary landfill facilities by all urban local bodies 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, 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 urban local bodies having 100000 or more population	2 years
(8)	setting up solid waste processing facilities by urban local bodies below 100000 population.	3 years
(9)	setting up common or stand alone sanitary landfills by or for all urban 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 urban local bodies under 0.5 million population for the disposal of permitted waste under the rules	4 years
(11)	bio-remediation or capping of old and abandoned dump sites	11 years

20. State Level Advisory Body. –

(1) Every State Government and Union territory shall constitute a State Level Advisory Body within six month from the date of notification of these rules.

(2)The body shall be constituted by Urban Development Department of the concerned State Government or Union Territory.

(3)The constitution of the State Level Advisory Body shall be as follows:

Sl. No	Designation	
1.	Secretary, Department of Urban Development/ Local self government department of the state	Chairperson, ex-officio
2.	One representative of Panchayats or Rural development Department not below the rank of Joint Secretary to state government	Member, ex-officio
3.	One representative from Ministry of Environment, Forest& Climate Change Government of India	Member, ex-officio
4.	One representative from Ministry of Urban Development, Government of India	Member, ex-officio
5.	One representative from the Central Pollution Control Board	Member, ex-officio
6.	One representative from the State Pollution Control Board or Pollution Control Committee	Member, ex-officio
7.	One representative from Indian Institute of Technology or National Institute of Technology	Member,Ex-officio
8.	Chief town planner of the state	Member
9.	Three representatives from the Urban local bodies	Members
10.	One representative from reputed Non-Governmental Organisation or Civil Society working in the field of environment or waste management	Member
11.	One representative from a body representing Industries at the state or central level	Member
12.	Two subject experts	Members

(4) The State Level Advisory Body shall meet at least once in six months to review all the matters related to implementation of these rules, implementation of 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.

(5) The copies of the review report shall be forwarded to all the 'Prescribed Authorities' under these rules for necessary action.

21. Annual report.-

(1)the urban local body shall furnish its annual report in Form-IV to state pollution control board or pollutioncommittee 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 urban local bodies of state on or before the 30th day of June every year.

(2) The operator of facility shall submit the annual report to the urban local body in Form-III.

(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 on the implementation of these rules and action taken against non complying urban local body by the 30th day of September 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 urban 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 30th day of December each year.

(5) The annual report will be reviewed by the ministry of environment, forest and climate change inviting concerned stakeholders including ministry of urban development, ministry of new and renewable energy, ministry of agriculture and ministry of health and give suitable instructions and guidance to the states as may be necessary for taking corrective measures.

22. Accident reporting- When an accident occurs at any solid waste processing or treatment or disposal facility or landfill site, the officer in charge of solid waste management in the urban local body or an operator of facility shall forthwith report of the accident in Form-VI to the Commissioner or Chief Executive Officer of the urban local body and the instructions issued by the said authority shall be followed.

CHAPTER 2

Construction and Demolition Waste

23. Roles and responsibilities.- The roles and responsibilities of different stake holders for management of construction and demolition waste as specified in Schedule III shall be as under:

(1) Responsibility of the waste generator for management of construction and demolition waste.-

(a) every waste generator shall prima-facie be responsible for collection, segregation of concrete, soil and others and storage of construction and demolition waste generated, as directed/notified by the concerned local body in consonance with these rules. The generator shall ensure that other waste (such as solid waste) does not get mixed with this waste and it is stored and disposed separately. Large generators shall segregate this waste into four streams– i) concrete, ii) soil, iii) steel, wood and plastics and iv) other construction and demolition waste such as bricks and mortar;

(b) every waste generator who requires permit for construction under local building by-laws shall give an undertaking for disposal of construction and demolition waste as per the bye laws or rules of the local body;

(c) The large waste generator shall submit waste management plan and get appropriate approvals from the urban local body before starting construction or demolition or remodeling work and keep the concerned authorities informed regarding the relevant activities from the planning stage to the implementation stage and this should be on project to project basis;

(d) everywaste generator shall keep the construction and demolition waste within the premise or get the waste deposited at collection centre or handover it to the authorised processing facilities of construction and demolition waste; and

(e) every waste generator shall see that there is no littering or deposition of construction and demolition waste in a manner, which causes obstruction to the traffic or the public or drains.

(f) everywaste generator shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities.

(2) Responsibility of service provider and their contractors for management of construction and demolition waste.-

(a) services providing authorities who provide services like water, sewerage, electricity, telephone, roads, drainage etc. often generate construction and demolition waste during their activities, which includes excavation, demolition and civil work and these departments need to have comprehensive waste management plan covering segregation, storage, collection, reuse, recycling, transportation and disposal of construction and demolition waste generated during the works;

(b) such authorities shall remove all construction and demolition waste and clean the area every day if possible or depending upon the duration of the work, the quantity and type(s) of waste generated, appropriate storage and collection a reasonable timeframe shall be worked out in consultation with the concerned urban local body;and

(c) in case they do not have the logistics to carry out such work, they shall tie up with the authorised agencies and pay the relevant charges as notified by the urban local body and also submit proof for disposal.

(3) Duties of urban local body for management of construction and demolition waste.-

(a) urban local body shall issue detailed directions with regard to proper management of construction and demolition waste within its jurisdiction in consonance with these rules and the urban local body shall seek detailed plan or undertaking as applicable from construction and demolition waste generator;

(b) such plan shall chalk out stages, methodology and equipment use, material involved in the overall activity and final clean up after completion of the job and it should specifically mention;

(c) if any industrial hazardous or toxic material or nuclear contamination is involved or expected, urban local body shall seek assistance from concerned authorities in case of nuclear or toxic material;

(d) urban local body shall make arrangements for placement of appropriate containers or skips or other containers and their removal at regular intervals or when they are filled either through own resources or by appointing private operators;

(e) urban local body shall get the collected waste transported to appropriate sites for further processing and disposal either through own resources or by appointing private operators, who shall be the authorised agency and in case of private operators, the urban local body shall work out the cost of service in a transparent manner;

(f) urban local body shall give incentives to any generator who plans an appropriate salvage plan, processing, and recycling, de-construction and above all in-situ recycling;

(g) urban local body shall examine and sanction the waste management plan and the waste management plan shall be sanctioned within a period of one month or building plan approval, whichever is earlier from the date of submission;

(h) each urban local body shall keep track of the generation of construction and demolition waste within its jurisdiction and create a continuous data base for at least one year at a time and this exercise shall then be repeated once in every 3 years;

(i) in consultation with expertinstitutions, the urban local bodies shall plan for appropriate management of construction and demolition waste generated including processing facility and further plan to use the recycled products in the best possible manner;

(j) expert institutions may also suggest ways to introduce ‘de-construction’ activity from the construction planning stage and provide assistance in this matter;

(k) the town and country planning department or urban development department or urban local body shall identify suitable sites for setting up processing facilities for construction and

demolition waste according to the parameters necessary for such projects and identified land shall be incorporated in the approved land use plan so that there is no disturbance to the processing facility on a long term basis and 'No Development zone' shall be notified around the site to safeguard the facility.

(l) in cities where land is not available for processing and disposal, the urban local body and State pollution control board or pollution control committee shall constitute a committee of experts for suitable sites along with measures for pollution control for such facility;

(m) the urban local body shall ensure a sustained system of information, education and communication (IEC) for construction and demolition waste through collaboration with expert institutions and civil societies.

(n) urban local body shall arrange and plan for information dissemination through their own website and through public workshops and public awareness programs;

(o) urban local body shall make provision for giving incentives for use of recycled material in the construction activity;

(p) urban local body shall submit the annual report to the State Pollution Control Board in Form IX.

(4) Duties of State Pollution Control Board or Pollution Control Committee for management of construction and demolition waste.-

(a) the state pollution control board or pollution control committeeshall monitor the implementation of these rules by the concerned local bodies and the competent authorities at local level and the annual data shall be sent to the Central Pollution Control Board and the State Government or Union Territory or any other state level nodal agency identified by the State Government or Union Territory administration for generating state level comprehensive data;

(b) suchreports shall also contain the comments and suggestions of the state pollution control board or pollution control committee with respect to any comments or changes required;

(c) the state pollution control board or pollution control committee after examining the application received in Form VII shall give authorisation to construction and demolition waste processing facility in Form-VIII as specified under these rules; and

(d) thestate pollution control board or pollution control committeeshall prepare annual review report in Form X with special emphasis on the implementation status of compliance with these rules and forward report to central pollution control board before the 31st May for each financial year.

(5) Duties of State Government or Union territory administration for management of construction and demolition waste.-

(a) TheState Government or Union territory administration shall prepare their policy document with respect to management of construction and demolition waste in line with these rules within one year from date of final notification of these rules and

(b) the State Government or Union territory administration shall also facilitate identification of appropriate land for setting up processing and recycling facilities in different cities through land use plan and identification of waste land.

(6) Duties of the Central Pollution Control Board for management of construction and demolition waste.-

(a) The Central Pollution Control Board shall prepare operational guidelines related to environmental management of construction and demolition waste management;

(b) data received from the state pollution control boards or pollution control committeeshall be analyzed and collated by the Central Pollution Control Board so that these rules can be reviewed from time to time;

(c) central pollution control board shall coordinate with all the state pollution control board and pollution control committees for any matter related to development of environmental standards; and

(d) Central Pollution Control Board shall forward annual compliance report to Central Government before the 30th September for each financial year based on reports given by state pollution control boards of pollution control committees;

(7) Responsibility of Bureau of Indian Standards (BIS) and Indian Roads Congress (IRC).-The Bureau of Indian Standards and Indian Roads Congressshall beresponsible for preparation of code of practices and standards for use of recycled materials and products of construction and demolition waste in respect of construction activities. The role of Indian Road Congress shall be specific to the standards and practices pertaining to construction of roads.

(8) Responsibility of the Central Government for management of construction and demolition waste.-

(a)the Ministry Of Urban Development, and the Ministry of Rural Development,Ministry of Panchayat Raj, shall be responsible for facilitating urban local bodies in compliance of these rules; and

(b) theMinistry of Environment, Forest and Climate Change shall be responsible for reviewing implementation of these rules as and when required.

(9) Responsibility of expert organizations.- Expert organizations or institutions mandated by the Central Government or any State Government or Union territory administration shall analyse the data gathered at state and national levels and evolve ways through research anddevelopment) to use such material in the best possible manner depending on use of locally available construction material.

24. Criteria for storage and processing or recycling facilities for construction and demolition waste.-

(a) the selection of the site for storage and processing or recycling facilities for construction and demolition waste shall be as per the criteria given in Schedule V; and

(b) the operator of the facility shall apply in Form VII for authorisation from State Pollution Control Board.

25. Timeline for implementation of provisions of these rules for management of construction and demolition waste management.-The timeline for implementation of these rules shall be as given below:

(a) one year and six months from the date of its notification for million plus cities based on 2011 census of India;

(b) two years from the date of its notification for 0.5 to 1 million cities based on 2011 census of India;

(c) three years from the date of its notification for other cities (< 0.5 million populations) based on 2011 census of India; and

(d) timeframe for planning and implementation for these shall be as given Schedule IV.

26. Monitoring compliance of the provisions of these rule for construction and demolition waste management.-The respective urban local body, state pollution control board or pollution control committeeas the case may be shall monitor implementation of these rules.

27. Accident reporting by the construction and demolition waste processing facilities.-When an accident occurs at any construction and demolition waste processing/ treatment or disposal facility, the officer in charge the facility in the urban local body or the operator of the facility shall forthwith report of the accident in Form-XI to urban local body, as applicable and the instructions issued by the said authority shall be followed.

SCHEDULE I

See [Rule 3(1)(xv), 13 (1) (v), 14 (1) (b), 14 (1) (e), 14(4), 15(8) (2)[

Specifications for Landfill Sites

A. Criteria for site selection.-

1. In areas falling under the jurisdiction of 'Development Authorities' it shall be the responsibility of such Development Authorities to identify the landfill sites and hand over the sites to the concerned municipal authority for development, operation and maintenance. Elsewhere, this responsibility shall lie with the concerned municipal authority.

2. Selection of landfill sites shall take into consideration the relevant environmental issues.

3. The landfill site shall be planned, and designed and developed with proper documentation of construction plan as well as a closure planin a phased manner. In case of creation of a new landfill facility is created adjoining an existing landfill site, the closure plan of existing landfill should form a part of the proposal of such new landfill.

4. 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.

5. Landfill sites shall be set up as per the guidance notes or guidelines formulated by the Ministry of Urban Development, Government of India.

6. The existing landfill sites which are in use for more than five years shall be improved in accordance of with the specifications given in this Schedule.

7. 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.

8. The landfill site shall be away from habitation clusters, forest areas, water bodies, monuments, National Parks, Wetlands and places of important cultural, historical or religious interest and the distance to be maintained, as prescribed by the State Environment Impact Assessment Authority (SEIAA) or the state pollution control board or pollution control committee onthe case to case basis for management of solid waste management plan or 100 meter away from river, 200 meter from a pond, 500 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 zone of coastal regulation, wetland, Critical habitat areas, sensitive eco-fragile areas and flood plains as recorded for the last 100 years.

9. A buffer zone of no development shall be maintained around landfill sites and sites for processing and disposal of solid waste. The sites for landfill, and processing and disposal of solid waste shall be incorporated in the Town Planning Department's land-use plans. The buffer zone shall be prescribed by the State Environment Impact Assessment Authority (SEIAA) or State Pollution Control Board or Pollution Control Committee, on the case to case basis. The site, as approved by the State Environment Impact Assessment Authority shall be notified by the concerned Local Government.

10. The biomedical waste shall be disposed of in accordance with the Bio-medical Waste (Management and Handling) Rules, 1998, as amended. The hazardous waste shall be managed in accordance with the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008, as amended, from time to time. The E-waste shall be managed in accordance with the e-Waste (Management and Handling) Rules, 2011.

11. Facilities to be created for 'temporary storage' of solid waste in each landfill sites for incoming wastes in case of shutting down of waste processing plants; which shall be taken again for further processing. The landfill site shall have provisions for using as temporary storage during emergency or natural calamities

B. Criteria for development of facilities at the site.-

1. Landfill site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles or other modes of transportation.

2. The landfill site shall be well protected to prevent entry of unauthorised persons and stray animals.

3. Approach and other internal roads for free movement of vehicles and other machinery shall exist at the landfill site.The approach/internal roads shall be concreted or paved so as to avoid generation of dust particles due to vehicular movement.

4. The landfill site shall have waste inspection facility to monitor waste brought in for landfill, 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 receiving, processing and disposal.

5. 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.

6. Utilities such as drinking water and sanitary facilities (preferably washing/bathing facilities for workers)and lighting arrangements for easy landfill operations when carried out in night hours shall be provided.

7. Safety provisions including health inspections of workers at landfill sites shall be periodically made.

8. Provisions to be made for parking and cleaning or washing transport vehicles after delivery of garbage at the site. The wastewater shall be treated to meet the prescribed standards.

C. Criteria for specifications for land filling operations and closure on completion of landfill.-

1. Waste subjected to 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.

2. Waste shall be covered immediately or at the end of each working day with minimum 10 cm of soil, inert debris or construction material till such time waste processing facilities for composting or recycling or energy recovery are set up.

3. 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.

4. After completion of landfill, a final cover shall be designed to minimise infiltration and erosion. The final cover shall meet the following specifications, namely :--

(i) The final cover shall have a barrier soil layer comprising of 60 cm of clay or amended soil with permeability coefficient less than 1×10^{-7} cm/sec.
(ii) On top of the barrier soil layer, there shall be a drainage layer of 15 cm.
(iii) 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 problems from landfill operations, the following provisions shall be made, namely:-

1. 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 fromsolid waste locations do not get mix with the surface runoff water. Provisions for diversion of storm water dischargesdrains shall be made to minimise leachate generation and prevent pollution of surface water and also for avoiding flooding and creation of marshy conditions.

2. Construction of a non-permeable lining system at the base and walls of waste disposal area. For landfill receiving residues of waste processing facilities or mixed waste or waste having contamination of hazardous materials (such as aerosols, bleaches, polishes, batteries, waste oils, paint products and pesticides) minimum liner specifications shall be a composite barrier having 1.5 mm 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.

3. Provisions for management of leachates including its collection and treatment shall be made. The treated leachates shall meet the standards specified in Schedule- II**.** The treated leachate shall be recycled or utilized as permitted, otherwise shall be released into the sewerage line of municipality for further treatment in Sewage Treatment Plants. In no case, leachate shall be released into open environment.

4. Arrangement shall be made to prevent runoff water 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.-

1. 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 beyond acceptable limit as decided by the Ground Water Board or the State Pollution Control Board or the Pollution Control Committee.

2. 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 10500:1991, Edition 2.2(2003-09) Desirable limit (mg/l except for pH)
(1)	Arsenic	0.01
(2)	Cadmium	0.01
(3)	Chromium(as Cr^{6+})	0.05
(4)	Copper	0.05
(5)	Cyanide	0.05
(6)	Lead	0.05
(7)	Mercury	0.001
(8)	Nickel	-
(9)	Nitrate as NO_3	45.0
(10)	pH	6.5-8.5
(11)	Iron	0.3
(12)	Total hardness (as $CaCO_3$)	300.0

(13)	Chlorides	250
(14)	Dissolved solids	500
(15)	Phenolic compounds (as C_6H_5OH)	0.001
(16)	Zinc	5.0
(17)	Sulphate (as SO_4)	200

F.Criteria for ambient air aualitymonitoring.-

1. Installation of landfill gas control system including gas collection system shall be made at landfill site to minimiseodour generation, prevent off-site migration of gases and to protect vegetation planted on the rehabilitated landfill surface.

2. The concentration of methane gas generated at landfill site shall not exceed 25 per cent of the lower explosive limit (LEL).

3. 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 utilization or flaring is not possible.

4. Ambient air quality at the landfill site and at the vicinity shall be monitored.

G. Criteria for plantation at landfill Site.-

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

(a) Selection of locally adopted non-edible perennial plants that are resistant to drought and extreme temperatures shall be allowed to grow;

(b) The plants grown 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 accordance with requirements and maintaining ground water quality;

(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 municipal authority with the approval of the concerned State Board or the Committee. The municipal authority shall set up processing facilities for utilization of biodegradable organic 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. Because of constraints in finding adequate land in hilly areas, waste not suitable for road-laying or filling up shall be disposed of in specially designed landfills.

SCHEDULE II

See [Rule 14 (1)(b), 14 (1)(e), 14(4), 15(7)(b)

Standards of processing and treatment of solid waste

A. Standards for composting:

1. The waste processing facilities shall include composting as one of the technologies for processing of bio degradable waste.

2. In order to prevent pollution problems from compost plant .The following shall be complied with, namely :-

3. The incoming organic waste at site shall be maintained prior to further processing. To the extent possible, the waste storage area should be covered. If, such storage is done in an open area, it shall be provided with impermeable base with facility for collection of leachate and

surface water run-off into lined drains leading to a leachate treatment and disposal facility;

4. Necessary precautions shall be taken to minimise nuisance of odour, flies, rodents, bird menace and fire hazard;

5. 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;

6. 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 as a feedstock and sent for RDF production/ co-processing in cement plants or to power plants. Only rejects from all processes shall be sent for well-designed landfill site(s).

7. The windrow area shall be provided with impermeable base. Such a base shall be made of concrete or compacted clay, 50 cm thick, having permeability coefficient less than 10^{-7} cm/sec. The base shall be provided with 1 to 2 per cent slope and circled by lined drains for collection of leachate or surface run-off;

8. Ambient air quality monitoring shall be regularly carried out particularly for checking odor nuisance at down-wind direction on the boundary of processing plant.

9. Leachate shall be re-circulated in compost plant for moisture maintenance.

10. The end product compost shall meet the standards prescribed under Fertilizer Control Order 2009/2013.

11. 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)**
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_2O_5) percent by weight, minimum	0.4	10.4
Total Potassium (as K_2O), 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 follow the following standards, namely:-

S. No	Parameter	Standards (Mode of Disposal)		
		Inland surface water	Public sewers	Land disposal
1.	Suspended solids, mg/l, max	100	600	200
2.	Dissolved solids (inorganic) mg/l, max.	2100	2100	2100
3	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
4	Ammonical nitrogen (as N), mg/l, max.	50	50	-
5	Total Kjeldahl nitrogen (as N), mg/l, max.	100	-	-
6	Biochemical oxygen demand (3 days at 27° 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 incinerators shall meet the following standards, namely:-

Emission standards

The stack emission standards for Incinerator/Thermal technologies in Solid Waste treatment/disposal facility:-

Parameter	**Emission standard**	
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:

(i) Suitably designed pollution control devices shall be installed or retrofitted with the incinerator to achieve the above emission limits, if necessary.

(ii) Waste to be incinerated shall not be chemically treated with any chlorinated disinfectants.

(iii) Chlorinated plastics shall not be incinerated.

(iv) Toxic metals in incineration ash shall be limited within the regulatory quantities as specified in the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008, as amended from time to time.

(v) Only low sulphur fuel like LDO or LSHS or Diesel shall be used as fuel in the incinerator.

(vi) The CO2 concentration in tail gas shall not be less than 7%.

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

(viii) 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 ashes less than 3%, or their loss on ignition is less than 5% of the dry weight.

Schedule III: Management of Construction and Demolition (C&D) Waste

See [Rule 23]

PART A

Sl. No.	Parameters	Compliance Criteria
1	**Plan approval by local body**	Prior to the construction or demolition work as per these rules. The generator shall obtain permission from local body and shall submit the waste management plan of C&D waste.
2.	**Storage, collection and transportation of C&D waste**	i. Littering of C&D waste shall be strictly prohibited. ii. C&D waste shall be stored separately and not allowed to get mixed with other waste (e.g., municipal / biomedical / e-waste / hazardous / nuclear etc.). iii. The storage bins/designated area shall be in accordance with the quantum and nature of the C&D waste. iv. Collection of the C&D waste shall be done at regular intervals, using appropriate mechanism. v. The collected material shall be transported to the identified location for further processing and / or disposal. vi. The generators of C&D waste shall have to pay for the services rendered for its storage, collection and transportation at a rate fixed by the concerned municipal body or any other authority designated by the State Government.
4	**Processing and disposal of C&D waste**	i. It is highly desirable that the hierarchy of using/ disposing of C& D waste should be maintained. The Hierarchy should be a) Reuse as much as possible

		b) Whatever cannot be reused, process & recycle, the residue after processing and recycling only be disposed in the place designated by the appropriate authority. ii. For reducing the space required for disposal of C&D waste and for saving of natural resources, C&D waste shall be processed (where feasible) and the products utilized to the extent possible. iii. The material rejected after due processing shall be deposited in designated areas or landfill (last resort). The low lying areas should not be natural drainage channels / water bodies. iv. Large generators shall explore the possibility of setting up in-situ facility for processing and reuse of the C&D waste generated. The Local Government / State Government would incentivize such endeavour. Large generators should deconstruct a facility/ building rather than demolishing the same. The deconstruction plan to be got approved by the appropriate authority. v. Large generators shall have to pay for the processing and disposal of C&D waste generated by them, apart from the payment for storage, collection and transportation. The rate shall be fixed by the concerned municipal body or any other authority designated by the State Government. Those generating 20 tons or more in one day or 300 tons per project in a month shall be defined as large generators. vi. For larger cities (say million plus), the processing should be done through appropriate technology, which minimises land-fillable process residues.
5	**Use of recycled products**	i. Use of recycled C&D waste products (such as in non-structural concrete, manufactured sand, paving blocks, lower layers of road pavements, colony and rural roads etc.) shall be incentivised in places where there is any operational facility for recycling C&D waste. Such applications shall be subject to quality

		requirements for the specific application. Other suitable products would also be encouraged (as given in schedule IV). ii. Procurement of such materials shall be made mandatory to a certain percentage (say 10-20%) in municipal and Govt. contracts subject to strict quality control.

PART B

Application of C&D products in operation of sanitary landfill

Sl. No.	Parameters	Compliance Criteria
1	(i) Drainage layer in leachate collection system at bottom of Sanitary Landfill and (ii) Gas Collection Layer above the waste at top of Sanitary Landfill and (iii) Drainage Layer in top Cover System above Gas Collection Layer of Sanitary Landfill For capping of sanitary landfill / dumpsite, drainage layer at the top	i. Only crushed and graded hard material (stone, concrete etc.) shall be used having coarse sand size graded material (2mm – 4.75mm standard sieve size). ii. Since the coarse sand particles will be angular in shape (and not rounded as for riverbed sand), protection layers of non-woven geo-textiles may be provided, wherever required, to prevent puncturing of adjacent layers / components.
2	Daily cover	i. Fines from C&D processed waste having size up to 2 mm shall be used for daily cover over the fresh waste. ii. Use of Construction and Demolition (C&D) fines as landfill cover shall be mandatory where such material is available. Fresh soil (sweet earth) shall not be used for such places and borrow-pits shall not be allowed. Exception – soil excavated during construction of the same landfill. iii. During hot windy days in summer months, some fugitive dust problems may

		arise. These can be minimised by mixing with local soil wherever available for limited period.
3	Civil construction in a sanitary landfill	iv. Non-structural applications, e.g., kerb stones, drain covers, paving blocks in pedestrian areas.

PART C

Standards and specifications

Construction and Demolition (C&D) waste as stored and collected at present, is mostly in mixed form. Therefore, the proposed standards should address mixed aggregates or recycled aggregates (RA), which is distinct from recycled concrete aggregates (RCA).

Proposed standards for recycled aggregates:

I. Recycled aggregate (RA) may be used in making concrete for non-structural purposes. The extent of use would be limited to non-load bearing structures only, provided the conditions mentioned below at point no. 2 is complied with. Examples of use – wall between two RCC load bearing members, filling walls between RCC frame, non-industrial flooring, etc.

II. The RA should be free from deleterious material, such as, organic content, vegetable matter, coal, clay lumps, external substances such as, soft fragments like pieces of plastics, paper etc. RA should also be free from chemicals, known to be detrimental for the strength or durability of concrete or steel reinforcement, such as, chlorides, etc. beyond the threshold value.

III. Percentage of replacement of natural aggregates by RA can be up to 20% for any type of plain concreting (PCC) work. The percentage can be increased up to 30% for road sub-base / base / other road related applications except wearing course. However, this should be backed up by laboratory test reports.

IV. RA of appropriate quality (as mentioned above) can be used for various purposes, such as, in making kerb stones, paving blocks, concrete blocks and bricks, road sub-base, pathways for pedestrian use, rural roads (used for walking and bicycles) etc. However, it has to be ensured that the existing norms for strength (such as, M20, M25 etc.) are complied with for desired application.

V. Recycled concrete aggregate (RCA) can be used in all grades of PCC (structural and non-structural).

VI. RCA have to be pre-wetted near to SSD (saturated surface dry) conditions before use to avoid rapid slump loss due to its high water absorption rate. Admixtures with better slump retention effect would be useful.

VII. Fine washed aggregates in the range of 4.75 mm to 0.075 mm (75 μ) separated from C&D waste using 'wet' process may be used as 'manufactured sand' for non-load bearing structures.

Schedule IV: Timeframe for Planning and Implementation
See [Rule 24(a) 25(d)]

Sl. No.	Compliance Criteria	Cities with population of 01 million and above	Cities with population of 0.5-01 million	Cities with population of less than 0.5 million
1	***Formulation of policy by State Govt.***	**12 months**	**12 months**	**12 months**
2	***Identification of sites for collection & processing facility***	**18 months**	**18 months**	**18 months**
3	***Commissioning & implementation of the facility***	**24 months**	**24 months**	**24 months**
4	***Monitoring by SPCBs***	3 times a year – once in 4 months	2 times a year – once in 6 months	2 times a year – once in 6 months

****The time Schedule shall be made effective from the date of notification.***

Schedule V: Criteria for Site Selection For Storage And Processing / Recycling Facilities For C&D Waste

A. Criteria for selection of storage and processing/recycling facilities for construction and demolition waste

1. In areas falling under the jurisdiction of 'Development Authorities, it shall be the responsibility of such Development Authorities to identify the ***storage facility, processing/recycling facilities*** and hand over the sites to the concerned municipal authority for development, operation and maintenance, which shall ultimately be given to the operators by Competent Authority. ***Elsewhere, this responsibility shall lie with the concerned municipal authority.***
2. Selection of processing/recycling facility shall be based on examination of environmental issues. The Local body shall co-ordinate (in consultation with Department of Urban Development of the State or the Union territory) with the concerned organizations for giving necessary approvals and clearances to the operators.
3. C&D waste shall be utilized in sanitary landfill for municipal solid waste of the city / region as mentioned at Schedule III of this rule. Residues from C&D waste processing / recycling industries shall be land filled in the sanitary landfill for municipal solid waste.
4. The processing/recycling shall be large enough to last for 20-25 years (project based on-site recycling facilities).
5. The processing/recycling site shall be away from habitation clusters, forest areas, water bodies, monuments, National Parks, Wetlands and places of important cultural, historical or religious interest.
6. A buffer `Zone of no-development`* shall be maintained – 20m (for handling less than 500 TPD C&D waste) and 30m (500 TPD or more) – around processing / recycling site and shall be incorporated in the land use plans of the concerned authority. In the case of successful implementation of 'no-development zone' the buffer zone inside the facility boundary should be limited to 6m and 10m respectively for the above mentioned capacities. Thus land required to be leased for the facility would reduce.

   *Explanatory Note:
   In case the ULB / Development Authority is unable to procure a site where it is not feasible to provide any 'no-development zone', the ULB would constitute a committee comprising representation from the State Urban Dev. Department, State Pollution Control Board / Committee and at least one Expert Institution to deliberate on the long term impact and then give recommendation to the ULB. In case they recommend any specific technology or modification in design of the facility, the same should be incorporated in the bid. This way the project would be secure from objections from the neighborhood for siting of the plant / facility.

B. Facilities at the Processing/Recycling Sites for Construction and Demolition waste

7. Processing / recycling site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles or other modes of transportation.
8. Approach road and other internal roads for free movement of vehicles and other machinery shall exist at the storage and processing/recycling site.
9. Provisions like weigh bridge to measure quantity of construction and demolition waste brought at processing/recycling , fire protection equipment and other facilities as may be required shall be provided.
10. Utilities such as drinking water, toilets and bathing facilities for workers and lighting arrangements for safe processing/recycling operations shall be provided.
11. Safety provisions including health inspections of workers at storage, processing/recycling and landfill site shall be periodically made.

C. Pollution prevention

In order to prevent pollution problems from processing / recycling operations, the following provisions shall be made, namely:

(a) Provision of storm water drains to prevent stagnation of surface water;
(b) Provision of paved / concreted surface in selected areas in the processing / recycling facility for minimizing dust and damage to the site.
(c) Prevention of noise pollution from processing and recycling plant: Noise is the main pollutant from a processing facility. In case of wet process, some quantity of effluent may be generated which shall be treated and discharged as per relevant norms – as per Environment (Protection) Rules, 1986.

a) Air Quality Monitoring

Work Zone air quality at the Processing/Recycling site and ambient air quality at the vicinity shall be monitored.

b) Noise monitoring

The measurement of ambient noise would be done at the interface of the facility with the surrounding area, i.e., at plant boundary.

Exemption: The following projects would be exempt from the norms for pollution from dust and noise as mentioned above:

1. For redevelopment of colonies and markets (please see definition), where in-situ recycling is carried out provided (a) the project is completed within 5 years (b) minimum 80% of the C&D waste generated at the site is recycled / reused within the same site and (c) sufficient buffer area is available to protect the surrounding habitation from any adverse impact.

2. In-situ recycling at large construction sites (minimum one hectare site area so that some buffer area is available) provided (a) the project is completed within 3 years and (b)

minimum 50% of the C&D waste generated at the site is reused / recycled within the same site.

D. Plantation at Processing / Recycling Sites

A vegetative boundary should be made around the Processing/Recycling plant/site to strengthen the buffer zone.

FORM – I
[Rule 13(1)(x), 14(1)(c)]

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

To,

The Member Secretary
State Pollution Control Board/Pollution Control Committee
of……..

Sir,

I/We hereby apply for authorisation under the Solid Waste (Management and Handling) Rules, 2014 for processing, recycling, treatment and disposal of solid waste.

1.	Name of the urban 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 urban 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)	(i) waste processing (ii) recycling (iii)treatment (iv) disposal at landfill

5.	Attach copies of the Documents	(i) Site clearance (local authority) (ii) Proof of Environmental Clearance (iii)Consent for establishment (iv)Agreement between municipal authority and operating agency (v) Investment on the project and expected return
6.	**Processing/recycling/treatment of solid waste** (i) Total Quantity of waste to be processed per day a) Quantity of waste recycled per day b) Quantity of waste treated per day c) Quantity of waste disposed per day into landfill (ii)Utilization programme for waste processed (Product utilization) (iii)Methodology for disposal (attach details) a) Quantity of leachate b) 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** 1) Number of sites identified 2) Quantity of waste to be disposed per day 3) Nature and composition of waste 4) Details of methodology or criteria followed for site selection (attach) 5) Details of existing site under operation 6) Methodology and operational details of landfilling 7) Measures taken to check environmental pollution	
8	A detailed Action Plan for implementation may be attached	

Date: Signature:

Place: Designation

Form- II
See [Rule 14 (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 their 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 and Handling) Rules, 2014 will attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1986).

(Member Secretary)
State Pollution Control Board/Pollution Control Committee of the UT
(Signature and designation)

Date:
Place:

Form – III
See [Rule 16(6), 21(2)]

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

1	Name of the City/Town and State	
2	Population	
3	Area in sq. kilometers	
4	Name & Address of the Urban 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 (SOLID WASTE)	

	Estimated Quantity of SOLID WASTE generated in the urban local body area per day in metric tonnes	/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
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	Yes/No				
	Whether each sanitation worker is given handcart/tricycle for collection of waste	Yes/No				
	Whether handcart / tricycle is containerized					
	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 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	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	

	Land(s) available with the urban 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 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 urban local body	
	No. of sanitary landfill sites available with the urban 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	kms
	Whether it falls in earthquake fault line area	Yes/No
	Quantity of waste landfilled each day	tpd
	Whether landfill site is fenced	Yes / No
	Whether Lighting facility is available on site	Yes / No
	Whether Weigh bridge facility available	Yes / No
	Vehicles and equipments used at landfill (specify)	Bulldozer, Compacters etc. available
	Manpower deployed at landfill site	Yes/No (if yes, attach details)
	Whether covering is done on daily basis	Yes/No

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

Signature of Operator

Dated :
Place:

Form – IV
Rule [13(za), 21(1)]

Format for annual report on solid waste management to be submitted by the urban 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 Urban 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 urban local body area per day in metric tonnes	/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	Yes/No
	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,	Yes/No
	Percentage of premises segregating the waste at source	%
	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 m3 bins 2 to 5 m3 bins Above 5m3 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	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 urban local body or through an agency	
	Land(s) available with the urban 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 urban local body	

	No. of sanitary landfill sites available with the urban 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	kms
	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: Urban 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 urban 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 urban local bodies	

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

Date:
Place:

Form – V
See [Rule 21(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
PariveshBhawan
East Arjun Nagar
DELHI- 110 0032

1.	Name of the State/Union territory	:	
2.	Name & address of the State Pollution Control	:	
3.	Number of urban 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 urban local body in respect of solid waste management	:	Please attach as Annexure-I
6.	A Summary Statement on progress made by urban local bodies in respect of waste collection, segregation, transportation and disposal	:	Please attach as Annexure-II

7.	A summary statement on progress made by urban local bodies in respect of implementation of Schedule II	:	Please attach as Annexure-III
Date: ..... Place:			Chairman or the Member Secretary State Pollution Control Board/ Pollution Control Committee

PART B

1. Towns/cities

(i) Total number of towns/cities
(ii) Total number of ULBs
(iii) Number of class I & class II cities/towns

2. Authorisation status (names/number)

(i) Number of applications received
(ii) Number of authorisations granted
(iii) Authorisations under scrutiny

3. SOLID WASTE Generation status

(i) SOLID WASTE generation in the state (TPD)
(ii) SOLID WASTE collected (TPD)
(iii) SOLID WASTE treated (TPD)
(iv) SOLID WASTE landfilled (TPD)

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

(i) Good practices in cities/towns
(ii) House-to-house collection
(iii) Segregation
(iv) Storage
(v) Covered transportation

5. Processing of SW (Number/names of towns/capacity)

(i) SOLID WASTE processing facilities setup:

Sl. No.	Composting	Vermin-composting	Biogas	RDF/Pelletization
i.	ii.	iii.	iv.	v.

(ii) Processing facility operational:

Sl.	Composting	Vermin-	Biogas	vi. RDF/Pelletization

No.		composting		
i.	ii.	iii.	iv.	v.

(iii) Processing facility under installation/planned:

Sl. No.	Composting	Vermin-composting	Biogas	RDF/Pelletisation
i.	ii.	iii.	iv.	v.

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

Sl. No.	Plant Location	Status of operation	Power generation (MW)	Remarks
i.	ii.	iii.	iv.	v.

7. Disposal of SOLID WASTE (number/names of towns/capacity):

(i) Landfill sites identified
(ii) Landfill constructed
(iii) Landfill under construction
(iv) Landfill in operation
(v) Landfill exhausted
(vi) Landfilled capped

8. SOLID WASTE Dumpsites (number/names of towns/capacity):

(i) Total number of existing dumpsites
(ii) Dumpsites reclaimed/capped
(iii) Dumpsites converted to sanitary landfill

9. Monitoring at Waste processing/Landfills sites

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

10. Status of Action Plan prepared by Municipalities

Total number of municipalities:
Number of Action Plan submitted:

Form – VI
See [Rule 22]
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:	

FORM – VII
See [Rule 23 (4)(c), 24 (b)]
Application for obtaining authorisation

To,
The Member Secretary
_____

1. Name of the municipal authority/Name of the agency appointed by the municipal authority :

2. Correspondence address :
   Telephone No. :
   Fax No. :

3. Nodal Officer & designation (Officer authorised by the competent authority or agency responsible for operation of processing / recycling or disposal facility) :

4. Authorisation applied for (Please tick mark) : Setting up of processing / recycling facility of Construction & Demolition waste

5. Detailed proposal of Construction & Demolition waste processing / recycling facility to include the following:

   (i) Location of site approved and allotted by the Competent Authority.
   (ii) Average quantity (in tons per day) and composition of C&D waste to be handled at the specific site.
   (iii) Details of C&D waste processing / recycling technology to be used.
   (iv) Quantity of Construction & Demolition waste to be processed per day.
   (v) Site clearance from Prescribed Authority.
   (vi) Salient points of agreement between competent authority / local body and operating agency (attach relevant document).
   (vii) Plan for utilization of recycled product.
   (viii) Expected amount of process rejects and plan for its disposal (e.g., SLF for SOLID WASTE).
   (ix) Measures to be taken for prevention and control of environmental pollution.
   (x) Investment on project and expected returns.
   (xi) Measures to be taken for safety of workers working in the processing / recycling plant.
   (xii) Any preventive plan for accident during the collection, transportation and treatment including processing and recycling should be informed to the Competent Authority (Local Body) / Prescribed Authority**.**
   (xiii)

Date: **Signature of Nodal Officer**

Form –VIII
See [Rule 23 (4) (c)]
Format for Issue of Authorisation to the Operator

File No.: _____
Date : _____

To,

_____
_____
_____

Ref : Your application number _____Dt. .....

The _____ State Pollution Control Board / Pollution Control Committee after examining the proposal hereby authorizes _____ having their administrative office at _____ to set up and operate Construction & Demolition waste processing facility at_____ on the terms and conditions (including the standards to comply) attached to this authorisation letter.

1. The validity of this authorisation is till _____. After expiry of the validity period, renewal of authorisation is to be sought.

2. The _____ State Pollution Control Board / Pollution Control Committee may, at any time, for justifiable reason, revoke any of the conditions applicable under the authorisation and shall communicate the same in writing.

3. Any violation of the provision of the Construction & Demolition Waste (Management and Handling) Rules, 2014 will attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1986).

Date: **(Member Secretary)**
Place: **State Pollution Control Board/**
Pollution Control Committee

Form –IX
See [Rule 23 (3) (p,q)]

Format of Annual Report to be submitted by Urban Local Body to the State Pollution Control Board

(i) Name of the City / Town.....(ii) Population.....
(iii) Name and address of local body / competent authority .....
.....
.....
Telephone No : .....
Fax : .....
Email ID: .....
Website: .....

(iv) Name of In-charge / Nodal Officer dealing with C&D wastes management with designation .....

1. Quantity and composition of C&D waste including any deconstruction waste

(i) Total quantity of Construction & Demolition waste generated during the whole year in metric ton

---
Any figures for lean period and peak period generation per day .....
Average generation of C&D waste per day (TPD) .....

(ii) Total quantity of Construction & Demolition waste collected per day

---

(iii) Any Processing / Recycling Facility set up in the city .....
Status of the facility

(iv) Total quantity of Construction & Demolition waste processed / recycled (in metric ton)

(a) Non-structural concrete aggregate :
.....
(b) Manufactured sand :
.....
(c) Ready-mix concrete (RMC) :
.....

(d) Paving blocks :

.....

(e) GSB :

.....

(f) Others, if any, please specify :

.....

(v) Total quantity of Construction & Demolition waste disposed by land filling without processing (last option) or filling low lying areas

---

(a) No of landfill sites used :

(b) Area used :

(c) Whether weigh-bridge facility used for quantity estimation? : Yes No

(d) Whether construction and demolition waste used in SLF (for SOLID WASTE) as per Schedule III : Yes No

2. Storage facilities

(i) Area/location/plot/societies covered for collection of Construction & Demolition waste :----------

(ii) No. of large Projects (including roadways project) covered :----------

(iii) Whether Area/location/plot/societies collection is Practiced (if yes, whether done by Competent Authority/Local Body or through Private Agency or Non-Governmental Organization) :----------

(iv) Storage Bins : ----------

	Specifications (Shape & Size)	Existing Number	Proposed for future
(a) Containers/receptacle (Capacity)			
(b) Others, please specify			

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

(vi) Whether lifting of Construction & Demolition Waste from Storage bins is manual or mechanical (please tick mark) please specify mode and equipment used : Manual Mechanical Others, (specify equipment)

3. Transportation

		Existing	Actually Required/Proposed number
(i)	Truck	:	
(ii)	Truck-Hydraulic	:	
(iii)	Tractor-Trailer	:	
(iv)	Dumper-placers	:	
(v)	Tricycle	:	
(vi)	Refuse-collector	:	
(vii)	Others (Please specify)	:	

4. Whether any proposal has been made to improve Construction & Demolitionwaste management practices

_____

_____

5. Have any efforts been made to involve PPP for processing of Construction & Demolition waste : If yes, what is (are) the technologies being used, such as:

	Processing / recycling Technology		(Quantity to be processed)	Steps taken
(i)	Dry Process	:		
(ii)	Wet Process	:		
(iii)	Others, if any, Please specify	:		

6. What provisions are available to check unauthorised operations of:

(i)	Encroachment on river bank/wet bodies	:
(ii)	Unauthorised filling of low line areas	:
(iii)	Mixing with SOLID WASTE	:
(iv)	Encroachment in Parks, Footpaths etc.	:

7. How many slums are provided with C&D waste receptacles facilities:

8. Are municipal magistrates appointed for taking penal action for non-compliance with these rules: Yes No

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

Dated: **Signature of Municipal Commissioner**

Form –X
See [Rule 23 (4)(d)]

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

To,

The Chairman,
Central Pollution Control Board,
(Ministry of Environment & Forests),
Government of India,
PariveshBhawan, East Arjun Nagar,
Delhi-110032

1.	Name of the State/Union territory	:	
2.	Name & address of the State Pollution Control Board/Pollution Control Committee	:	
3.	Number of municipal authorities responsible for management of municipal solid wastes in the State/Union territory under these rules	:	
4.	A Summary Statement on progress made by municipal authorities in respect of implementation of **Schedule III**]	:	Please attach as Annexure-I
5.	A Summary Statement on progress made by municipal authorities in respect of implementation of **Schedule IV**	:	Please attach as Annexure-II

Date:
Secretary

Chairman or the Member

State Pollution Control Board/
Pollution Control Committee

Place:

Form –XI
See [Rule 27]

Accident reporting

1. Date and time of accident :

2. Sequence of events leading to accident :

3. The type of C&D waste involved in accident :

4. Assessment of the effects of the accidents on traffic, drainage system 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 :

8. Regular monthly health checkup of workers at Processing / recycling site shall be made

9. Any accident during the collection, transportation and treatment including processing and recycling should be informed to the Competent Authority (Local Body)/ Prescribed Authority

Date : Authorised Signatory

Place:

Designation

[18-3/2004-HSMD]
Bishwanath Sinha, Joint Secretary