BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

IN

ORIGINAL APPLICATION NO. 706 OF 2022

IN THE MATTER OF:

ASGAR AHMAD NAJAR **..... APPLICANT(S)**

VERSUS

MOEF & CC & ORS. **.....RESPONDENT(S)**

INDEX

Filed by:-

(VIKRANT PACHNANDA)
Advocate for MoEF&CC
(Respondent no.1)
Email: vikrant.pachnanda@gmail.com
Ph 9871138313

Dated 22 .04.2026
Place- New Delhi

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AFFIDAVIT ON BEHALF OF RESPONDENT No. 1, THE MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE;-

I, V.Pazhaniyandi, S/o Shri Velayudhan Pillai, aged about 46 years, presently working as Director in the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, do hereby solemnly affirm and declare as under:

1. That in my official capacity as stated above, I am aware of the facts and circumstances of the present case and am competent to swear to the contents of the present affidavit. I state that my knowledge in this regard is based on the official records available with the Ministry of Environment, Forests & Climate Change (hereby referred as Respondent No. 1).

2. That the present Original Application has been filed raising issues regarding installation of a batching (cement concrete) plant at Village Channar, Bankoot by ABCI Infrastructure Pvt. Ltd., under the aegis of

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IRCON International Limited, and alleged discharge/disposal of polluted material from the batching plant associated with T-77 Tunnel at Bankoot–Banihal.

3. That the answering Respondent no.1 is engaged in, *inter alia*, policy formulation for abatement, prevention and control of pollution by prescribing environmental standards which are implemented through the Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs).

   Besides, the State Pollution Control Boards/Pollution Control Committees concerned are mandated and empowered to take all such measures as are deemed necessary or expedient for the purpose of protection and improving the quality of environment as well as prevention, control and abatement of environmental pollution.

4. It is submitted that Ministry of Environment, Forest and Climate Change in exercise of the powers conferred by sections 6, 8, and 25 of the Environment (Protection) Act, 1986, vide G.S.R No. 395 (E) dated 04th April, 2016 notified, the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 ('HOWM Rules, 2016') as amended from time to time. These rules are applicable to all persons who generate, collect, receive, store, transport, treat, dispose, or handle

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Hazardous waste in any form. The copy of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 is marked and annexed hereto as **Annexure-I**.

5. That Rule 3 of the HOWM Rules, 2016 deals with the 'Definition' clause which inter-alia includes the following:

"3.(1)17. 'Hazardous waste' means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances, shall include-

(i) Waste specified under column (3) of Schedule I;

(ii) waste having equal to or more than the concentration limits specified for the constituents in class A and class B of Schedule II or any of the characteristics as specified in class C of Schedule II; and

(iii) wastes specified in Part A of Schedule III in respect of import or export of such wastes or the wastes not specified in Part A but exhibit hazardous characteristics specified in Part C of Schedule III

3.(1) 23. 'Other wastes' means wastes specified in Part B and Part D of Schedule III for the purpose of import and export and include such

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indigenously produced wastes as may be notified from time to time. (As amended vide Notification G.S.R. 798(E) dated 12th November, 2021)."

6. That Rule 9 of the HOWM Rules, 2016 titled as "Utilisation of hazardous and other wastes" specifies that-

"(1) The utilisation of hazardous waste as a resource or after pre-processing either for co processing or for any other use, including within the premises of the generator (if it is not part of process), shall be carried out only after obtaining authorisation from the State Pollution Control Board in respect of wastes on the basis of standard operating procedures or guidelines issued by the Central Pollution Control Board from time to time.

(2) Where standard operating procedures are not available for specific utilisation of hazardous waste, the approval has to be sought from the Central Pollution Control Board which shall be granting approval on the basis of trial runs and thereafter, standard operating procedures shall be prepared by the Central Pollution Control Board:] Provided, if trial run has been conducted for particular waste with respect to particular utilisation and compliance to the environmental standards has been demonstrated, authorisation may be granted by the State Pollution Control Board with respect to the

same waste and utilisation, without need of separate trial run by Central Pollution Control Board and such cases of successful trial run, Central Pollution Control Board shall intimate all the State Pollution Control Board regarding the same.

(3) No trial runs shall be required for co-processing of waste in cement plants for which guidelines by the Central Pollution Control Board are already available; however, the actual users shall ensure compliance to the standards notified under the Environment (Protection) Act,1986 (29 of 1986), for cement plant with respect to co-processing of waste:

Provided that till the time the standards are notified, the procedure applicable to other kind of utilisation of hazardous and other waste, as enumerated above shall be followed."

7. It is respectfully submitted that the Central Pollution Control Board (CPCB) issued the "Guidelines for Pre-Processing and Co-Processing of Hazardous and Other Wastes in Cement Plants" under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, on 17th July 2017. A true copy of the said guidelines is annexed hereto and marked as **Annexure-II**.

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8. Further it is also submitted that, as per Schedule VII of the HOWM Rules, 2016, it is inter- alia duty of State Pollution Control Board or Pollution Control Committees ('SPCBs/PCCs') to:-

i. Inventorisation of hazardous and other wastes

ii. Grant and renewal of authorisation

iii. Monitoring of compliance of various provisions and conditions of permission including conditions of permission for issued by Ministry of Environment, Forest and Climate Change for exports and imports.

iv. Examining the applications for imports submitted by the importers and forwarding the same to Ministry of Environment, Forest and Climate Change

v. Implementation of programmes to prevent or reduce or minimise the generation of hazardous and other wastes.

vi. Action against violations of these rules.

vii. Any other function under these Rules assigned by Ministry of Environment, Forest and Climate Change from time to time

9. That in view of the facts and submissions stated hereinabove, it is most respectfully prayed that this Hon'ble Tribunal may be pleased to pass such

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order(s) as it may deem fit and proper in the facts and circumstances of the present case.

DEPONENT

(PAZHANIVENDI. V.)
निदेशक (सी.पी.)/Director (CP)
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
M/o Environment,Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

VERIFICATION:

Verified at on this the 20 APR day of 2026 2026 that the contents of this reply affidavit based on official record(s) maintained and information available in the office are correct to my knowledge and belief. No part of it is false and nothing has been concealed there from.

I identified the deponent/executant who has signed in my presence. (UP.02559/31/3/14)

DEPONENT

(PAZHANIVENDI. V.)
निदेशक (सी.पी.)/Director (CP)
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
M/o Environment,Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

NOTARY
R.V. SINGH
Advocate
Regn.No.2282
Commission
Expire on
24-10-2027
Area-Delhi
GOVT. OF INDIA

Solemnly affirmed before me and read over & explained to the deponent.

Notary Public, Delhi

20 APR 2026

The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016[1]

(Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)

[As amended up to Hazardous and Other Wastes (Management and Transboundary Movement) Second Amendment Rules, 2024, G.S.R. 698(E), dt. 12-11-2024] *[4th April, 2016]*

Whereas the draft rules, namely the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2015, were published by the Government of India in the Ministry of Environment, Forest and Climate Change, vide number G.S.R. 582(E), dated the 24th July, 2015 in the Gazette of India, Extraordinary, Part II, Section 3, sub-section (*ii*), inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which copies of the Gazette containing the said notification were made available to the public;

And whereas the copies of the said Gazette containing the said notification were made available to the public on the 24th day of July, 2015;

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

Now, therefore, in exercise of the powers conferred by Sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), and in supersession of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following rules, namely—

CHAPTER I

PRELIMINARY

1. Short title and commencement.—(1) These rules may be called the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

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

2. Application.—These rules shall apply to the management of

hazardous and other wastes as specified in the schedules to these rules but shall not apply to—

(*a*) waste-water and exhaust gases as covered under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and the rules made thereunder and as amended from time to time;

(*b*) wastes arising out of the operation from ships beyond five kilometres of the relevant baseline as covered under the provisions of the Merchant Shipping Act, 1958 (44 of 1958) and the rules made thereunder and as amended from time to time;

(*c*) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and the rules made thereunder and as amended from time to time;

(*d*) bio-medical wastes covered under the Bio-Medical Wastes (Management and Handling) Rules, 1998 made under the Act and as amended from time to time; and

(*e*) wastes covered under the Municipal Solid Wastes (Management and Handling) Rules, 2000 made under the Act and as amended from time to time.

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

1. "Act" means the Environment (Protection) Act, 1986 (29 of 1986);
2. "actual user" means an occupier who procures and processes hazardous and other waste for reuse, recycling, recovery, pre-processing, utilisation including co-processing;
3. "authorisation" means permission for generation, handling, collection, reception, treatment, transport, storage, reuse, recycling, recovery, pre-processing, utilisation including co-processing and disposal of [2][hazardous and other wastes] granted under sub-rule (2) of Rule 6;
4. "Basel Convention" means the United Nations Environment Programme Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal;
5. "captive treatment, storage and disposal facility" means a facility developed within the premises of an occupier for treatment, storage and disposal of wastes generated during manufacture, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of hazardous and other wastes;
6. "Central Pollution Control Board" means the Central Pollution Control Board constituted under sub-section (1) of Section 3 of

the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);

7. "common treatment, storage and disposal facility" means a common facility identified and established individually or jointly or severally by the State Government, occupier, operator of a facility or any association of occupiers that shall be used as common facility by multiple occupiers or actual users for treatment, storage and disposal of the hazardous and other wastes;
8. "co-processing" means the use of waste materials in manufacturing processes for the purpose of energy or resource recovery or both and resultant reduction in the use of conventional fuels or raw materials or both through substitution;
9. "critical care medical equipment" means life saving equipment and includes such equipment as specified by the Ministry of Health and Family Welfare from time to time;
10. "disposal" means any operation which does not lead to reuse, recycling, recovery, utilisation including co-processing and includes physico-chemical treatment, biological treatment, incineration and disposal in secured landfill;
11. "export", with its grammatical variations and cognate expressions, means taking out of India to a place outside India;
12. "exporter" means any person or occupier under the jurisdiction of the exporting country who exports hazardous or other wastes, including the country which exports hazardous or other waste;
13. "environmentally sound management of hazardous and other wastes" means taking all steps required to ensure that the hazardous and other wastes are managed in a manner which shall protect health and the environment against the adverse effects which may result from such waste;
14. "environmentally sound technologies" means any technology approved by the Central Government from time to time;
15. "facility" means any establishment wherein the processes incidental to the generation, handling, collection, reception, treatment, storage, reuse, recycling, recovery, pre-processing, co -processing, utilisation and disposal of hazardous and, or, other wastes are carried out;
16. "Form" means a form appended to these rules;
17. "hazardous waste" means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances, and shall include—

(*i*) waste specified under column (3) of Schedule I;

(*ii*) waste having equal to or more than the concentration limits specified for the constituents in Class A and Class B of Schedule II or any of the characteristics as specified in Class C of Schedule II; and

(*iii*) wastes specified in Part A of Schedule III in respect of import or export of such wastes or the wastes not specified in Part A but exhibit hazardous characteristics specified in Part C of Schedule III;

18. "import", with its grammatical variations and cognate expressions, means bringing into India from a place outside India;

19. "importer" mean any person or occupier who imports hazardous or other waste;

20. "manifest" means transporting document prepared and signed by the sender authorised in accordance with the provisions of these rules;

21. "occupier" in relation to any factory or premises, means a person who has, control over the affairs of the factory or the premises and includes in relation to any hazardous and other wastes, the person in possession of the hazardous or other waste;

22. "operator of disposal facility" means a person who owns or operates a facility for collection, reception, treatment, storage and disposal of hazardous and other wastes;

[3][22-A. "deposition centers" means the deposition centre specified in the Solid Waste Management Rules, 2016 for collection of domestic hazardous wastes;]

[4][23. "other wastes" means wastes specified in Part B and Part D of SCHEDULE III for the purpose of import and export and include such indigenously produced wastes as may be notified from time to time;]

24. "pre-processing" means the treatment of waste to make it suitable for co-processing or recycling or for any further processing;

25. "recycling" means reclamation and processing of hazardous or other wastes in an environmentally sound manner for the originally intended purpose or for other purposes;

26. "reuse" means use of hazardous or other waste for the purpose of its original use or other use;

27. "recovery" means any operation or activity wherein specific materials are recovered;

28. "Schedule" means a Schedule appended to these rules;
29. "State Government" in relation to a Union Territory means, the Administrator thereof appointed under Article 239 of the Constitution;
30. "State Pollution Control Board" means the State Pollution Control Board constituted under Section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and includes, in relation to a Union Territory, the Pollution Control Committee;
31. "storage" mean storing any hazardous or other waste for a temporary period, at the end of which such waste is processed or disposed of;
32. "transboundary movement" means any movement of hazardous or other wastes from an area under the jurisdiction of one country to or through an area under the jurisdiction of another country or to or through an area not under the jurisdiction of any country, provided that at least two countries are involved in the movement;
33. "transport" means off-site movement of hazardous or other wastes by air, rail, road or water;
34. "transporter" means a person engaged in the off-site transportation of hazardous or other waste by air, rail, road or water;
35. "treatment" means a method, technique or process, designed to modify the physical, chemical or biological characteristics or composition of any hazardous or other waste so as to reduce its potential to cause harm;
36. "used oil" means any oil—
    (*i*) derived from crude oil or mixtures containing synthetic oil including spent oil, used engine oil, gear oil, hydraulic oil, turbine oil, compressor oil, industrial gear oil, heat transfer oil, transformer oil and their tank bottom sludges; and
    (*ii*) suitable for reprocessing, if it meets the specification laid down in Part A of Schedule V but does not include waste oil;
37. "utilisation" means use of hazardous or other waste as a resource;
38. "waste" means materials that are not products or by-products, for which the generator has no further use for the purposes of production, transformation or consumption.

    Explanation.—for the purposes of this clause,

    (*i*) waste includes the materials that may be generated during, the extraction of raw materials, the processing of raw materials into intermediates and final products, the

consumption of final products, and through other human activities and excludes residuals recycled or reused at the place of generation; and

(*ii*) by-product means a material that is not intended to be produced but gets produced in the production process of intended product and is used as such;

39. "waste oil" means any oil which includes spills of crude oil, emulsions, tank bottom sludge and slop oil generated from petroleum refineries, installations or ships and can be used as fuel in furnaces for energy recovery, if it meets the specifications laid down in Part-B of Schedule V either as such or after reprocessing;

[5][40. "waste collector" means a person who collects hazardous and other wastes on behalf of actual user or operator of disposal facility from the occupier.]

(2) Words and expressions used in these rules and not defined but defined in the Act shall have the meanings respectively assigned to them in the Act.

CHAPTER II

PROCEDURE FOR MANAGEMENT OF HAZARDOUS AND OTHER WASTES

4. Responsibilities of the occupier for management of hazardous and other wastes.—(1) For the management of hazardous and other wastes, an occupier shall follow the following steps, namely—

(*a*) prevention;

(*b*) minimization;

(*c*) reuse,

(*d*) recycling;

(*e*) recovery, utilisation including co-processing;

(*f*) safe disposal.

(2) The occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes.

(3) The hazardous and other wastes generated in the establishment of an occupier shall be sent or sold to an authorised actual user or shall be disposed of in an authorised disposal facility.

(4) The hazardous and other wastes shall be transported from an occupier's establishment to an authorised actual user or to an authorised disposal facility in accordance with the provisions of these rules.

(5) The occupier who intends to get its hazardous and other wastes treated and disposed of by the operator of a treatment, storage and disposal facility shall give to the operator of that facility, such specific information as may be needed for safe storage and disposal.

(6) The occupier shall take all the steps while managing hazardous and

other wastes to—

(*a*) contain contaminants and prevent accidents and limit their consequences on human beings and the environment; and

(*b*) provide persons working in the site with appropriate training, equipment and the information necessary to ensure their safety.

5. Responsibilities of State Government for environmentally sound management of hazardous and other wastes.—(1) Department of Industry in the State or any other government agency authorised in this regard by the State Government, to ensure earmarking or allocation of industrial space or shed for recycling, pre-processing and other utilisation of hazardous or other waste in the existing and upcoming industrial park, estate and industrial clusters;

(2) Department of Labour in the State or any other government agency authorised in this regard by the State Government shall,—

[6][(*a*) ensure recognition and registration of workers involved in generation, handling, collection, reception, treatment, transport, storage, reuse, recycling, recovery, pre-processing, utilisation including co-processing and disposal of hazardous wastes;]

(*b*) assist formation of groups of such workers to facilitate setting up such facilities;

[7][(*c*) undertake industrial skill development activities for the workers involved in generation, handling, collection, reception, treatment, transport, storage, reuse, recycling, recovery, pre-processing, utilisation including co-processing and disposal of hazardous wastes;

(*d*) undertake annual monitoring and to ensure safety and health of workers involved in generation, handling, collection, reception, treatment, transport, storage, reuse, recycling, recovery, pre-processing, utilisation including co-processing and disposal of hazardous wastes.]

(3) Every State Government may prepare integrated plan for effective implementation of these provisions and to submit annual report to the Ministry of Environment, Forest and Climate Change, in the Central Government.

6. Grant of authorisation for managing hazardous and other wastes.—(1) Every occupier of the facility who is engaged in handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilisation, offering for sale, transfer or disposal of the hazardous and other wastes shall be required to make an application in Form 1 to the State Pollution Control Board and obtain an authorisation from the State Pollution Control Board within a period of sixty days from the date of publication of these rules. Such application for authorisation shall be accompanied with a copy

each of the following documents, namely—

(*a*) consent to establish granted by the State Pollution Control Board under the Water (Prevention and Control of Pollution) Act, 1974 (25 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (21 of 1981);

(*b*) Consent to operate granted by the State Pollution Control Board under the Water (Prevention and Control of Pollution) Act, 1974 (25 of 1974) and/or Air (Prevention and Control of Pollution) Act, 1981, (21 of 1981);

(*c*) in case of renewal of authorisation, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorisation for hazardous and other wastes:

Provided that an application for renewal of authorisation may be made three months before the expiry of such authorisation:

Provided further that—

(*i*) any person authorised under the provisions of the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008, prior to the date of commencement of these rules, shall not be required to make an application for authorisation till the period of expiry of such authorisation;

(*ii*) any person engaged in recycling or reprocessing of the hazardous waste specified in Schedule IV and having registration under the provisions of the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008, shall not be required to make an application for authorisation till the period of expiry of such registration.

[8][(1-A) An occupier shall not be required obtain an authorisation under this rule, from the State Pollution Control Board, in case the consent to establish or consent to operate, is not required from the State Pollution Control Board or Pollution Control Committee under the Water (Prevention and Control of Pollution) Act, 1974 (25 of 1974) and Air (Prevention and Control of Pollution) Act, 1981 (21 of 1981);

Provided that the hazardous and other wastes generated by the occupier shall be given to the actual user, waste collector or operator of the disposal facility, in accordance with the Central Pollution Control Board guidelines.]

[9][(1-B) The deposition centers shall obtain authorization from the State Pollution Control Board or the Pollution Control Committee concerned.

(1-C) The deposition centers shall provide the domestic hazardous waste to the actual user or operator of the disposal facility and maintain

records of the same in Form 3 and shall file annual return in Form 4 to the State Pollution Control Board or the Pollution Control Committee concerned.]

(2) On receipt of an application complete in all respects for the authorisation, the State Pollution Control Board may, after such inquiry as it considers necessary, and on being satisfied that the applicant possesses appropriate facilities for collection, storage, packaging, transportation, treatment, processing, use, destruction, recycling, recovery, pre-processing, co-processing, utilisation, offering for sale, transfer or disposal of the hazardous and other waste, as the case may be, and after ensuring technical capabilities and equipment complying with the standard operating procedure or other guidelines specified by the Central Pollution Control Board from time to time and through site inspection, grant within a period of one hundred and twenty days, an authorisation in Form 2 to the applicant, which shall be valid for a period of five years subject to such conditions as may be laid down therein. For commonly recyclable hazardous waste as given in Schedule IV, the guidelines already prepared by the Central Pollution Control Board shall be followed:

Provided that in the case of an application for renewal of authorisation, the State Pollution Control Board may, before granting such authorisation, satisfy itself that there has been no violation of the conditions specified in the authorisation earlier granted by it and same shall be recorded in the inspection report.

(3) The authorisation granted by the State Pollution Control Board under sub-rule (2) shall be accompanied by a copy of the field inspection report signed by that Board indicating the adequacy of facilities for collection, storage, packaging, transportation, treatment, processing, use, destruction, recycling, recovery, pre-processing, co-processing, utilisation, offering for sale, transfer or disposal of the hazardous and other wastes and compliance to the guidelines or standard operating procedures specified by the Central Pollution Control Board from time to time.

(4) The State Pollution Control Board may, for the reasons to be recorded in writing and after giving reasonable opportunity of being heard to the applicant, refuse to grant any authorisation under these rules.

(5) Every occupier authorised under these rules, shall maintain a record of hazardous and other wastes managed by him in Form 3 and prepare and submit to the State Pollution Control Board, an annual return containing the details specified in Form 4 on or before the 30th day of June following the financial year to which that return relates.

(6) The State Pollution Control Board shall maintain a register containing particulars of the conditions imposed under these rules for management of hazardous and other wastes and it shall be open for

inspection during office hours to any interested or affected person.

(7) The authorised actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorisation.

(8) Handing over of the hazardous and other wastes to the authorised actual user shall be only after making the entry into the passbook of the actual user.

7. Power to suspend or cancel an authorisation.—(1) The State Pollution Control Board, may, if in its opinion the holder of the authorisation has failed to comply with any of the conditions of the authorisation or with any provisions of the Act or these rules and after giving him a reasonable opportunity of being heard and after recording reasons thereof in writing cancel or suspend the authorisation issued under Rule 6 for such period as it considers necessary in the public interest.

(2) Upon suspension or cancellation of the authorisation, the State Pollution Control Board may give directions to the person whose authorisation has been suspended or cancelled for the safe storage and management of the hazardous and other wastes, and such occupier shall comply with such directions.

8. Storage of hazardous and other wastes.—(1) The occupiers of facilities may store the hazardous and other wastes for a period not exceeding ninety days and shall maintain a record of sale, transfer, storage, recycling, recovery, pre-processing, co-processing and utilisation of such wastes and make these records available for inspection:

Provided that the State Pollution Control Board may extend the said period of ninety days in following cases, namely—

[10][(*i*) small generators (between five to ten tonnes per annum) up to one hundred and eighty days of their annual capacity and small generators (less than five tons per annum) up to three hundred and sixty five days of their annual capacity;]

(*ii*) actual users and disposal facility operators up to one hundred and eighty days of their annual capacity,

(*iii*) occupiers who do not have access to any treatment, storage, disposal facility in the concerned State; or

(*iv*) the waste which needs to be specifically stored for development of a process for its recycling, recovery, pre-processing, co-processing or utilisation;

(*v*) in any other case, on justifiable grounds up to one hundred and eighty days.

9. Utilisation of hazardous and other wastes.—[11][(1) The utilisation of hazardous waste as a resource or after pre-processing either

for co-processing or for any other use, including within the premises of the generator (if it is not part of process), shall be carried out only after obtaining authorisation from the State Pollution Control Board in respect of wastes on the basis of standard operating procedures or guidelines issued by the Central Pollution Control Board from time to time.]

[12][(2) Where standard operating procedures are not available for specific utilisation of hazardous waste, the approval has to be sought from the Central Pollution Control Board which shall be granting approval on the basis of trial runs and thereafter, standard operating procedures shall be prepared by the Central Pollution Control Board:]

Provided, if trial run has been conducted for particular waste with respect to particular utilisation and compliance to the environmental standards has been demonstrated, authorisation may be granted by the State Pollution Control Board with respect to the same waste and utilisation, without need of separate trial run by Central Pollution Control Board and such cases of successful trial run, Central Pollution Control Board shall intimate all the State Pollution Control Board regarding the same.

(3) No trial runs shall be required for co-processing of waste in cement plants for which guidelines by the Central Pollution Control Board are already available; however, the actual users shall ensure compliance to the standards notified under the Environment (Protection) Act,1986 (29 of 1986), for cement plant with respect to co-processing of waste:

Provided that till the time the standards are notified, the procedure as applicable to other kind of utilisation of hazardous and other waste, as enumerated above shall be followed.

[13][(4) The utilisation and management of waste tyre shall be in accordance to the provisions contained in Schedule IX.]

10. Standard Operating Procedure or guidelines for actual users.—The Ministry of Environment, Forest and Climate Change or the Central Pollution Control Board may issue guidelines or standard operating procedures for environmentally sound management of hazardous and other wastes from time to time.

CHAPTER III

IMPORT AND EXPORT OF HAZARDOUS AND OTHER WASTES

11. Import and export (transboundary movement) of hazardous and other wastes.—The Ministry of Environment, Forest and Climate Change shall be the nodal Ministry to deal with the transboundary movement of the hazardous and other wastes in accordance with the provisions of these rules.

12. Strategy for Import and export of hazardous and other wastes.—(1) No import of the hazardous and other wastes from any country to India for disposal shall be permitted.

(2) The import of hazardous and other wastes from any country shall be permitted only for recycling, recovery, reuse and utilisation including co-processing.

(3) The import of hazardous waste in Part A of Schedule III may be allowed to actual users with the prior informed consent of the exporting country and shall require the permission of the Ministry of Environment, Forest and Climate Change.

(4) The import of other wastes in Part B of Schedule III may be allowed to actual users with the permission of the Ministry of Environment, Forest and Climate Change.

(5) The import of other wastes in Part D of Schedule III will be allowed as per procedure given in Rule 13 and as per the note below the said Schedule.

(6) No import of the hazardous and other wastes specified in Schedule VI shall be permitted.

[14][6-A. The import of 'post-industrial or pre-consumer polyethylene wastes' and 'Polymethyl Methacrylate' mentioned at column (2), against Basel Number B3010 in Schedule VI, is permitted to units in Special Economic Zones and Export Oriented Units notified by the Central Government.

[15][(6-B) The import of post-industrial or pre-consumer polyethylene wastes shall be permitted with a requirement to export at least thirty five per cent of the total annual turnover.]]

(7) The export of hazardous and other wastes from India listed in Part A and Part B of Schedule III and Schedule VI shall be with the permission of Ministry of Environment, Forest and Climate Change. In case of applications for export of hazardous and other waste listed in Part A of Schedule III and Schedule VI, they shall be considered on the basis of prior informed consent of the importing country.

(8) The import and export of hazardous and other wastes not specified in Schedule III, but exhibiting the hazardous characteristics outlined in Part C of Schedule III shall require prior written permission of the Ministry of Environment, Forest and Climate Change before it is imported to or exported from India, as the case may be.

13. Procedure for import of hazardous and other wastes.—(1) Actual users intending to import or transit for transboundary movement of hazardous and other wastes specified in Part A and Part B of Schedule III shall apply in Form 5 along with the documents listed therein, to the Ministry of Environment, Forest and Climate Change for the proposed import together with the prior informed consent of the exporting country in respect of Part A of Schedule III waste, and shall send a copy of the application, simultaneously, to the concerned State Pollution Control

Board for information and the acknowledgement in this respect from the concerned State Pollution Control Board shall be submitted to the Ministry of Environment, Forest and Climate Change along with the application.

(2) For the import of other wastes listed in Part D of Schedule III, the importer shall not require the permission of the Ministry of Environment, Forest and Climate Change. However, the importer shall furnish the required information as per Form 6 to the Customs authorities, accompanied with the following documents in addition to those listed in Schedule VIII, wherever applicable. For used electrical and electronic assemblies listed at Serial Numbers 4(*e*) to 4(*i*) of Schedule VIII (Basel No. B1110), there is no specific requirement of documentation under these rules:

(*a*) the import license from Directorate General of Foreign Trade, if applicable;

(*b*) the valid consents under the Water (Prevention and Control of Pollution) Act, 1974 (25 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (21 of 1981)and the authorisation under these rules as well as the authorisation under the E-Waste (Management and Handling) Rules, 2011, as amended from time to time, whichever applicable;

[16][(*c*) importer who is a trader, importing waste on behalf of actual users or for use of the actual users authorised by State Pollution Control Board, shall apply in Form 7 for onetime authorisation and obtain one-time authorisation in Form 7-A and copy of such authorisation shall be appended to Form 6.]

(3) For Part B of Schedule III, in case of import of any used electrical and electronic assemblies or spares or part or component or consumables as listed under Schedule I of the E-Waste (Management and Handling) Rules, 2011, as amended from time to time, the importer need to obtain extended producer responsibility-authorisation as producer under the said E-Waste (Management and Handling) Rules, 2011.

(4) Prior to clearing of consignment of wastes listed in Part D of Schedule III, the Custom authorities shall verify the documents as given in column (3) of Schedule VIII.

(5) On receipt of the complete application with respect to Part A and Part B of Schedule III, the Ministry of Environment, Forest and Climate Change shall examine the application considering the comments and observations, if any, received from the State Pollution Control Boards, and may grant the permission for import within a period of sixty days subject to the condition that the importer has—

(*i*) the environmentally sound facilities;

(*ii*) adequate arrangements for treatment and disposal of wastes generated;

(*iii*) a valid authorisation and consents from the State Pollution Control Board;

(*iv*) prior informed consent from the exporting country in case of Part A of Schedule III wastes.

(6) The Ministry of Environment, Forest and Climate Change shall forward a copy of the permission to the concerned Port and Customs authorities, Central Pollution Control Board and the concerned State Pollution Control Board for ensuring compliance with respect to their respective functions given in Schedule VII.

(7) The importer of the hazardous and other wastes shall maintain records of the hazardous and other waste imported by him in Form 3 and the record so maintained shall be made available for inspection.

(8) The importer of the hazardous and other wastes shall file an annual return in Form 4 to the State Pollution Control Board on or before the 30th day of June following the financial year to which that return relates.

(9) Samples of hazardous and other wastes being imported for testing or research and development purposes up to 1000 gm or 1000 ml shall be exempted from need of taking permission for import under these rules.

(10) The Port and Customs authorities shall ensure that shipment is accompanied with the movement document as given in Form 6 and the test report of analysis of the waste, consignment, wherever applicable, from a laboratory accredited or recognised by the exporting country. In case of any doubt, the customs may verify the analysis.

14. Procedure for Export of hazardous and other wastes from India.—(1) Any occupier intending to export waste specified in Part A of Schedule III, Part B of Schedule III and Schedule VI, shall make an application in Form 5 along with insurance cover to the Ministry of Environment, Forest and Climate Change for the proposed transboundary movement of the hazardous and other wastes together with the prior informed consent in writing from the importing country in respect of wastes specified in Part A of Schedule III and Schedule VI.

(2) On receipt of an application under sub-rule (1), the Ministry of Environment, Forest and Climate Change may give permission for the proposed export within a period of sixty days from the date of submission of complete application and may impose such conditions as it may consider necessary.

(3) The Ministry of Environment, Forest and Climate Change shall forward a copy of the permission granted under sub-rule (2) to the State Pollution Control Board of the State where the waste is generated and the Pollution Control Board of the State where the port of export is located and the concerned Port and Customs authorities for ensuring compliance of the conditions of the export permission.

(4) The exporter shall ensure that no consignment is shipped before the prior informed consent is received from the importing country, wherever applicable.

(5) The exporter shall also ensure that the shipment is accompanied with movement document in Form 6.

(6) The exporter of the hazardous and other wastes shall maintain the records of the hazardous or other waste exported by him in Form 3 and the record so maintained shall be available for inspection.

15. Illegal traffic.—(1) The export and import of hazardous or other wastes from and into India, respectively shall be deemed illegal, if,—

(*i*) it is without permission of the Central Government in accordance with these rules; or

(*ii*) the permission has been obtained through falsification, mis-representation or fraud; or

(*iii*) it does not conform to the shipping details provided in the movement documents; or

(*iv*) it results in deliberate disposal (i.e., dumping) of hazardous or other waste in contravention of the Basel Convention and of general principles of international or domestic law.

(2) In case of illegal import of the hazardous or other waste, the importer shall re-export the waste in question at his cost within a period of ninety days from the date of its arrival into India and its implementation will be ensured by the concerned Port and the Custom authority. In case of disposal of such waste by the Port and Custom authorities, they shall do so in accordance with these rules with the permission of the Pollution Control Board of the State where the Port exists.

(3) In case of illegal import of hazardous or other waste, where the importer is not traceable then the waste either can be sold by the Customs authority to any user having authorisation under these rules from the concerned State Pollution Control Board or can be sent to authorised treatment, storage and disposal facility.

CHAPTER IV

TREATMENT, STORAGE AND DISPOSAL FACILITY FOR HAZARDOUS AND OTHER WASTES

16. Treatment, storage and disposal facility for hazardous and other wastes.—(1) The State Government, occupier, operator of a facility or any association of occupiers shall individually or jointly or severally be responsible for identification of sites for establishing the facility for treatment, storage and disposal of the hazardous and other waste in the State.

(2) The operator of common facility or occupier of a captive facility, shall design and set up the treatment, storage and disposal facility as per

technical guidelines issued by the Central Pollution Control Board in this regard from time to time and shall obtain approval from the State Pollution Control Board for design and layout in this regard.

(3) The State Pollution Control Board shall monitor the setting up and operation of the common or captive treatment, storage and disposal facility, regularly.

(4) The operator of common facility or occupier of a captive facility shall be responsible for safe and environmentally sound operation of the facility and its closure and post closure phase, as per guidelines or standard operating procedures issued by the Central Pollution Control Board from time to time.

(5) The operator of common facility or occupier of a captive facility shall maintain records of hazardous and other wastes handled by him in Form 3.

(6) The operator of common facility or occupier of a captive facility shall file an annual return in Form 4 to the State Pollution Control Board on or before the 30th day of June following the financial year to which that return relates.

CHAPTER V

PACKAGING, LABELLING, AND TRANSPORT OF HAZARDOUS AND OTHER WASTES

17. Packaging and Labelling.—(1) Any occupier handling hazardous or other wastes and operator of the treatment, storage and disposal facility shall ensure that the hazardous and other wastes are packaged in a manner suitable for safe handling, storage and transport as per the guidelines issued by the Central Pollution Control Board from time to time. The labelling shall be done as per Form 8.

(2) The label shall be of non-washable material, weather proof and easily visible.

18. Transportation of hazardous and other wastes.—(1) The transport of the hazardous and other waste shall be in accordance with the provisions of these rules and the rules made by the Central Government under the Motor Vehicles Act, 1988 and the guidelines issued by the Central Pollution Control Board from time to time in this regard.

(2) The occupier shall provide the transporter with the relevant information in Form 9, regarding the hazardous nature of the wastes and measures to be taken in case of an emergency and shall label the hazardous and other wastes containers as per Form 8.

(3) In case of transportation of hazardous and other waste for final disposal to a facility existing in a State other than the State where the waste is generated, the sender shall obtain ‘No Objection Certificate’ from the State Pollution Control Board of both the States.

(4) In case of transportation of hazardous and other waste for recycling or utilisation including co-processing, the sender shall intimate both the State Pollution Control Boards before handing over the waste to the transporter.

(5) In case of transit of hazardous and other waste for recycling, utilisation including co-processing or disposal through a State other than the States of origin and destination, the sender shall give prior intimation to the concerned State Pollution Control Board of the States of transit before handing over the wastes to the transporter.

(6) In case of transportation of hazardous and other waste, the responsibility of safe transport shall be either of the sender or the receiver whosoever arranges the transport and has the necessary authorisation for transport from the concerned State Pollution Control Board. This responsibility should be clearly indicated in the manifest.

(7) The authorisation for transport shall be obtained either by the sender or the receiver on whose behalf the transport is being arranged.

19. Manifest system (Movement Document) for hazardous and other waste to be used within the country only.—(1) The sender of the waste shall prepare seven copies of the manifest in Form 10 comprising of colour code indicated below and all seven copies shall be signed by the sender:

Copy number with colour code	Purpose
(1)	(2)
Copy 1 (White)	To be forwarded by the sender to the State Pollution Control Board after signing all the seven copies.
Copy 2 (Yellow)	To be retained by the sender after taking signature on it from the transporter and the rest of the five signed copies to be carried by the transporter.
Copy 3 (Pink)	To be retained by the receiver (actual user or treatment storage and disposal facility operator) after receiving the waste and the remaining four copies are to be duly signed by the receiver.
Copy 4 (Orange)	To be handed over to the transporter by the receiver after accepting waste.
Copy 5 (Green)	To be sent by the receiver to the State Pollution Control Board.
Copy 6 (Blue)	To be sent by the receiver to the sender.
Copy 7 (Grey)	To be sent by the receiver to the State Pollution Control Board of the sender in case the sender is

	in another State.

(2) The sender shall forward copy 1 (white) to the State Pollution Control Board, and in case the hazardous or other wastes is likely to be transported through any transit State, the sender shall intimate State Pollution Control Boards of transit States about the movement of the waste.

(3) No transporter shall accept waste from the sender for transport unless it is accompanied by signed copies 3 to 7 of the manifest.

(4) The transporter shall submit copies 3 to 7 of the manifest duly signed with date to the receiver along with the waste consignment.

(5) The receiver after acceptance of the waste shall hand over copy 4 (orange) to the transporter and send copy 5 (green) to his State Pollution Control Board and send copy 6 (blue) to the sender and the copy 3 (pink) shall be retained by the reciever.

(6) The copy 7 (grey) shall only be sent to the State Pollution Control Board of the sender, if the sender is in another State.

[17][(7) The provisions of this rule shall not be applicable to other wastes as listed in Part D of Schedule III.]

CHAPTER VI

MISCELLANEOUS

20. Records and returns.—(1) The occupier handling hazardous or other wastes and operator of disposal facility shall maintain records of such operations in Form 3.

(2) The occupier handling hazardous and other wastes and operator of disposal facility shall send annual returns to the State Pollution Control Board in Form 4.

(3) The State Pollution Control Board based on the annual returns received from the occupiers and the operators of the facilities for disposal of hazardous and other wastes shall prepare an annual inventory of the waste generated; waste recycled, recovered, utilised including co-processed; waste re-exported and waste disposed and submit to the Central Pollution Control Board by the 30th day of September every year. The State Pollution Control Board shall also prepare the inventory of hazardous waste generators, actual users, and common and captive disposal facilities and shall submit the information to Central Pollution Control Board every two years.

(4) The Central Pollution Control Board shall prepare the consolidated review report on management of hazardous and other wastes and forward it to the Ministry of Environment, Forest and Climate Change, along with its recommendations before the 30th day of December once in every year.

21. Responsibility of authorities.—The authority specified in column

(2) of Schedule VII shall perform the duties as specified in column (3) of the said Schedule subject to the provisions of these rules.

22. Accident reporting.—Where an accident occurs at the facility of the occupier handling hazardous or other wastes and operator of the disposal facility or during transportation, the occupier or the operator or the transporter shall immediately intimate the State Pollution Control Board through telephone, e-mail about the accident and subsequently send a report in Form 11.

23. Liability of occupier, importer or exporter and operator of a disposal facility.—(1) The occupier, importer or exporter and operator of the disposal facility shall be liable for all damages caused to the environment or third party due to improper handling and management of the hazardous and other waste.

(2) The occupier and the operator of the disposal facility shall be liable to pay financial penalties as levied for any violation of the provisions under these rules by the State Pollution Control Board with the prior approval of the Central Pollution Control Board.

24. Appeal.—(1) Any person aggrieved by an order of suspension or cancellation or refusal of authorisation or its renewal passed by the State Pollution Control Board may, within a period of thirty days from the date on which the order is communicated to him, prefer an appeal in Form 12 to the Appellate Authority, namely, the Environment Secretary of the State.

(2) The Appellate Authority may entertain the appeal after expiry of the said period of thirty days, if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

(3) Every appeal filed under this rule shall be disposed of within a period of sixty days from the date of its filing.

[18][CHAPTER VII

EXTENDED PRODUCER RESPONSIBILITY FOR USED OIL

25. Definitions.—For the purposes of this Chapter.—

(*a*) “base oil” means any oil used for production of finished lubrication oil;

(*b*) “bulk generator” includes any entity like automobile industry or railways or defence establishments or a transport company or industrial units or power transmission company or hotels or restaurants and other such entity which is generating more than 100 metric tonnes of used oil per annum;

(*c*) “business” means any activity of production or manufacturing or sale of base oil or lubrication oil, import of base oil, recycling used oil;

(*d*) “collection point” means the facility where the authorised collection agent would collect and store used oil as per the

standard operating procedure or guidelines issued by the Central Pollution Control Board for the purposes of this Chapter;

(*e*) "collection agent" means any person or entity who collects used oil and supplies it to the recycler;

(*f*) "energy recovery" means any process of utilizing used oil as a fuel, which is not suitable for recycling in accordance with these rules;

(*g*) "environmentally sound management of used oil" means taking all steps required to ensure that used oil is managed in a manner so as to protect health and environment against any adverse effects which may result during collection, transportation and recycling of used oil;

(*h*) "extended producer responsibility" means responsibility of producer of base oil or lubrication oil or importer of used oil under this chapter for meeting recycling targets only through registered recyclers to ensure environmentally sound management of used oil;

(*i*) "guidelines" means any document prepared and issued by the Central Pollution Control Board elaborating minimum requirements for achieving environmentally sound management of used oil including its handling, collection, transportation, storage and recycling;

(*j*) "portal" means the online system developed by the Central Pollution Control Board for management and implementation of compliance of this Chapter;

(*k*) "producer" means any person or entity, irrespective of the selling technique used such as dealer, retailer, eretailer, who—

(*i*) manufactures and offers to sell base oil or lubrication oil domestically under its own brand; or

(*ii*) offers to sell lubrication oil domestically under its own brand, using the base oil manufactured by other manufacturers or suppliers; or

(*iii*) offers to sell imported base oil or lubrication oil domestically;

(*l*) "recycling" means any process of re-refining of used oil to produce base oil or lubrication oil or any process of energy recovery from used oil in an environmentally sound manner with facilities as elaborated in the standard operating procedure or guidelines issued by the Central Pollution Control Board for the purposes of this Chapter;

(*m*) "re-refining" means any process of removing undesirable impurities from used oil and making base oil or lubrication oil as end product in accordance with the standard operating procedure or guidelines issued by the Central Pollution Control Board;

(*n*) "recycler" means any person or entity engaged in the process of recycling of used oil;

(*o*) "recycling target" means the quantity of used oil to be recycled as per the provisions of rule (2) of Rule 27;

(*p*) "standard operating procedure" means the document issued by the Central Pollution Control Board elaborating minimum requirement of equipment and processes;

(*q*) "used oil" shall have the meaning assigned to it in clause (36) of Rule 3 the said rules; and

(*r*) "used oil importers" means any person or entity who imports used oil.

26. Registration.—(1) The following entities shall get them registered by the Central Pollution Control Board on the portal, namely.—

(*a*) producers;

(*b*) collection agents;

(*c*) recyclers;

(*d*) used oil importers.

(2) In case any entity falls in more than one categories under sub-rule (1), then the said entity shall register themselves under each of those categories separately.

(3) No entity referred in sub-rule (1) shall carry out business without registration.

(4) The entities registered under sub-rule (1) shall not deal with any entity not registered under sub-rule (1).

(5) Where any registered entity furnishes false information or willfully conceals information for registration or return or report or information required to be provided or furnished under this Chapter or in case of any irregularity, the registration of such entity may be revoked by the Central Pollution Control Board for a period up to five-years after giving an opportunity to be heard and in addition, environmental compensation charges may also be levied as per Rule 39.

(6) The Central Pollution Control Board may charge registration fees and annual maintenance charges from the entities seeking registration under this Chapter based on volume of used oil generated, recycled, or handled by them.

27. Modalities of extended producer responsibility and its target.—(1) The extended producer responsibility covers the following modes for managing the used oil in order of priority, namely:—

(*i*) producing re-refined base oil or lubrication oil; and

(*ii*) energy recovery.

(2) All producers and used oil importers shall fulfil their extended producer responsibility obligation specified in Table given below and in

doing so they may take help of third party organisations, such as integrated used oil management systems, collection centres or dealers:

Provided that the extended producer responsibility shall lie entirely on the producer only.

TABLE

PART A

For producers of base oil or lubrication oil, the target prescribed in the following Table—

Sl. No.	Year.	Used oil Recycling Target.
(1)	(2)	(3)
(*i*)	Extended Producer Responsibility obligation of the Year 2024-2025 (the year in which this Chapter comes into force)	5% of the base oil or lubrication oil sold or imported in the Year 2022-2023.
(*ii*)	Extended Producer Responsibility obligation of the Year 2025-2026.	10% of the base oil or lubrication oil sold or imported in the year 2023-2024.
(*iii*)	Extended Producer Responsibility obligation of the Year 2026-2027.	20% of the base oil or lubrication oil sold or imported in the year 2024-2025.
(*iv*)	Extended Producer Responsibility obligation of the Year 2027-2028.	20% of the base oil or lubrication oil sold or imported in the year 2025-2026.
(*v*)	Extended Producer Responsibility obligation of the Year 2028-2029.	40% of the base oil or lubrication oil sold or imported in the year 2026-2027.
(*vi*)	Extended Producer Responsibility obligation of the Year 2029-2030.	40% of the base oil or lubrication oil sold or imported in the year 2027-2028.
(*vii*)	Extended Producer Responsibility obligation for the year 2030-2031 (Y) onwards shall be 50% of the base oil or lubrication oil sold or imported in the year (Y-2)	
(*viii*)	For units established after 1st April, 2024, the extended producer responsibility obligation will start after two years from the end of the financial year in which the unit was established	

	and will be as per the target prescribed above.

PART B

For used oil importers.—

(*i*) the extended producer responsibility obligation for used oil importers in year (Y) shall be 100 per cent of the used oil imported in year (Y-1); and

(*ii*) the import of used oil is permitted for the purpose of re-refining only.

(3) The extended producer responsibility target of the producers shall be reduced by a factor laid down by the Central Pollution Control Board on account of operational loss of base oil.

(4) (*i*) The producers may fulfil their extended producer responsibility through online purchase of extended producer responsibility certificates from registered recyclers only;

(*ii*) the details provided by producers and registered recyclers shall be cross-checked through the portal;

(*iii*) in case of any difference, the lower figure shall be considered towards fulfillment of the extended producer responsibility obligation of the producer; and

(*iv*) the certificates shall be subject to audit by the Central Pollution Control Board or any other agencies authorised by them in this regard.

28. Extended producer responsibility certificate generation.—(1) The Central Pollution Control Board shall generate extended producer responsibility certificate through the portal in favour of a registered recycler, which shall be calculated as per the Table given here under.—

TABLE

Sl. No.	End Product of recycling.	Weightage allocated to the end product (W_P).
(1)	(2)	(3)
1.	Producing re-refined base oil or lubrication oil	1.0
2.	Co-processing/utilisation/energy recovery for used oil notsuitable for recycling, maximum permissible percentage to beprescribed by the Central Pollution Control Board.	0.25

(2) For the purpose of the Table referred to in sub-rule (1).—

(*i*) the quantity eligible for generation of extended producer responsibility certificate shall be calculated as per the following formula, namely—

$Q_{EPR} = Q_P \times C_F \times W_P$;

**the QEPR is the quantity eligible for generation of the extended producer responsibility certificate, Qp is the quantity of the end product and Cf is the conversion factor (quantity of inputs required for production of one unit of output) and Wp is the weightage for particular end product*

Example : If a recycler finally produces 100 Tonnes of re-refined oil, and conversion factor is 1.5 then, the eligible EPR certificate for that recycler in that year shall be as follows:

Q_{EPR} = 100 x 1.5 x 1 (weightage)= 150.0 Tonnes;

(*ii*) Conversion factor CF for each end product shall be determined by the Central Pollution Control Board based on the technologies used by recyclers and quality of re-refined base oil produced;

(*iii*) The weightage W_P shall be reviewed by the Central Pollution Control Board from time to time in view of the technological advancements, availability of material and other factors;

(3) The validity of the extended producer responsibility certificate shall be two years from the end of the financial year in which it was generated and the expired certificate shall automatically extinguish after the period unless extinguished earlier as per these rules.

(4) Each extended producer responsibility certificate shall have a unique number containing year of generation, code of end product, recycler code and a unique code and shall be in the denominations of 100, 200, 500, 1000 and 10,000 kilograms or as may be laid down by the Central Pollution Control Board with the approval of the Steering Committee constituted under Rule 42.

29. Transaction of extended producer responsibility certificate.— (1) A producer may purchase extended producer responsibility certificates limited to its extended producer responsibility liability of current year (Year Y) plus any leftover liability of preceding years plus 10 per cent of the current year liability.

(2) The extended producer responsibility obligation shall have to be fulfilled by the producers and used oil importers by proportionately purchasing extended producer responsibility certificates on a quarterly basis.

(3) As soon as the producer and used oil importer purchases the extended producer responsibility certificate, it will be automatically adjusted against its liability, priority in adjustment shall be given to earlier liability and the extended producer responsibility certificate so adjusted shall be automatically extinguished and cancelled.

(4) The availability, requirement and other details of the extended producer responsibility certificate for every producer or used oil importer or recycler shall be made available on the portal.

(5) All the transactions under this Chapter shall be recorded and submitted by the producers or used oil importers or recyclers on the portal.

(6) One or more trading platform for sale and purchase of extended producer responsibility certificates may be established through agency accredited by the Central Pollution Control Board in accordance with the guidelines issued by Central Pollution Control Board with the approval of the Central Government.

[19][(7) The operation of the platform established under sub-paragraphs (6) shall be operated and regulated in accordance with the guidelines made by the Central Government on the recommendation of the Central Pollution Control Board.

(8) The Central Pollution Control Board shall fix the highest and lowest price for exchange of extended producer responsibility certificates which shall be equal to hundred per cent and thirty per cent, respectively of the environmental compensation for non-fulfilment of extended producer responsibility under Rule 39.

(9) The exchange price of extended producer responsibility certificates between registered entities through the portal shall be between the highest and lowest prices referred to in sub-rule (8).]

30. Portal for registration, filing of annual returns, Extended Producer Responsibility certificate and tracing of materials.—(1) The Central Pollution Control Board shall establish an online system for the registration and as for filing of quarterly and annual returns, extended producer responsibility certificate and tracing of oil produced or generated by any entity or person, which shall ensure a mechanism wherein the material balance of the lubrication oil introduced in the market by any producer in a financial year is reflected.

(2) The portal shall act as the single point data repository with respect to management and implementation of extended producer responsibility for used oil.

(3) The online portal shall be functional by the Central Pollution Control Board within six months from the date of commencement of the Hazardous and Other Wastes (Management and Transboundary Movement) Second Amendment Rules, 2023 and all activities related to the implementation of the extended producer responsibility shall be done in online manner.

(4) The manifest system for transport of used oil shall be applicable to those entities under this Chapter who are required to take authorisation under the said rules.

[20][(5) Relaxation of timelines for filing of returns.—The Central Government may, if it is satisfied that it is necessary so to do in the public interest or for effective implementation of these rules, by order, relax any period within which any return or report is to be filed under these rules by a producer, collection agents, recycler and used oil importer thereof, for a further period not exceeding nine months.]

31. Responsibility of producers.—The producers of base oil or lubrication oil shall be responsible for.—

(*a*) registration on the portal;

(*b*) fulfilling extended producer responsibility targets as per sub-rule (2) of Rule 27;

(*c*) provide the contact details such as address, email address, toll free telephone numbers or helpline numbers to consumers through their website or through advertisements or documentation so as to facilitate the process;

(*d*) filing annual returns in the form provided on the portal on or before 30th June following the financial year to which that return relates;

(*e*) creating awareness through media, publications, advertisements, posters, or by any other means of communication.

32. Responsibility of used oil importer.—The used oil importers shall be responsible for.—

(*a*) registration on the portal;

(*b*) fulfilling extended producer responsibility targets as per sub-rule (2) of Rule 27 through the portal;

(*c*) filing annual returns in the form provided on the portal on or before 30th June following the financial year to which that return relates.

33. Responsibility of collection agent.—All used oil collection agents shall have to.—

(*a*) register on the portal;

(*b*) collect used oil from the generators and supply to the registered recycler or producer in accordance with these rules and upload information on the portal;

(*c*) filing quarterly returns in the laid down form on the portal on or before the end of the month succeeding the quarter to which the returns relate;

(*d*) filing annual returns in the form provided on the portal on or before 30th June following the financial year to which that return relates.

34. Responsibilities of the recycler.—All used oil recycler shall have to.—

(*a*) register on the portal;

(*b*) ensure that the facility and recycling processes are in accordance with these rules;

(*c*) ensure that no damage is caused to the environment during storage, transportation and recycling of used oil;

(*d*) ensure that the residue generated during the recycling process is disposed of in accordance the said rules;

(*e*) filing quarterly returns in the prescribed form on the portal on or before the end of the month succeeding the quarter to which the returns relate;

(*f*) filing annual returns in the prescribed form provided on the portal on or before 30th June following the financial year to which that return relates.

35. Responsibilities of the bulk generators.—Bulk generators shall.—

(*a*) set up collection points to facilitate collection agents for collection and transportation of used oil from their premises; and

(*b*) ensure that used oil generated by them be handed over only to the registered recyclers or producer or collection agents.

36. Responsibilities of the Central Pollution Control Board.—(1) The Central Pollution Control Board shall be responsible for—

(*a*) operation and maintenance of the portal and monitoring of extended producer responsibility compliance;

(*b*) coordination with the State Pollution Control Boards;

(*c*) prepare and issue Guidelines and Standard Operating Procedures for registration on the portal, extended producer responsibility certificate generation, fulfillment of obligation, returns, and for collection, storage, transportation, recycling and disposal of used oil under this Chapter and also on any other issue for smooth implementation of these rules from time to time;

(*d*) prepare and issue necessary forms or returns on portal for implementation of this Chapter;

(*e*) conduct of random checks for ascertaining compliance of the extended producer responsibility and for that purpose the Board may take help of Customs or the State Government or any other agency;

(*f*) documentation, compilation of data on used oil and uploading on the portal;

(*g*) taking action against violation of this Chapter;

(*h*) conducting training programmes to develop capacity building

including the State Pollution Control Board and Urban Local Bodies officials of State Governments;

(*i*) conducting awareness programmes;

(*j*) integration of all stakeholders with the centralised digital system;

(*k*) prepare and submit an annual report to the Central Government; and

(*l*) any other function delegated by the Central Government under this Chapter from time to time.

37. Responsibilities of the State Governments or Union territories or Municipalities or local bodies or the State Pollution Control Board.—(1) The Department of Industry in the State and Union territory or any other Government agency authorised in this regard by the State Government or the Union territory Administration, as the case may be, shall.—

(*a*) ensure earmarking or allocation of industrial space or shed for collection of used oil and for rerefining units in the existing and upcoming industrial parks, estates and industrial clusters;

(*b*) ensure recognition and registration of workers involved in re-refining and recycling;

(*c*) undertake industrial skill development activities for the workers involved in re-cycling of used oil; and

(*d*) undertake annual monitoring and to ensure safety and health of workers involved in recycling of used oil.

(2) Municipalities and Local Bodies shall facilitate producers and bulk generators or collection agents to set up large number of collection points for collection of used oils in their jurisdictional areas and the used oils so collected can be auctioned or sold to the authorised recyclers.

(3) The State Pollution Control Boards or Pollution Control Committees of Union territories, shall.—

(*i*) ensure proper implementation of this Chapter in coordination with the Central Pollution Control Board;

(*ii*) facilitate setting up of collection points by the collection agents;

(*iii*) monitor the compliance of extended producer responsibility as directed by the Central Pollution Control Board;

(*iv*) conduct random inspection of producers or collection agents or recycler or used oil importers; and

(*v*) perform any other function as directed by the Central Government under this Chapter.

38. Responsibilities of the Bureau of Indian Standards.—The Bureau of Indian Standards shall issue necessary standards for re-refined oil, which could be used as base oil for producers of lubrication oil within

nine months from the date of commencement of the Hazardous and Other Wastes (Management and Transboundary Movement) Second Amendment Rules, 2023.

39. Environmental Compensation.—(1) The Central Pollution Control Board shall lay down guidelines for imposition and collection of environmental compensation on the producers in case of non-fulfilment of obligations set out in this Chapter and transaction or use of false extended producer responsibility certificates or on any entity on violation of any provisions of this Chapter and guidelines issued hereunder.

(2) The environmental compensation shall also be levied on the recyclers for issue of false extended producer responsibility certificates and providing false information.

(3) It shall also be levied on unregistered producers, recyclers and any entity, which aids or abets the violation of this Chapter.

(4) (*i*) payment of environmental compensation shall not absolve the producer from the extended producer responsibility as specified in this Chapter and the unfulfilled extended producer responsibility for a particular year shall be carried forward to the next year and so on and up to three years;

(*ii*) in case, the shortfall of extended producer responsibility obligation is addressed after one year, eighty-five per cent. of the environmental compensation levied shall be returned to the producer; and

(*iii*) in case, the shortfall of extended producer responsibility obligation is addressed after two year, sixty per cent. of the environmental compensation levied shall be returned to the producer, and in case, the shortfall of extended producer responsibility obligation is addressed after three year, thirty per cent. of the environmental compensation levied shall be returned to the producer, thereafter no environmental compensation will be returned to the producer.

(5) False information resulting in over generation of extended producer responsibility certificates by recycler above five per cent. of the actual recycled waste shall result in revocation of registration and imposition of environmental compensation which shall not be returnable and subsequent offence, violation of this Chapter for three times or more shall also result in permanent revocation of registration over and above the environmental compensation charges.

(6) (*i*) the funds collected under environmental compensation shall be kept in a separate escrow account by the Central Pollution Control Board and the funds collected shall be utilised in collection and recycling or end of life disposal of uncollected and non-recycled or non-end of life disposal of used oil on which the environmental compensation is levied, and on other heads as decided by the committee; and

(*ii*) modalities and head for utilisation of the funds shall be decided by

the Steering Committee with the approval of the Central Government.

[21][40. Action for contravention.—Any person who fails to comply or contravenes the provisions of these rules shall be liable to a penalty in accordance with the provisions of Section 15 of the Act.]

41. Verification and audit.—(1) The Central Pollution Control Board by itself or through a designated agency shall verify compliance of this Chapter by the producers, used oil importer, bulk generators, collection agents and recyclers through inspection and periodic audit, as deemed appropriate and take actions against violations under Rule 39 of this Chapter.

(2) Any fee for the verification and audit shall be charged by the Central Pollution Control Board from the concerned registered entity.

42. Steering Committee.—(1) There shall be a Steering Committee headed by the Chairperson, Central Pollution Control Board to oversee the implementation of extended producer responsibility under this Chapter, which shall consists of following other members, namely:.—

(*i*) one representative of the Ministry of Environment, Forest and Climate Change;

(*ii*) one representative of the Ministry of Petroleum and Natural Gas;

(*iii*) a maximum of two representative of producers;

(*iv*) a maximum of two representative of Automobile Manufacturer Associations.

(*vi*) a maximum of two representative of recycler associations;

(*v*) one representative of the State Pollution Control Board or Pollution Control Committee as coopted by the Chairman of the Steering Committee;

(*vii*) Member Secretary of the Central Pollution Control Board; and

(*viii*) Head of the Division concern of the Central Pollution Control Board as Member Convener.

(2) The Steering Committee may co-opt any other member if it considers necessary.

(3) The Steering Committee shall be responsible for overall monitoring and supervision of implementation this Chapter.

(4) Shall also decide upon the disputes arisen from time to time on the representations received in this regard, and shall refer to the Central Government any substantial issue arisen or pertaining to this Chapter.

(5) The Steering Committee shall review and revise the targets, weightage and permissibility of modes of recycling in view of the technological advancements and other factors and make recommendations to the Central Government.

(6) The Steering Committee shall take all such measures, as it deems necessary for proper implementation of the provisions of this Chapter.

43. Application of other provisions of these rules.—The provisions relating to hazardous wastes under these rules shall also apply to utilisation and management of used oil under this Chapter.]

SCHEDULE I

[*See* Rule 3(1)(17)(*i*)]

List of processes generating hazardous wastes

Sl. No.	Processes	Hazardous Waste*	
(1)	(2)	(3)	
1.	Petrochemical processes and pyrolytic operations	1.1	Furnace or reactor residue and debris
		1.2	Tarry residues and still bottoms from distillation
		1.3	Oily sludge emulsion
		1.4	Organic residues
		1.5	Residues from alkali wash of fuels
		1.6	Spent catalyst and molecular sieves
		1.7	Oil from wastewater treatment
2.	Crude oil and natural gas production	2.1	Drill cuttings excluding those from water based mud
		2.2	Sludge containing oil
		2.3	Drilling mud containing oil
3.	Cleaning, emptying and maintenance of petroleum oil storage tanks including ships	3.1	cargo residue, washing water and sludge containing oil
		3.2	cargo residue and sludge containing chemicals
		3.3	Sludge and filters contaminated with oil
		3.4	Ballast water containing oil from ships
4.	Petroleum refining or re-processing of used oil or recycling of waste oil	4.1	Oil sludge or emulsion
		4.2	Spent catalyst
		4.3	Slop oil
		4.4	Organic residue from processes
		4.5	Spent clay containing oil
5.	Industrial operations	5.1	Used or spent oil

	using mineral or synthetic oil as lubricant in hydraulic systems or other applications	5.2	Wastes or residues containing oil
		5.3	Waste cutting oils
6.	Secondary production and/or industrial use of zinc	6.1	Sludge and filter press cake arising out of production of Zinc Sulphate and other Zinc Compounds.
		6.2	Zinc fines or dust or ash or skimmings in dispersible form
		6.3	Other residues from processing of zinc ash or skimmings
		6.4	Flue gas dust and other particulates
7.	Primary production of zinc or lead or copper and other non-ferrous metals except aluminium	7.1	Flue gas dust from roasting
		7.2	Process residues
		7.3	Arsenic-bearing sludge
		7.4	Non-ferrous metal bearing sludge and residue.
		7.5	Sludge from scrubbers
8.	Secondary production of copper	8.1	Spent electrolytic solutions
		8.2	Sludge and filter cakes
		8.3	Flue gas dust and other particulates
9.	Secondary production of lead	9.1	Lead bearing residues
		9.2	Lead ash or particulate from flue gas
		9.3	Acid from used batteries
10.	Production and/or industrial use of cadmium and arsenic and their compounds	10.1	Residues containing cadmium and arsenic
11.	Production of primary and secondary aluminium	11.1	Sludges from off-gas treatment
		11.2	Cathode residues including pot lining wastes
		11.3	Tar containing wastes
		11.4	Flue gas dust and other

		particulates 11.5 Drosses and waste from treatment of salt sludge 11.6 Used anode butts 11.7 Vanadium sludge from alumina refineries
12.	Metal surface treatment, such as etching, staining, polishing, galvanizing, cleaning, degreasing, plating, etc.	12.1 Acidic and alkaline residues 12.2 Spent acid and alkali 12.3 Spent bath and sludge containing sulphide, cyanide and toxic metals 12.4 Sludge from bath containing organic solvents 12.5 Phosphate sludge 12.6 Sludge from staining bath 12.7 Copper etching residues 12.8 Plating metal sludge
13.	Production of iron and steel including other ferrous alloys (electric furnace; steel rolling and finishing mills; Coke oven and by products plant)	13.1 Spent pickling liquor 13.2 Sludge from acid recovery unit 13.3 Benzol acid sludge 13.4 Decanter tank tar sludge 13.5 Tar storage tank residue 13.6 Residues from coke oven by product plant.
14.	Hardening of steel	14.1 Cyanide-, nitrate-, or nitrite-containing sludge 14.2 Spent hardening salt
15.	Production of asbestos or asbestos-containing materials	15.1 Asbestos-containing residues 15.2 Discarded asbestos 15.3 Dust or particulates from exhaust gas treatment
16.	Production of caustic soda and chlorine	16.1 Mercury bearing sludge generated from mercury cell process 16.2 Residue or sludges and filter cakes 16.3 Brine sludge

17.	Production of mineral acids	17.1	Process acidic residue, filter cake, dust
		17.2	Spent catalyst
18.	Production of nitrogenous and complex fertilizers	18.1	Spent catalyst
		18.2	Carbon residue
		18.3	Sludge or residue containing arsenic
		18.4	Chromium sludge from water cooling tower
19.	Production of phenol	19.1	Residue or sludge containing phenol
		19.2	Spent catalyst
20.	Production and/or industrial use of solvents	20.1	Contaminated aromatic, aliphatic or napthenic solvents may or may not be fit for reuse.
		20.2	Spent solvents
		20.3	Distillation residues
		20.4	20.4 Process Sludge
21.	Production and/or industrial use of paints, pigments, lacquers, varnishes and inks	21.1	Process wastes, residues and sludges
		21.2	Spent solvent
22.	Production of plastics	22.1	Spent catalysts
		22.2	Process residues
23.	Production and/or industrial use of glues, organic cements, adhesive and resins	23.1	Wastes or residues (not made with vegetable or animal materials)
		23.2	Spent solvents
24.	Production of canvas and textiles	24.1	Chemical residues
25.	Industrial production and formulation of wood preservatives	25.1	Chemical residues
		25.2	Residues from wood alkali bath
26.	Production or industrial use of synthetic dyes, dye-intermediates and pigments	26.1	Process waste sludge/residues containing acid, toxic metals, organic compounds
		26.2	Dust from air filtration system
		26.3	Spent acid
		26.4	Spent solvent

		26.5 Spent catalyst
27.	Production of organic-silicone compound	27.1 Process residues
28.	Production/formulation of drugs/pharmaceutical and health care product	28.1 Process Residue and wastes 28.2 Spent catalyst 28.3 Spent carbon 28.4 Off specification products 28.5 Date-expired products 28.6 Spent solvents
29.	Production, and formulation of pesticides including stock-piles	29.1 Process wastes or residues 29.2 Sludge containing residual pesticides 29.3 Date-expired and off-specification pesticides 29.4 Spent solvents 29.5 Spent catalysts 29.6 Spent acids
30.	Leather tanneries	30.1 Chromium bearing residue and sludge
31.	Electronic Industry	31.1 Process residue and wastes 31.2 Spent etching chemicals and solvents
32.	Pulp and Paper Industry	32.1 Spent chemicals 32.2 Corrosive wastes arising from use of strong acid and bases 32.3 Process sludge containing adsorbable organic halides(AO_X)
33.	Handling of hazardous chemicals and wastes	33.1 Empty barrels/containers/liners contaminated with hazardous chemicals /wastes 33.2 Contaminated cotton rags or other cleaning materials
34.	De-contamination of barrels/ containers used for handling of hazardous wastes/chemicals	34.1 Chemical-containing residue arising from decontamination. 34.2 Sludge from treatment of waste water arising out of cleaning / disposal of barrels / containers
35.	Purification and treatment of exhaust	35.1 Exhaust Air or Gas cleaning residue

	air/gases, water and waste water from the processes in this schedule and common industrial effluent treatment plants (CETP's)	35.2	Spent ion exchange resin containing toxic metals
		35.3	Chemical sludge from waste water treatment
		35.4	Oil and grease skimming
		35.5	Chromium sludge from cooling water
36.	Purification process for organic compounds/solvents	36.1	Any process or distillation residue
		36.2	Spent carbon or filter medium
37.	Hazardous waste treatment processes, e.g. pre-processing, incineration and concentration	37.1	Sludge from wet scrubbers
		37.2	Ash from incinerator and flue gas cleaning residue
		37.3	Concentration or evaporation residues
38.	Chemical processing of Ores containing heavy metals such as Chromium, Manganese, Nickel, Cadmium etc.	38.1	Process residues
		38.2	Spent acid

*The inclusion of wastes contained in this Schedule does not preclude the use of Schedule II to demonstrate that the waste is not hazardous. In case of dispute, the matter would be referred to the Technical Review Committee constituted by Ministry of Environment, Forest and Climate Change.

Note: The high volume low effect wastes such as fly ash, Phosphogypsum, red mud, jarosite, Slags from pyrometallurgical operations, mine tailings and ore beneficiation rejects are excluded from the category of hazardous wastes. Separate guidelines on the management of these wastes shall be issued by Central Pollution Control Board.

SCHEDULE II

[*See* Rule 3(1)(17)(*ii*)]

List of waste constituents with concentration limits

Class A: *Based on leachable concentration limits [Toxicity Characteristic Leaching Procedure (TCLP) or Soluble Threshold Limit Concentration (STLC)]*

Class	Constituents	Concentration in mg/l

(1)	(2)	(3)
A1	Arsenic	5.0
A2	Barium	100.0
A3	Cadmium	1.0
A4	Chromium and/or Chromium (III) compounds	5.0
A5	Lead	5.0
A6	Manganese	10.0
A7	Mercury	0.2
A8	Selenium	1.0
A9	Silver	5.0
A10	Ammonia	50*
A11	Cyanide	20*
A12	Nitrate (as nitrate-nitrogen)	1000.0
A13	Sulphide (as H_2S)	5.0
A14	1,1-Dichloroethylene	0.7
A15	1,2-Dichloroethane	0.5
A16	1,4-Dichlorobenzene	7.5
A17	2,4,5-Trichlorophenol	400.0
A18	2,4,6-Trichlorophenol	2.0
A19	2,4-Dinitrotoluene	0.13
A20	Benzene	0.5
A21	Benzo (*a*) Pyrene	0.001
A22	Bromodicholromethane	6.0
A23	Bromoform	10.0
A24	Carbon tetrachloride	0.5
A25	Chlorobenzene	100.0
A26	Chloroform	6.0
A27	Cresol (ortho+ meta+ para)	200.0
A28	Dibromochloromethane	10.0
A29	Hexachlorobenzene	0.13
A30	Hexachlorobutadiene	0.5
A31	Hexachloroethane	3.0
A32	Methyl ethyl ketone	200.0
A33	Naphthalene	5.0
A34	Nitrobenzene	2.0

A35	Pentachlorophenol	100.0
A36	Pyridine	5.0
A37	Tetrachloroethylene	0.7
A38	Trichloroethylene	0.5
A39	Vinyl chloride	0.2
A40	2,4,5-TP (Silvex)	1.0
A41	2,4-Dichlorophenoxyacetic acid	10.0
A42	Alachlor	2.0
A43	Alpha HCH	0.001
A44	Atrazine	0.2
A45	Beta HCH	0.004
A46	Butachlor	12.5
A47	Chlordane	0.03
A48	Chlorpyriphos	9.0
A49	Delta HCH	0.004
A50	Endosulfan (alpha+ beta+ sulphate)	0.04
A51	Endrin	0.02
A52	Ethion	0.3
A53	Heptachlor (& its Epoxide)	0.008
A54	Isoproturon	0.9
A55	Lindane	0.4
A56	Malathion	19
A57	Methoxychlor	10
A58	Methyl parathion	0.7
A59	Monocrotophos	0.1
A60	Phorate	0.2
A61	Toxaphene	0.5
A62	Antimony	15
A63	Beryllium	0.75
A64	Chromium (VI)	5.0
A65	Cobalt	80.0
A66	Copper	25.0
A67	Molybdenum	350
A68	Nickel	20.0
A69	Thallium	7.0
A70	Vanadium	24.0

A71	Zinc	250
A72	Fluoride	180.0
A73	Aldrin	0.14
A74	Dichlorodiphenyltrichloroethane (DDT), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyldichloroethane (DDD)	0.1
A75	Dieldrin	0.8
A76	Kepone	2.1
A77	Mirex	2.1
A78	Polychlorinated biphenyls	5.0
A79	Dioxin (2,3,7,8-TCDD)	0.001

Class B: *Based on Total Threshold Limit Concentration (TTLC)*

Class	Constituent	Concentration in mg/kg
(1)	(2)	(3)
B1	Asbestos	10000
B2	Total Petroleum Hydrocarbons (TPH) (C5 - C36)	5000

Note:

(1) The testing method for list of constituents at A1 to A61 in Class A, shall be based on Toxicity Characteristic Leaching Procedure (TCLP) and for extraction of leachable constituents, USEPA Test Method 1311 shall be used.

(2) The testing method for list of constituents at A62 to A79 in Class A, shall be based on Soluble Threshold Limit Concentration (STLC) and Waste Extraction Test (WET) Procedure given in Appendix II of Section 66261 of Title 22 of California Code regulation (CCR) shall be used.

(3) In case of ammonia (A10), cyanide (A11) and chromium VI (A64), extractions shall be conducted using distilled water in place of the leaching media specified in the TCLP/STLC procedures.

(4) A summary of above specified leaching/extraction procedures is included in manual for characterization and analysis of hazardous waste published by Central Pollution Control Board and in case the method is not covered in the said manual, suitable reference

method may be adopted for the measurement.

(5) In case of asbestos, the specified concentration limits apply only if the substances are in a friable, powdered or finely divided state.

(6) The hazardous constituents to be analyzed in the waste shall be relevant to the nature of the industry and the materials used in the process.

Wastes which contain any of the constituents listed below shall be considered as hazardous, provided they exhibit the characteristics listed in Class-C of this Schedule:

1.	Acid Amides
2.	Acid anhydrides
3	Amines
4.	Anthracene
5.	Aromatic compounds other than those listed in Class A
6.	Bromates, (hypo-bromites)
7.	Chlorates (hypo-chlorites)
8.	Carbonyls
9.	Ferro-silicate and alloys
10.	Halogen- containing compounds which produce acidic vapours on contact with humid air or water e.g. silicon tetrachloride, aluminum chloride, titanium tetrachloride
11.	Halogen- silanes
12.	Halogenated Aliphatic Compounds
13.	Hydrazine (s)
14.	Hydrides
15.	Inorganic Acids
16.	Inorganic Peroxides
17.	Inorganic Tin Compounds
18.	Iodates
19.	(Iso- and thio-) Cyanates
20.	Manganese-silicate
21.	Mercaptans
22.	Metal Carbonyls
23.	Metal hydrogen sulphates
24.	Nitrides
25.	Nitriles
26.	Organic azo and azooxy Compounds
27.	Organic Peroxides

28.	Organic Oxygen Compounds
29.	Organic Sulphur Compounds
30.	Organo- Tin Compounds
31.	Organo nitro- and nitroso compounds
32.	Oxides and hydroxides except those of hydrogen, carbon, silicon, iron, aluminum, titanium, manganese, magnesium, calcium
33.	Phenanthrene
34.	Phenolic Compounds
35.	Phosphate compounds except phosphates of aluminum, calcium and iron
36.	Salts of pre-acids
37.	Total Sulphur
38.	Tungsten Compounds
39.	Tellurium and tellurium compounds
40.	White and Red Phosphorus
41	2-Acetylaminofluorene
42.	4-Aminodiphenyl
43.	Benzidine and its salts
44.	Bis (Chloromethyl) ether
45.	Methyl chloromethyl ether
46.	1,2-Dibromo-3-chloropropane
47.	3,3′-Dichlorobenzidine and its salts
48.	4-Dimethylaminoazobenzene
49.	4-Nitrobiphenyl
50.	Beta-Propiolactone

Class C: *Based on hazardous Characteristics*.—Apart from the concentration limit given above, the substances or wastes shall be classified as hazardous waste if it exhibits any of the following characteristics due to the presence of any hazardous constituents:

Class C1: *Flammable*.—A waste exhibits the characteristic of flammability or ignitability if a representative sample of the waste has any of the following properties, namely—

(*i*) flammable liquids, or mixture of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc; but not including substances or wastes otherwise classified on account of their dangerous characteristics), which give off a flammable vapour at temperature less than 60°C. This flash point

shall be measured as per ASTM D 93-79 closed-cup test method or as determined by an equivalent test method published by Central Pollution Control Board;

(*ii*) it is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns vigorously and persistently creating a hazard;

(*iii*) it is an ignitable compressed gas;

(*iv*) It is an oxidizer and for the purposes of characterisation is a substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter.

Class C2: *Corrosive*.—waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties, namely—

(*i*) it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5;

(*ii*) it is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm per year at a test temperature of 55°C;

(*iii*) it is not aqueous and, when mixed with an equivalent weight of water, produces a solution having a pH less than or equal to 2 or greater than or equal to 12.5;

(*iv*) it is not a liquid and, when mixed with an equivalent weight of water, produces a liquid that corrodes steel (SAE1020) at a rate greater than 6.35 mm per year at a test temperature of 55°C.

Note: For the purpose of determining the corrosivity, the Bureau of Indian Standard 9040 C method for pH determination, NACE TM 01 69 : Laboratory Corrosion Testing of Metals and EPA 1110A method for corrosivity towards steel (SAE1020) to establish the corrosivity characteristics shall be adopted.

Class C3: *Reactive or explosive*.—A waste exhibits the characteristic of reactivity if a representative sample of the waste it has any of the following properties, namely—

(*i*) it is normally unstable and readily undergoes violent change without detonating;

(*ii*) it reacts violently with water or forms potentially explosive mixtures with water;

(*iii*) when mixed with water, it generates toxic gases, vapours or fumes in a quantity sufficient to present a danger to human health or the environment;

(*iv*) it is a cyanide or sulphide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapours or fumes in a quantity sufficient to present a danger to

human health or the environmental;

(*v*) it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

(*vi*) it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure;

(*vii*) it is a forbidden explosive.

Class C4: *Toxic*.—A waste exhibits the characteristic of toxicity, if,—

(*i*) the concentration of the waste constituents listed in Class A and B (of this schedule) are equal to or more than the permissible limits prescribed therein;

(*ii*) it has an acute oral LD50 less than 2,500 milligrams per kilogram;

(*iii*) it has an acute dermal LD50 less than 4,300 milligrams per kilogram;

(*iv*) it has an acute inhalation LC50 less than 10,000 parts per million as a gas or vapour;

(*v*) it has acute aquatic toxicity with 50% mortality within 96 hours for zebra fish (*Brachidanio rerio*) at a concentration of 500 milligrams per litre in dilution water and test conditions as specified in BIS test method 6582-2001.

(*vi*) it has been shown through experience or by any standard reference test- method to pose a hazard to human health or environment because of its carcinogenicity, mutagenecity, endocrine disruptivity, acute toxicity, chronic toxicity, bio-accumulative properties or persistence in the environment.

Class C5: *Substances or Wastes liable to spontaneous combustion*.—Substances or Wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.

Class C6: *Substances or Wastes which, in contact with water emit flammable gases*.—Substances or Wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

Class C7: *Oxidizing*.—Substances or Wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen cause, or contribute to, the combustion of other materials.

Class C8: *Organic Peroxides*.—Organic substances or Wastes which contain the bivalent o-o structure, which may undergo exothermic self-accelerating decomposition.

Class C9: *Poisons (acute)*.—Substances or Wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.

Class C10: *Infectious substances*.—Substances or Wastes containing

viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.

Class C11: *Liberation of toxic gases in contact with air or water*.—Substances or Wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.

Class C12: *Eco-toxic*.—Substances or Wastes which if released, present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation or toxic effects upon biotic systems or both.

Class C13: Capable, by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above.

SCHEDULE III

[*See* Rules 3 (1)(17)(*iii*), 3(23), 12, 13 and 14]

PART A

List of hazardous wastes applicable for import and export with Prior Informed Consent [Annexure VIII of the Basel Convention]*

Basel No.	Description of Hazardous Wastes
(1)	(2)
A1	Metal and Metal bearing wastes
A1010	Metal wastes and waste consisting of alloys of any of the following but excluding such wastes specifically listed in Part B and Part D
	—Antimony
	—Cadmium
	—Lead
	—Tellurium
A1020	Waste having as constituents or contaminants, excluding metal wastes in massive form, any or the following:
	—Antimony, antimony compounds
	—Cadmium, cadmium compounds
	—Lead, lead compounds
	—Tellurium, tellurium compounds
A1040	Waste having metal carbonyls as constituents
A1050	Galvanic sludges
A1070	Leaching residues from zinc processing, dust and sludges such as jarosite, hematite, etc.
A1080	Waste zinc residues not included in Part B, containing lead and cadmium in concentrations sufficient to exhibit hazard

	characteristics indicated in Part C
A1090	Ashes from the incineration of insulated copper wire
A1100	Dusts and residues from gas cleaning systems of copper smelters
A1120	Waste sludges, excluding anode slimes, from electrolyte purification systems in copper electrorefining and electrowinning operations
A1140	Waste cupric chloride and copper cyanide catalysts not in liquid form note the related entry in Schedule VI
A1150	Precious metal ash from incineration of printed circuit boards not included in Part B
A1160	Waste lead acid batteries, whole or crushed
A1170	Unsorted waste batteries excluding mixtures of only Part B batteries. Waste batteries not specified in Part B containing constituents mentioned in Schedule II to an extent to render them hazardous
A2	Wastes containing principally inorganic constituents, which may contain metals and organic materials
A2010	Glass waste from cathode-ray tubes and other activated glasses
A2030	Waste catalysts but excluding such wastes specified in Part B
A3	Wastes containing principally organic constituents, which may contain metals and inorganic materials
A3010	Waste from the production or processing of petroleum coke and bitumen
A3020	Waste mineral oils unfit for their originally intended use
A3050	Wastes from production, formulation and use of resins, latex, plasticizers, glues or adhesives excluding such wastes specified in Part B (B4020)
A3120	Fluff-light fraction from shredding
A3130	Waste organic phosphorus compounds
A4	Wastes which may contain either inorganic or organic constituents
A4010	Wastes from the production, preparation and use of pharmaceutical products but excluding such waste specified in Part B
A4040	Wastes from the manufacture, formulation and use of wood-preserving chemicals (does not include wood treated with wood preserving chemicals)

A4070	Waste from the production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish excluding those specified in Part B (B4010)
A4100	Wastes from industrial pollution control devices for cleaning of industrial off-gases but excluding such wastes specified in Part B
A4120	Wastes that contain, consist of or are contaminated with peroxides.
A4130	Wastes packages and containers containing Schedule II constituents in concentration sufficient to exhibit Part C of Schedule III hazard characteristics.
A4140	Waste consisting of or containing off specification or outdated chemicals (unused within the period recommended by the manufacturer) corresponding to constituents mentioned in Schedule II and exhibiting Part C of Schedule III hazard characteristics.
A4160	Spent activated carbon not included in Part B, B2060

*This List is based on Annexure VIII of the Basel Convention on Transboundary Movement of Hazardous Wastes and comprises of wastes characterized as hazardous under Article I, paragraph 1(a) of the Convention. Inclusion of wastes on this list does not preclude the use of hazard.

Characteristics given in Annexure VIII of the Basel Convention (Part C of this Schedule) to demonstrate that the wastes are not hazardous. Hazardous wastes in Part A are restricted and cannot be allowed to be imported without permission from the Ministry of Environment, Forest and Climate Change and the Directorate General of Foreign Trade license, if applicable.

PART B

List of other wastes applicable for import and export and not requiring Prior Informed Consent [Annex IX of the Basel Convention]*

Basel No.	Description of wastes
(1)	(2)
B1	Metal and metal-bearing wastes
B1010	Metal and metal-alloy wastes in metallic, non-dispersible form:
	— Thorium scrap
	— Rare earths scrap
B1020	Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plates, beams, rods, etc.), of:

	— Antimony scrap
	— Beryllium scrap
	— Cadmium scrap ——
	— Lead scrap (excluding lead acid batteries)
	— Selenium scrap
	— Tellurium scrap
B1030	Refractory metals containing residues
B1031	Molybdenum, tungsten, titanium, tantalum, niobium and rhenium metal and metal alloy wastes in metallic dispersible form (metal powder), excluding such wastes as specified in Part A under entry A1050, Galvanic sludges
B1040	Scrap assemblies from electrical power generation not contaminated with lubricating oil, PCB or PCT to an extent to render them hazardous
B1050	Mixed non-ferrous metal, heavy fraction scrap, containing cadmium, antimony, lead & tellurium mentioned in Schedule II in concentrations sufficient to exhibit Part C characteristics
B1060	Waste selenium and tellurium in metallic elemental form including powder
B1070	Waste of copper and copper alloys in dispersible form, unless they contain any of the constituents mentioned in Schedule II to an extent that they exhibit Part C characteristics
B1080	Zinc ash and residues including zinc alloys residues in dispersible form unless they contain any of the constituents mentioned in Schedule II in concentration such as to exhibit Part C characteristics
B1090	Waste batteries conforming to a standard battery specification, excluding those made with lead, cadmium or mercury
B1100	Metal bearing wastes arising from melting, smelting and refining of metals:
	— Slags from copper processing for further processing or refining containing arsenic, lead or cadmium
	— Slags from precious metals processing for further refining
	— Wastes of refractory linings, including crucibles, originating from copper smelting
	— Tantalum-bearing tin slags with less than 0.5% tin
B1110	Used Electrical and electronic assemblies other than those listed in Part D of Schedule III

	Electronic assemblies consisting only of metals or alloys Waste electrical and electronic assemblies or scrap (including printed circuit boards) not containing components such as accumulators and other batteries included in Part A of Schedule III, mercury-switches, glass from cathode-ray tubes and other activated glass and PCB-capacitors, or not contaminated with Schedule II constituents such as cadmium, mercury, lead, polychlorinated biphenyl) or from which these have been removed, to an extent that they do not possess any of the characteristics contained in Part C of Schedule III (note the related entry in Schedule VI, A1180)
	[22][High End and High Value Used Medical Equipment other than Used Critical Care Medical Equipment for reuse (note the related entry in Schedule VI, B1110) **]
B1120	Spent catalysts excluding liquids used as catalysts, containing any of: Transition metals, excluding waste catalysts (spent catalysts, liquid used catalysts or other catalysts) in Part A and Schedule VI: —Scandium —Titanium —Vanadium —Chromium —Manganese —Iron —Cobalt —Nickel —Copper —Zinc —Yttrium —Zirconium —Niobium —Molybdenum —Hafnium —Tantalum —Tungsten —Rhenium Lanthanides (rare earth metals): —Lanthanum —Cerium
	—Praseodymium—Neodymium —Samarium—Europium —Gadolinium—Terbium —Dysprosium—Holmium —Erbium —Thulium —Ytterbium—Lutetium
B1130	Cleaned spent precious metal bearing catalysts
B1140	Precious metal bearing residues in solid form which contain traces of inorganic cyanides
B1150	Precious metals and alloy wastes (gold, silver, the platinum group but not mercury) in a dispersible form, non-liquid form

	with appropriate packaging and labelling
B1160	Precious metal ash from the incineration of printed circuit boards (note the related entry in Part A A1150)
B1170	Precious metal ash from the incineration of photographic film
B1180	Waste photographic film containing silver halides and metallic silver
B1190	Waste photographic paper containing silver halides and metallic silver
B1200	Granulated slag arising from the manufacture of iron and steel
B1210	Slag arising from the manufacture of iron and steel including slags as a source of Titanium dioxide and Vanadium
B1220	Slag from zinc production, chemically stabilised, having a high iron content (above 20%) and processed according to industrial specifications mainly for construction
B1230	Mill scale arising from the manufacture of iron and steel
B1240	Copper Oxide mill-scale
B2	Wastes containing principally inorganic constituents, which may contain metals and organic materials
B2010	Wastes from mining operations in non-dispersible form:
	— Natural graphite waste
	— Slate wastes
	— Mica wastes
	— Leucite, nepheline and nepheline syenite waste
	— Feldspar waste
	— Fluorspar waste
	— Silica wastes in solid form excluding those used in foundry operations
[23][* * *]	
B2030	Ceramic wastes in non-dispersible form: — Cermet wastes and scrap (metal ceramic composites) — Ceramic based fibres
B2040	Other wastes containing principally inorganic constituents: — Partially refined calcium sulphate produced from flue gas desulphurization (FGD) — Waste gypsum wallboard or plasterboard arising from the demolition of buildings — Slag from copper production, chemically stabilized,

	having a high iron content (above 20%) and processed according to industrial specifications mainly for construction and abrasive applications — Sulphur in solid form — Limestone from production of calcium cyanamide (pH<9) — Sodium, potassium, calcium chlorides — Carborundum (silicon carbide) — Broken concrete — Lithium-tantalum and lithium-niobium containing glass scraps
B2060	Spent activated carbon not containing any of Schedule II constituents to the extent they exhibit Part C characteristics, for example, carbon resulting from the treatment of potable water and processes of the food industry and vitamin production (note the related entry in Part A A4160)
B2070	Calcium fluoride sludge
B2080	Waste gypsum arising from chemical industry processes not included in Schedule VI (note the related entry in A2040)
B2090	Waste anode butts from steel or aluminium production made of petroleum coke or bitumen and cleaned to normal industry specifications (excluding anode butts from chlor alkali electrolyses and from metallurgical industry)
B2100	Waste hydrates of aluminium and waste alumina and residues from alumina production, excluding such materials used for gas cleaning, flocculation or filtration processes
B2130	Bituminous material (asphalt waste) from road construction and maintenance, not containing tar (note the related entry in Schedule VI, A3200)
B3	Wastes containing principally organic constituents, which may contain metals and inorganic materials
[24] [B3011	Solid plastic waste - Polymethyl methacrylate - Polyethylene terephthalate] [25][- Polysiloxanes - only post-industrial or pre-consumer]
B3027	Self-adhesive label laminate waste containing raw materials used in label material production
B3030	[26][* * *]
B3035	[27][* * *]
B3040	Rubber Wastes

	The following materials, provided they are not mixed with other wastes: — Waste and scrap of hard rubber (e.g., ebonite) — Other rubber wastes (excluding such wastes specified elsewhere)
B3050	Untreated cork and wood waste: — Wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms — Cork waste: crushed, granulated or ground cork
B3060	Wastes arising from agro-food industries provided it is not infectious: — Wine lees — Dried and sterilized vegetable waste, residues and by-products, whether or not in the form of pellets, of a kind used in animal feeding, not elsewhere specified or included — *Degras*: residues resulting from the treatment of fatty substances or animal or vegetable waxes — Waste of bones and horn-cores, unworked, defatted, simply prepared (but not cut to shape), treated with acid or degelatinised — Fish waste — Cocoa shells, husks, skins and other cocoa waste — Other wastes from the agro-food industry excluding by-products which meet national and international requirements and standards for human or animal consumption
B3070	The following wastes: — Waste of human hair — Waste straw — Deactivated fungus mycelium from penicillin production to be used as animal feed
B3080	Waste parings and scrap of rubber
B3090	Paring and other wastes of leather or of composition leather not suitable for the manufacture of leather articles, excluding leather sludges, not containing hexavalent chromium compounds and biocides (note the related entry in Schedule VI, A3100)
B3100	Leather dust, ash, sludges or flours not containing hexavalent chromium compounds or biocides (note the related entry in Schedule VI, A3090)
B3110	Fellmongery wastes not containing hexavalent chromium compounds or biocides or infectious substances (note the

	related entry in Schedule VI, A3110)
B3120	Wastes consisting of food dyes
B3130	Waste polymer ethers and waste non-hazardous monomer ethers incapable of forming peroxides
B3140	Waste pneumatic and other tyres, excluding those which do not lead to resource recovery, recycling, reclamation but not for direct reuse
B4	Wastes which may contain either inorganic or organic constituents
B4010	Wastes consisting mainly of water-based or latex paints, inks and hardened varnishes not containing organic solvents, heavy metals or biocides to an extent to render them hazardous (note the related entry in Part A, A4070)
B4020	Wastes from production, formulation and use of resins, latex, plasticizers, glues or adhesives, not listed in Part A, free of solvents and other contaminants to an extent that they do not exhibit Part C characteristics (note the related entry in Part A, A3050)
B4030	Used single-use cameras, with batteries not included in Part A

* This list is based on Annexure IX of the Basel Convention on Transboundary Movement of Hazardous Wastes and comprises of wastes not characterized as hazardous under Article-I of the Basel Convention. The wastes in Part- B are restricted and cannot be allowed to be imported without permission from the Ministry of Environment, Forest and Climate Change and the Directorate General of Foreign Trade license, if applicable.

[28][** Import permitted in the country by actual user or by Original Equipment Manufacturers (OEM) or Indian Subsidiary of OEM or Trader on behalf of actual user;

High End and High Value Medical Equipment is such medical equipment as specified by the Ministry of Health and Family Welfare from time to time.]

Note.—(1) Copper dross containing copper greater than 65% and lead and Cadmium equal to or less than 1.25% and 0.1% respectively; spent cleaned metal catalyst containing copper; and copper reverts, cake and residues containing lead and cadmium equal to or less than 1.25% and 0.1% respectively are allowed for import without Director General of Foreign Trade license to units (actual users) authorised by State Pollution Control Board and with the Ministry of Environment, Forest and Climate Change's permission. Copper reverts, cake and residues containing lead and cadmium greater than 1.25% and 0.1% respectively are under restricted category for which import is permitted only against Director

General of Foreign Trade license for the purpose of processing or reuse by units permitted with the Ministry of Environment, Forest and Climate Change (actual users).

(2) Zinc ash or skimmings in dispersible form containing zinc more than 65% and lead and cadmium equal to or less than 1.25% and 0.1% respectively and spent cleaned metal catalyst containing zinc are allowed for import without Director General of Foreign Trade license to units authorised by State Pollution Control Board, Ministry of Environment, Forest and Climate Change's permission (actual users) up to an annual quantity limit indicated in registration letter. Zinc ash and skimmings containing less than 65% zinc and lead and cadmium equal to or more than 1.25% and 0.1% respectively and hard zinc spelter and brass dross containing lead greater than 1.25% are under restricted category for which import is permitted against Director General of Foreign Trade license and only for purpose of processing or reuse by units registered with the Ministry of Environment Forest and Climate Change (actual users).

PART C

List of Hazardous Characteristics

Code	Characteristic
H 1	Explosive
	An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surrounding.
H 3	Flammable liquids
	The word “flammable” has the same meaning as “inflammable”. Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc. but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.5°C, closed-cup test, or not more than 65.6°C, open-cup test. (Since the results of open-cups tests and of closed-cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowance for such differences would be within the spirit of this definition).
H 4.1	Flammable solids
	Solids. or waste solids. other than those classed as

explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.

H 4.2 Substances or wastes liable to spontaneous combustion

Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.

H 4.3 Substances or wastes which, in contact with water emit flammable gases

Substances or wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

H 5.1 Oxidizing

Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen cause, or contribute to, the combustion or other materials.

H 5.2 Organic Peroxides

Organic substances or wastes which contain the bivalent-o -o-structure are thermally unstable substances which may undergo exothermic self-accelerating decomposition.

H 6.1 Poisons (acute)

Substances or wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.

H 6.2 Infectious substances

Substances or wastes containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.

H 8 Corrosives

Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport; they may also cause other hazards.

H 10 Liberation of toxic gases in contact with air or water

Substances or wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.

H 11 Toxic (delayed or chronic)

Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity).

H 12 Eco-toxic

Substances or wastes which if released, present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation or toxic effects upon biotic systems or both.

H 13 Capable, by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above.

PART D

List of other wastes applicable for import and export without permission from Ministry of Environment, Forest and Climate Change [Annex IX of the Basel Convention]*

Basel No.	Description of wastes
(1)	(2)
B1	Metal and metal-bearing wastes
B1010	Metal and metal-alloy wastes in metallic, non-dispersible form:
	— Precious metals (gold, silver, platinum but not mercury)**
	— Iron and steel scrap**
	— Nickel scrap**
	— Aluminium scrap**
	— Zinc scrap**
	— Tin scrap**
	— Tungsten scrap**
	— Molybdenum scrap**
	— Tantalum scrap**
	— Cobalt scrap**
	— Bismuth scrap**
	— Titanium scrap**
	— Zirconium scrap**
	— Manganese scrap**
	— Germanium scrap**
	— Vanadium scrap **

	— Hafnium scrap**
	— Indium scrap**
	— Niobium scrap**
	— Rhenium scrap**
	— Gallium scrap**
	— Magnesium scrap**
	— Copper scrap**
	— Chromium scrap**
B1050	Mixed non-ferrous metal, heavy fraction scrap, containing metals other than specified in Part B1050 and not containing constituents mentioned in Schedule II in concentrations sufficient to exhibit Part C characteristics**
B1100	Metal bearing wastes arising from melting, smelting and refining of metals:
	— Hard Zinc spelter**
	— Zinc-containing drosses**: ~ Galvanizing slab zinc top dross (>90% Zn) ~ Galvanizing slab zinc bottom dross (>92% Zn) ~ Zinc die casting dross (>85% Zn) ~ Hot dip galvanizers slab zinc dross (batch) (>92% Zn) ~ Zinc skimmings
	— Aluminium skimmings (or skims) excluding salt slag
B1110	Electrical and electronic assemblies (including printed circuit boards, electronic components and wires) destined for direct reuse and not for recycling or final disposal
	— [29][Used electrical and electronic assemblies imported for repair or refurbishment and to be re-exported after repair or refurbishment to OEMs or any other company in the country of origin or any other company in any other country within one year of import* * *: Provided that 5% of unrepairable used electrical and electronic assemblies, by weight, may be retained in the country and the same shall be sent to authorised recyclers only in accordance with these rules and the E-Waste (Management) Rules, 2022.]
	— Used electrical and electronic assemblies imported for rental purpose and re-exported back within one year of import * * *
	— Used electrical and electronic assemblies exported for repair and to be re-import after repair

	— Used electrical and electronic assemblies imported for testing, research and development, project work purposes and to be re-exported back within a period of three years from the date of import * * *
	— Spares imported for warranty replacements provided equal number of defective or non-functional parts are exported back within one year of the import * * *
	— Used electrical and electronic assemblies imported by Ministry of Defence, Department of Space and Department of Atomic Energy * * *
	— Used electrical and electronic assemblies (not in bulk; quantity less than or equal to three) imported by the individuals for their personal uses
	— Used Laptop, Personal Computers, Mobile, Tablet up to 01 number each imported by organisations in a year
	— Used electrical and electronic assemblies owned by individuals and imported on transfer of residence
	— Used multifunction print and copying machines (MFDs)* * * *
	— Used electrical and electronic assemblies imported by airlines for aircraft maintenance and remaining either on board or under the custodianship of the respective airlines warehouses located on the airside of the custom bonded areas.
	[30][— Used electrical and electronic assemblies imported for testing, research and development, project work purposes by the Department of Scientific and Industrial Research (DSIR) approved research and development units or units in Software Technology Parks of India (STPI), Electronic Hardware Technology Park (EHTP), Export Oriented Units (EOU) and Biotechnology Parks (BTP) with investment of Rs. 50 Crore in a Research and Development (R&D) facility* * *
	— Used plant and machinery having a residual life of at least 5 years for manufacturing of electrical and electronic items by the electronic industry* * *]
	[31][Electrical and electronic assemblies and components manufactured in and exported from India if found defective or non-functional can be imported back by Original Equipment Manufacturers (OEMs) within twelve months from the date of export]

[32][B2	Wastes containing principally inorganic constituents, which may contain metals and organic materials
B2020	Glass wastes in non-dispersible form: - Cullet and other waste and scrap of glass except for glass from cathode-ray tubes and other activated glasses]
B3	Wastes containing principally organic constituents, which may contain metals and inorganic materials
B3020	[33][Paper, paperboard, and paper product wastes**ā] The following materials, provided they are not mixed with hazardous wastes: Waste and scrap of paper or paperboard of: — unbleached paper or paperboard or of corrugated paper or paperboard — other paper or paperboard, made mainly of bleached chemical pulp, not coloured in the mass — paper or paperboard made mainly of mechanical pulp (for example newspapers, journals and similar printed matter) — other, including but not limited to (1) laminated paperboard (2) unsorted scrap
[34][B3030	Textile wastes** The following materials which are textile wastes, provided they are not mixed with other wastes and are prepared to a specification: — Silk wastes (including cocoons unsuitable for reeling, yarn waste and garnetted stock) • not carded or combed • other — Wastes of wool or of fine or coarse animal hair, including yarn waste but excluding garnetted stock • noils of wool or of fine animal hair • other wastes of wool or of fine animal hair • waste of coarse animal hair — Cotton wastes (including yarn waste and garnetted stock) • yarn wastes (including thread waste) • garnetted stock • other — Flax tow and wastes — Tow and waste (including yarn waste and garnetted

	stock) of true hemp (Cannabis sativa L.) — Tow and wastes (including yarn wastes and garnetted stock) of jute and other textile bast fibres (excluding flax, true hemp and ramie) — Tow and wastes (including yarn wastes and garnetted stock) of sisal and other textile fibres of the genus Agave — Tow, noils and wastes (including yarn wastes and garneted stock) of coconut — Tow, noils and wastes (including yarn wastes and garneted stock) of abaca (Manila hemp or Musa textiles Nee) — Tow, noils and wastes (including yarn wastes and garneted stock) of ramie and other vegetable textile fibres, not elsewhere specified or included — Wastes (including noils, yarn wastes and garnetted stock) of manmade fibres • of synthetic fibres • of artificial fibres — Worn clothing and other worn textile articles — Used rags, scrap twine, cordage, rope and cables and worn-out articles of twine, cordage, rope or cables of textile materials • sorted • other
B3035	Wastes textile floor coverings and carpets**]
B3140	Aircraft Tyres exported to Original Equipment Manufacturers for re-treading and re-imported after re-treading by airlines for aircraft maintenance and remaining either on board or under the custodianship of the respective airlines warehouses located on the airside of the custom bonded areas

Note:

* This list is based on Annexure IX of the Basel Convention on Transboundary Movement of Hazardous Wastes and comprises of wastes not characterized as hazardous under Article-I of the Basel Convention.

[35][** Import permitted in the country to the actual user or to the trader for use of the actual users authorised by State Pollution Control Board on one-time basis and subject to verification of

documents specified in Schedule VIII of these rules by the Custom Authority.

**ā Import permitted in the country to the actual user or to the trader on behalf of the actual user authorised by State Pollution Control Board on one-time basis and subject to verification of documents specified in Schedule VIII of these rules by the Custom Authority.]

*** Import permitted in the country only to the actual users from Original Equipment Manufacturers (OEM) and subject to verification of documents specified in Schedule VIII of these rules by the Custom Authority.

[36][**** Import permitted in the country to the actual users or trader in accordance with the documents required and verified by the Custom Authority as specified under Schedule VIII of these rules. The policy for free trade for multifunction print and copying machine to be reviewed once the MFDs are domestically manufactured.]

All other wastes listed in Part D of Schedule III having no "Stars" are permitted without any documents from MoEF&CC subject to compliance of the conditions of the Customs Authority, if any.

SCHEDULE IV

[*See* Rules 6(1)(*ii*) and 6(2)]

List of commonly recyclable hazardous wastes

Sl. No.	Wastes
(1)	(2)
1.	Brass Dross
2.	Copper Dross
3.	Copper Oxide mill scale
4.	Copper reverts, cake and residue
5.	Waste Copper and copper alloys in dispersible from
6.	Slags from copper processing for further processing or refining
7.	Insulated Copper Wire Scrap or copper with PVC sheathing including ISRI-code material namely "Druid"
8.	Jelly filled Copper cables
9.	Spent cleared metal catalyst containing copper
10.	Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt
11.	Zinc Dross-Hot dip Galvanizers SLAB
12.	Zinc Dross-Bottom Dross
13.	Zinc ash/Skimmings arising from galvanizing and die casting operations

14.	Zinc ash/Skimming/other zinc bearing wastes arising from smelting and refining
15.	Zinc ash and residues including zinc alloy residues in dispersible from
16.	Spent cleared metal catalyst containing zinc
17.	Used Lead acid battery including grid plates and other lead scrap/ashes/residues not covered under Batteries (Management and Handling) Rules, 2001. [Battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs covered by ISRI, Code word "Rakes". Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "rains".
18.	Components of waste electrical and electronic assembles comprising accumulators and other batteries included in Part A of Schedule III, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule II constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in Part C of Schedule III.
19.	Paint and ink Sludge/residues
20.	Used oil and waste oil

SCHEDULE V

[*See* Rules 3(36) and 3(39)]

PART A

Specifications of Used Oil Suitable for recycling

Sl. No.	Parameter	Maximum permissible Limits
(1)	(2)	(3)
1.	Polychlorinated biphenyls (PCBs)	< 2ppm *
2.	Lead	100 ppm
3.	Arsenic	5 ppm
4.	Cadmium+Chromium+Nickel	500 ppm
5.	Polyaromatic hydrocarbons (PAH)	6%

PART B

Specification of fuel derived from waste oil

Sl. No.	Parameter	Maximum permissible limits

(1)	(2)	(3)
1.	Sediment	0.25%
2.	Lead	100 ppm
3.	Arsenic	5 ppm
4.	Cadmium + Chromium + Nickel	500 ppm
5.	Polyaromatic hydrocarbons (PAH)	6%
6.	Total halogents	4000 ppm
7.	Polychlorinated biphenyls (PCBs)	<2 ppm *
8.	Sulfur	4.5%
9.	Water Content	1%

*The detection limit is 2 ppm by gas Liquid Chromatography (GLC) using

Electron Capture detector (ECD)

SCHEDULE VI

[*See* Rules 12(6), 12(7) and 14(1)]

Hazardous and Other wastes prohibited for import

Basel No.	Description of hazardous and other wastes
(1)	(2)
A1	Metal and Metal bearing wastes
A1010	Metal wastes and waste consisting of alloys of any of the following but excluding such wastes specifically listed in Part B and Part D of Schedule III
	— Arsenic
	— Beryllium
	— Mercury
	— Selenium
	— Thallium
A1020	Wastes having as constituents or contaminants, excluding metal wastes in massive form, any of the following:
	— Beryllium; beryllium compounds
	— Selenium; selenium compounds
A1030	Wastes having as constituents or contaminants any of the following:
	— Arsenic; arsenic compounds
	— Mercury; mercury compounds

	— Thallium; thallium compounds
A1040	Waste having hexavalent chromium compounds as constituents
A1140	Waste cupric chloride and copper cyanide catalysts in liquid form (note the related entry in Part A of Schedule III)
A1060	Wastes liquors from the pickling of metals
A1110	Spent electrolytic solutions from copper electrorefining and electrowinning operations
A1130	Spent etching solutions containing dissolved copper
A1180	Waste electrical and electronic assembles or scrap (does not include scrap assemblies from electric power generation) containing components such as accumulators and other batteries included in Part A of Schedule III, mercury-switches, glass from cathode-ray tubes and other activated glass and PCB-capacitors, or contaminated with Schedule II constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in Part C of Schedule III (note the related entry in Part B B1110)
A1190	Waste metal cables coated or insulated with plastics containing or contaminated with coal tar, PCB, lead, cadmium, other organohalogen compounds or other constituents as mentioned in Schedule II to the extent that they exhibit hazard characteristics indicated in Part C of Schedule III
A2	Wastes containing principally inorganic constituents, which may contain metals and organic materials
A2020	Waste inorganic fluorine compounds in the form of liquids or sludges but excluding such wastes specified in Part B
A2040	Waste gypsum arising from chemical industry processes, if it contains any of the constituents mentioned in Schedule 2 to the extent that they exhibit hazard characteristics indicated in Part C of Schedule III (note the related entry in Part B B2080)
A2050	Waste asbestos (dusts and fibres)
A2060	Coal-fired power plant fly-ash containing Schedule II constituents in concentrations sufficient to exhibit Part C characteristics
A3	Wastes containing principally organic constituents, which may contain metals and inorganic materials
A3030	Wastes that contain, consist of or are contaminated with

	leaded anti-knock compounds sludges.
A3040	Waste thermal (heat transfer) fluids
A3060	Waste nitrocellulose
A3070	Waste phenols, phenol compounds including chlorophenol in the form of liquids or sludges
A3080	Waste ethers not including those specified in Part B
A3090	Waste leather dust, ash, sludges and flours when containing hexavalent chromium compounds or biocides (note the related entry in Part B B3100)
A3100	Waste paring and other waste of leather or of composition leather not suitable for the manufacture of leather articles, containing hexavalent chromium compound and biocides (note the related entry in Part B B3090)
A3110	Fellmongery wastes containing hexavalent chromium compounds or biocides or infectious substances (note the related entry in Part B B3110)
A3140	Waste non-halogenated organic solvents but excluding such wastes specified in Part B
A3150	Waste halogenated organic solvents
A3160	Waste halogenated or unhalogenated non-aqueous distillation residues arising from organic solvent recovery operations
A3170	Waste arising from the production of aliphatic halogenated hydrocarbons (such as chloromethane, dichloro-ethane, vinyl chloride, vinylidene chloride, allyl chloride and epichlorhydrin)
A3180	Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyl (PCB), polychlorinated terphenyl (PCT), polychlorinated naphthalene (PCN) or polybrominated biphenyl (PBB) or any other polybrominated analogues of these compounds
A3190	Waste tarry residues (excluding asphalt cements) arising from refining, distillation and any pyrolytic treatment of organic materials
A3200	Bituminous material (asphalt waste) from road construction and maintenance, containing tar (note the related entry in Part B, B2130)
A4	Wastes which may contain either inorganic or organic constituents
A4020	Clinical and related wastes; that is wastes arising from medical, nursing, dental, veterinary, or similar practices, and wastes generated in hospitals or other facilities during the investigation or treatment of patients, or research projects.

A4030	Waste from the production, formulation and use of biocide and phyto-pharmaceuticals, including waste pesticides and herbicides which are off-specification, out-dated (unused within the period recommended by the manufacturer), or unfit for their originally intended use,
A4050	Wastes that contain, consist of, or are contaminated with any of the following: — Inorganic cyanides, excepting precious-metal-bearing residues in solid form containing traces of inorganic cyanides. — Organic cyanides
A4060	Waste oils/water, hydrocarbons/water mixtures, emulsions
A4080	Wastes of an explosive nature (but excluding such wastes specified in Part B)
A4090	Waste acidic or basic solutions, other than those specified at B2120 of this Schedule
A4110	Wastes that contain, consist of or are contaminated with any of the following: — Any congenor of polychlorinated dibenzo-furan. — Any congenor of polychlorinated dibenzo-P-dioxin.
A4150	Waste chemical substances arising from research and development or teaching activities which are not identified and /or are new and whose effects on human health and /or the environment are not known
B1	Metal and Metal bearing wastes
B1110	Used critical care medical equipment for re-use
B1115	Waste metal cables coated or insulated with plastics, not included in A1190 of this schedule, excluding those destined for operations which do not lead to resource recovery, recycling, reclamation, direct re-use or alternative uses or any other disposal operations involving, at any stage, uncontrolled thermal processes, such as open-burning.
B1250	Waste end-of-life motor vehicles, containing neither liquids nor other hazardous components
B2	Wastes containing principally inorganic constituents, which may contain metals and organic materials
B2050	Coal-fired power plant fly-ash, note the related entry at A2060 of this Schedule
B2110	Bauxite residue (red mud) (pH moderated to less than 11.5)
B2120	Waste acidic or basic solutions with a pH greater than 2 and

	less than 11.5, which are not corrosive or otherwise hazardous (note the related entry at A4090 of this schedule)
B3	Wastes containing principally organic constituents, which may contain metals and inorganic materials
[37] [B3011]	Solid plastic waste The following plastic or mixed plastic waste, prepared to a specification: — Scrap plastic of non-halogenated polymers and co-polymers, including but not limited to the following: Ethylene, Styrene, Polypropylene, [38][* * *], Acrylonitrile, Butadiene, Polyacetals, Polyamides, polybutylene terephthalate, Polycarbonates, Polyethers, polyphenylene sulphides, acrylic polymers, alkanes C10-C13 (plasticiser), polyurethane (not containing CFC's), [39][* * *], [40][* * *], polyvinyl alcohol, polyvinyl butyral, Polyvinyl acetate — Cured waste resins or condensation products including the following: urea formaldehyde resins, phenol formaldehyde resins, melamine formaldehyde resins, epoxy resins, alkyd resins, polyamides — The following fluorinated polymer wastes (excluding post-consumer wastes): perfluoroethylene/ propylene, perfluoro alkoxy alkane, tetrafluoroethylene/ per fluoro vinyl ether (PFA), tetrafluoroethylene/per fluoro methylvinyl ether (MFA), polyvinylfluoride, polyvinylidenefluoride [*Note*.—[41][* * *]
B3026	The following waste from the pre-treatment of composite packaging for liquids, not containing constituents mentioned in Schedule II in concentrations sufficient to exhibit Part C characteristics: — Non-separable plastic fraction — Non-separable plastic-aluminium fraction
B3065	Waste edible fats and oils of animal or vegetable origin (e.g. frying oil)
B3140	Waste pneumatic tyres for direct reuse
Y 46	Wastes collected from household/municipal waste
Y 47	Residues arising from the incineration of household wastes

SCHEDULE VII

[*See* Rules 13(6) and 21]

List of authorities and corresponding duties

Sl. No.	Authority	Corresponding Duties
(1)	(2)	(3)
1.	Ministry of Environment, Forests and Climate Change under the Environment (Protection) Act, 1986	(*i*) Identification of hazardous and other wastes (*ii*) Permission to exporters of hazardous and other wastes (*iii*) Permission to importer of hazardous and other wastes (*iv*) Permission for transit of hazardous and other wastes through India. (*v*) Promote environmentally sound management of hazardous and other waste. (*vi*) Sponsoring of training and awareness programme on Hazardous and Other Waste Management related activities.
2.	Central Pollution Control Board constituted under the Water (Prevention and Control of Pollution) Act, 1974	(*i*) Co-ordination of activities of State Pollution Control Boards (*ii*) Conduct training courses for authorities dealing with management of hazardous and other wastes (*iii*) Recommend standards and specifications for treatment and disposal of wastes and leachates, recommend procedures for characterisation of hazardous wastes. (*iv*) Inspection of facilities handling hazardous waste as and when necessary. (*v*) Sector specific documentation to identify

			waste for inclusion in these rules.
		(*vi*)	Prepare and update guidelines to prevent or minimise the generation and handling of hazardous and other wastes.
		(*vii*)	Prepare and update guidelines/Standard Operating Procedures (SoPs) for recycling, utilization, pre-processing, co-processing of hazardous and other wastes.
		(*viii*)	To prepare annual review report on management of hazardous waste.
		(*ix*)	Any other function assigned by the Ministry of Environment, Forest and Climate Change, from time to time.
3.	State Government/Union Territory Government/Administration	(*i*)	Identification of site(s) for common Hazardous and Other Waste Treatment Storage and Disposal Facility (TSDF)
		(*ii*)	Asses Environment Impact Assessment (EIA) reports and convey the decision of approval of site or otherwise Acquire the site or inform operator of facility or occupier or association of occupiers to acquire the site
		(*iii*)	Notification of sites.
		(*iv*)	Publish periodically an inventory of all potential or existing disposal sites in the State or Union Territory
4.	State Pollution Control Boards or Pollution Control Committees constituted	(*i*)	Inventorisation of hazardous and other wastes
		(*ii*)	Grant and renewal of

	under the Water (Prevention and Control of Pollution) Act, 1974		authorisation
		(*iii*)	Monitoring of compliance of various provisions and conditions of permission including conditions of permission for issued by Ministry of Environment, Forest and Climate Change for exports and imports
		(*iv*)	Examining the applications for imports submitted by the importers and forwarding the same to Ministry of Environment, Forest and Climate Change
		(*v*)	Implementation of programmes to prevent or reduce or minimise the generation of hazardous and other wastes
		(*vi*)	Action against violations of these rules
		(*vii*)	Any other function under these rules assigned by Ministry of Environment, Forest and Climate Change from time to time
5.	Directorate General of Foreign Trade constituted under the Foreign Trade (Development and Regulation) Act, 1992	(*i*)	Grant of licence for import of hazardous and other wastes
		(*ii*)	Refusal of licence for hazardous and other wastes prohibited for imports and export
6.	Port authority under Indian Ports Act, 1908 (15 of 1908) and Customs Authority under the Customs Act, 1962 (52 of 1962)	(*i*)	Verify the documents
		(*ii*)	Inform the Ministry of Environment, Forests and Climate Change of any illegal traffic
		(*iii*)	Analyse wastes permitted for imports and exports, wherever required.

			(*iv*) Train officials on the provisions of these rules and in the analysis of hazardous and other wastes (*v*) Take action against exporter or importer for violations under the Indian Ports Act, 1908 or Customs Act, 1962

SCHEDULE VIII

[*See* Rules 13(2) and 13 (4)]

List of documents for verification by Customs for import of other wastes specified in Part D of Schedule III

Sl. No.	Basel No.	Description of other wastes	List of Documents
(1)	(2)	(3)	(4)
1.	B1010	Metal and metal-alloy wastes in metallic, non-dispersible form: —Precious metals (gold, silver, platinum) —Iron and steel scrap — Nickel scrap — Aluminium scrap — Zinc scrap — Tin scrap —Tungsten scrap — Molybdenum scrap —Tantalum scrap —Cobalt scrap —Bismuth scrap — Titanium scrap —Zirconium scrap — Manganese scrap —Germanium scrap —Vanadium scrap —Hafnium scrap —Indium scrap —Niobium scrap	(*a*) Duly filled up Form 6 — Movement document; (*b*) The import license from Directorate General of Foreign Trade, wherever applicable; (*c*) Pre-shipment inspection certificate issued by the inspection agency of the exporting country or the inspection and certification agency approved by Directorate General of Foreign Trade; (*d*) The valid consents to operate under the Air and Water Acts and the authorisation under these rules, for actual users. For traders, only valid one time authorisation from concerned SPCB is required;

		—Rhenium scrap —Gallium scrap —Magnesium scrap —Copper scrap —Chromium scrap	[42] [(*e*) The Chemical analysis report of the wastes being imported other than wastes covered under the Institute of Scrap Recycling Industries (ISRI) code or equivalent code prevalent in international trade;] (*f*) an acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year.
2.	B1050	Mixed non-ferrous metal, heavy fraction scrap, containing metals other than specified in Part B1050 and not containing constituents mentioned in Schedule II in concentrations sufficient to exhibit Part C characteristics* *	(*a*) Duly filled up Form 6 - Movement document; (*b*) The import license from Directorate General of Foreign Trade, wherever applicable; (*c*) Pre-shipment inspection certificate issued by the inspection agency of the exporting country or the inspection and certification agency approved by Directorate General of Foreign Trade; (*d*) The valid consents to operate under the Air and Water Acts and the authorisation under these rules, for actual users. For traders, only valid authorisation from concerned SPCB is required; [43] [(*e*) The Chemical analysis report of the wastes being imported other

				than wastes covered under the Institute of Scrap Recycling Industries (ISRI) code or equivalent code prevalent in international trade;] (*f*) An acknowledged copy of the annual return filed with concerned SPCB for import in the last financial year.
3.	B1100	Metal bearing wastes arising from melting, smelting and refining of metals: —Hard Zinc spelter —Zinc-containing drosses: ~ Galvanizing slab zinc top dross (>90% Zn) ~ Galvanizing slab zinc bottom dross (>92% Zn) ~ Zinc die casting dross (>85% Zn) ~ Hot dip galvanizers slab zinc dross (batch) (>92% Zn) ~ Zinc skimmings —Aluminium skimmings (or skims) excluding salt slag	(*a*) Duly filled up Form 6 - Movement document; (*b*) The import license from Directorate General of Foreign Trade, wherever applicable; (*c*) Pre-shipment inspection certificate issued by the inspection agency of the exporting country or the inspection and certification agency approved by Directorate General of Foreign Trade; (*d*) The valid consents to operate under the Air and Water Acts and the authorisation under these rules, for actual users. For traders, only valid authorisation from concerned SPCB is required; [44] [(*e*) The Chemical analysis report of the wastes being imported other than wastes covered under the Institute of Scrap Recycling Industries (ISRI) code or

			equivalent code prevalent in international trade;] (*f*) An acknowledged copy of the annual return filed with concerned SPCB for import in the last financial year.
4.	B1110	Electrical and electronic assemblies (including printed circuit boards, electronic components and wires) destined for direct reuse and not for recycling or final disposal	
(*a*)		[45][Used electrical and electronic assemblies imported for repair or refurbishment and to be re-exported after repair or refurbishment to OEMs or any other company in the country of origin or any other company in any other country within one year of import.]	(*a*) Duly filled up Form 6 - Movement document; (*b*) Undertaking for re-export; (*c*) Details of previous import, if there has been any and confirmation regarding their re-export; (*d*) An acknowledged copy of the annual return filed with concerned SPCB for import in the last financial year [46][(*e*) Certificate from exporting company for accepting the repaired and unrepairable electrical and electronic assemblies and the spares or part or component or consumables being re-exported or certificate from any other company in the country of origin or any other company in any other country for accepting the repaired and unrepairable electrical and electronic

				assemblies and the spares or part or component or consumables being re-exported.]
(*b*)		Used electrical and electronic assemblies imported for rental purpose and re-exported back within one year of import	(*a*) (*b*) (*c*) (*d*)	Duly filled up Form 6 - Movement document; Undertaking for re-export; Details of previous import, if there has been any and confirmation regarding their re-export; An acknowledged copy of the annual return filed with concerned SPCB for import in the last financial year
(*c*)		Used electrical and electronic assemblies exported for repair and to be re-imported after repair	(*a*) (*b*)	Duly filled up Form 6 - Movement document; Proof of export of the defective electrical and electronic assemblies i.e. shipping or airway document authenticated by Customs
(*d*)		Used electrical and electronic assemblies imported for testing, research and development, project work purposes and to be re-exported back within a period of three years from the date of import	(*a*) (*b*) (*c*) (*d*)	Duly filled up Form 6 - Movement document; Undertaking for re-export; Details of previous import, if there has been any and confirmation regarding their re-export; Chartered Engineer Certificate or certificate from accredited agency of exporting country indicating the functionality,

				manufacturing date, residual life and serial number; (*e*) an acknowledged copy of the annual return filed with concerned SPCB for import in the last financial year; (*f*) Certificate from exporting company for accepting the second hand functional or non-functional electrical and electronic assemblies and/or the spares or part or component or consumables being re-exported at the end of three years.
[47] [(*d*) (*i*)		Used electrical and electronic assemblies imported for testing, research and development, project work purposes by the Department of Scientific and Industrial Research (DSIR) approved research and development units or units in Software Technology Parks of India (STPI), Electronic Hardware Technology Park (EHTP), Export Oriented Units (EOU) and Biotechnology Parks (BTP) with investment of Rs. 50 Crore in a Research and Development (R&D) facility.	(*a*) Duly filled up Form 6 - Movement document; (*b*) Details of previous import, if any. (*c*) Chartered Engineer Certificate or certificate from accredited agency of exporting country indicating the functionality, manufacturing date, residual life and serial number; (*d*) An acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year. (*e*) A certificate of investment of Rs. 50 crores or above in Research and Development (R&D)

				facility
(*d*) (*ii*)		Used plant and machinery having a residual life of at least 5 years for manufacturing of electrical and electronic items by the electronic industry.	(*a*) (*b*) (*c*) (*d*)	Duly filled up Form 6 - Movement document; Details of previous import, if any, Chartered Engineer Certificate or certificate from accredited agency of exporting country indicating the functionality, manufacturing date, residual life and serial number; An acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year]
(*e*)		Spares imported for warranty replacements provided equal number of defective/non-functional parts are exported back within one year of the import.	(*a*) (*b*) (*c*) (*d*)	Duly filled up Form 6 — Movement document; if refurbished components being imported as replacement to defective component then undertaking for export of equivalent numbers of defective components; Details of previous import, if there has been any and confirmation regarding their re-export; Certificate from exporting company for accepting the re-export of defective or non-functional spares or part or component or consumables being re-exported;

			(*e*)	Documents on the declared policy regarding the use of second hand or refurbished spare parts for repair of electrical and electronic assemblies during warranty period.
(*f*)		Used electrical and electronic assemblies imported by Ministry of Defence, Department of Space and Department of Atomic Energy.	---	
(*g*)		Used electrical and electronic assemblies (not in bulk; quantity less than or equal to three) imported by the individuals for their personal uses.	---	
(*h*)		Used Laptop, Personal Computers, Mobile, Tablet up to 03 number each imported by organisations in a year.	---	
(*i*)		Used electrical and electronic assemblies owned by individuals and imported on transfer of residence.	As per existing guidelines of Custom Authority	
(*j*)		Used electrical and electronic assemblies, spares, imported by airlines for aircraft maintenance and remaining either on board or under the custodianship of the respective airlines warehouses located on the airside of the custom bonded areas.	----	

(*k*)		Used multifunction print and copying machines (MFDs)*	(*a*) The country of Origin Certificate along with bill of lading and packaging; (*b*) The certificate issued by the inspection agency as certified by the exporting country or the inspection and certification agency approved by Directorate General Foreign Trade (DGFT) for functionality, having residual life of not less than five years and serial number; (*c*) Extended Producer Responsibility- Authorisation under e-waste (Management and Handling) Rules, 2011 as amended from time to time as Producer; (*d*) The MFDs shall be for printing A 3 size and above; (*e*) An acknowledged copy of the annual return filed with concerned SPCB for import in the last financial year.
5	B3020	Paper, paperboard and paper product wastes The following materials, provided they are not mixed with hazardous wastes: Waste and scrap of paper or paperboard of: —unbleached paper or paperboard or of corrugated paper or paperboard —other paper or paperboard, made	(*a*) Duly filled up Form 6 – Movement document; (*b*) The import license from Directorate General of Foreign Trade, wherever applicable; (*c*) Pre-shipment inspection certificate issued by the inspection agency of the exporting country or the inspection and certification agency approved by Directorate General of Foreign

		mainly of bleached chemical pulp, not coloured in the mass —paper or paperboard made mainly of mechanical pulp (for example newspapers, journals and similar printed matter) —other, including but not limited to (1) laminated paperboard (2) unsorted scrap	Trade; (*d*) The valid consents to operate under the Air and Water Acts and the authorisation under these rules, for actual users. For traders, only valid authorisation from concerned SPCB is required; (*e*) The chemical analysis report of the waste being imported; (*f*) an acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year.
[48][5 (A).	B3030	Textile wastes The following materials which are textile wastes, provided they are not mixed with other wastes and are prepared to a specification: — Silk wastes (including cocoons unsuitable for reeling, yarn wastes and garnetted stock) • not carded or combed • other — Wastes of wool or of fine or coarse	(*a*) Duly filled up Form 6 - Movement document. (*b*) The import license from Directorate General of Foreign Trade, wherever applicable.

			animal hair, including yarn wastes but excluding garnetted stock • noils of wool or of fine animal hair • other wastes of wool or of fine animal hair • waste of coarse animal hair — Cotton wastes (including yarn wastes and garnetted stock) • yarn waste (including thread wastes) • garnetted stock • other — Flax tow and wastes — Tow and wastes (including yarn wastes and garnetted stock) of true hemp (Cannabis sativa L.) — Tow and wastes (including yarn wastes and garnetted stock) of jute and other textile bast fibres (excluding flax, true hemp and ramie) — Tow and wastes (including yarn wastes and	(*c*)	Pre-shipment inspection certificate issued by the inspection agency of the exporting country or the inspection and certification agency approved by Directorate General of Foreign Trade. (*d*) The valid consents to operate under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 and the authorisation under these rules, for actual users. For traders, only valid one-time authorisation from concerned State Pollution Control Board is required.

			garnetted stock) of sisal and other textile fibres of the genus Agave — Tow, noils and wastes (including yarn wastes and garneted stock) of coconut — Tow, noils and wastes (including yarn wastes and garneted stock) of abaca (Manila hemp or Musa textiles Nee) — Tow, noils and wastes (including yarn wastes and garneted stock) of ramie and other vegetable textile fibres, not elsewhere specified or included — Waste (including noils, yarn waste and garnetted stock) of manmade fibres • of synthetic fibres • of artificial fibres — Worn clothing and other worn textile articles — Used rags, scrap twine, cordage, rope and cables and worn-out articles of twine, cordage, rope or	(*e*) an acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year.

		cables of textile materials • sorted • other	
5(B).	B3035	Waste textile floor coverings and carpets	(*a*) Duly filled up Form 6 - Movement document. (*b*) The import license from Directorate General of Foreign Trade, wherever applicable. (*c*) Pre-shipment inspection certificate issued by the inspection agency of the exporting country or the inspection and certification agency approved by the Directorate General of Foreign Trade. (*d*) The valid consents to operate under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 and authorisation under these rules, for actual users. For traders, only valid one-time authorisation from concerned State Pollution Control Board is required. (*e*) an acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year.]
6.	B3140	Aircraft Tyres exported to Original Equipment Manufacturers for re-	As per existing guidelines of Custom Authority

		treading and re-imported after re-treading by airlines for aircraft maintenance and remaining either on board or under the custodianship of the respective airlines warehouses located on the airside of the custom bonded areas	
[49][7.	B2020	Glass wastes in nondispersible form: - Cullet and other waste and scrap of glass except for glass from cathoderay tubes and other activated glasses	(*a*) Duly filled up Form 6 - Movement document; (*b*) The import license from Directorate General of Foreign Trade, wherever applicable; (*c*) Pre-shipment inspection certificate issued by the inspection agency of the exporting country or the inspection and certification agency approved by Directorate General of Foreign Trade; (*d*) The consent to operate under the Air (Prevention and Control of Pollution) Act, 1981 (21 of 1981) and the Water (Prevention and Control Pollution) Act, 1974 (25 of 1974) and the authorisation under these rules, for actual users. For traders, only valid authorisation from concerned State Pollution Control Board is required; (*e*) The chemical analysis report of the waste being

				imported;
			(*f*)	an acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year.]

Note: * The policy for free trade for multifunction print and copying machine to be reviewed once the MFDs are domestically manufactured.

[50][SCHEDULE IX

[*See* Rule 9(4)]

Extended Producer Responsibility (EPR) for Waste Tyre

1. Definitions.—For the purposes of this Schedule,—

(*a*) "business" means any activity of production or manufacturing or sale of new tyre, import of new or waste tyre, import of vehicle fitted with new tyre, import of new tyre by automobile manufacturer for use in vehicle sold domestically and recycling of waste tyre;

(*b*) "conversion factor" means units of waste tyre needed to produce one unit of each end product of recycling;

(*c*) "environmentally sound management of waste tyre" means taking all steps required to ensure that waste tyre is managed in a manner so as to protect health and environment against any adverse effects which may result from such waste tyre;

(*d*) "extended producer responsibility" means responsibility of producer of tyre to ensure environmentally sound management of waste tyre in accordance with the provisions of this Schedule;

(*e*) "producer" means any person or entity who,—

(*i*) manufactures and sells new tyre domestically; or

(*ii*) sells domestically under its own brand, new tyre manufactured by other manufacturers or suppliers; or

(*iii*) sells imported new tyre; or

(*iv*) imports vehicles fitted with new tyres; or

(*v*) automobile manufacturers importing new tyre for use in new vehicles sold domestically; or

(*vi*) imports waste tyre;

(*f*) "recycling" means any process or action of converting waste tyre into following end products, in an environmentally sound manner and having facilities as elaborated in the standard operating procedure or guidelines as specified by the Central Pollution Control Board, namely—

(*i*) reclaimed rubber;

(*ii*) crumb rubber;

(*iii*) crumb rubber modified bitumen (CRMB);

(*iv*) recovered carbon black, which is usable as raw material for manufacture of new tyre; and

(*v*) pyrolysis oil or Char, which is used only as a fuel and not as raw material for manufacture of new tyre;

(*g*) "recycler" means any person or entity engaged in the process of recycling;

(*h*) "recycling target" means quantity of waste tyre to be recycled as per the provisions of Paragraph 6 of this Schedule;

(*i*) "standard operating procedure" means the document specified by the Central Pollution Control Board elaborating minimum requirement of equipment and processes;

(*j*) "guidelines" means the document specified by the Central Pollution Control Board elaborating minimum requirement for achieving environmentally sound management of waste tyres including handling, collection, transportation and storage and recycling of waste tyre;

(*k*) "portal" means the online system developed by the Central Pollution Control Board under Paragraph 9;

(*l*) "retreading" means process of renewal of tread and side wall rubber of a worn out tyre having a good structural quality; and

(*m*) "waste tyre" means any tyre, including tubes and flaps that is no longer mounted on a vehicle and is no longer used for its intended purpose.

2. Application.—The provisions of this Schedule shall be applicable to the following entities, namely—

(*i*) producer;

(*ii*) recycler of waste tyre; and

(*iii*) retreader.

3. Registration.—(1) The entities referred in Paragraph 2 shall register on the portal.

(2) No entity shall carry out any business without registration.

(3) The entities registered under sub-paragraph (1) shall not deal with any unregistered producer or recycler.

(4) In case, any registered entity furnishes false information or willfully conceals information for getting registration or return or report or information required to be provided or furnished under this Schedule or in case of any irregularity, the registration of such entity may be revoked by the Central Pollution Control Board for a period up to three years after giving an opportunity of being heard and in addition, environmental compensation charges may also be levied in such cases as per Paragraph

10.

(5) In case any entity is covered in more than one category under Paragraph 3, then the said entity shall register under those categories separately.

(6) The Central Pollution Control Board may charge such registration fees from the applicants as may be specified from time to time with the approval of the steering committee constituted under Paragraph 13.

4. Modalities of extended producer responsibility regime.—(1) All producers shall have the following extended producer responsibility obligations, namely—

(*a*) For manufacturers or importers of new tyres—

Sl. No.	Year	Waste Tyre Recycling Target in Weight (Kilogram or Tons)
(1)	(2)	(3)
(i)	EPR obligation of the year 2022-2023 (the year in which this Schedule comes into force	35% of the quantity of new manufactured or tyres imported in year 2020-2021
(ii)	EPR obligation of the year 2023-20 24	70% of the quantity of new manufactured or tyres imported in year 2021-2022
(iii)	EPR obligation of the year 2024- 2025	100% of the quantity of new manufactured or tyres imported in year 2022-2023.
(iv)	After the year 2024-2025 (year Y), the extended producer responsibility obligation shall be 100% of the quantity of new tyres manufactured or imported in the year (Y-2).	
(v)	Units established after the 1st April, 2022, the extended producer responsibility obligation shall start after two years (Y) and shall be 100% of the new tyres manufactured or imported in the year (Y-2).	

(*b*) For waste tyre importer—

(*i*) The extended producer responsibility obligation for waste tyre importer in year (Y) shall be 100% of the tyre imported in year (Y -1)

(*ii*) The import of waste tyre for the purpose of producing pyrolysis oil or char is prohibited.

(2) Retreading—

(*i*) The waste tyre shall be allowed for retreading and a retreader shall have to get registered on the portal for issuance of retreading certificates.

(*ii*) On production of retreading certificates, the extended producer responsibility obligation shall be deferred by one year for the corresponding quantity of waste tyre:

Provided that the obligation shall be extinguished only after end of life disposal through a registered recycler.

(3) The extended producer responsibility target of producer shall be reduced by a factor laid down by the Central Pollution Control Board on account of wear and tear of tyres.

(4)(i) The producer shall fulfill their extended producer responsibility obligation through online purchase of extended producer responsibility certificate from registered recyclers only and submit it online on the portal by filing quarterly return.

(ii) The quarterly return shall be filed by the end of the month succeeding the end of the quarter.

(iii) The details provided by producers and registered recyclers shall be cross-checked on the portal.

(iv) In case of difference, the lower figure shall be considered towards fulfilment of extended producer responsibility obligation of producer.

(v) The certificates referred to in this paragraph shall be subject to environmental audit by the agencies authorised by the Central Government in this regard.

(5) The Central Pollution Control Board shall specify the standard operating procedure strictly in accordance with the provisions of this Schedule.

5. Extended producer responsibility certificate generation.—(1) The Central Pollution Control Board shall generate extended producer responsibility certificate through the portal in favor of a registered recycler and the eligible quantity for generating extended producer responsibility certificates shall be calculated as per the following table, namely—

TABLE

Sl. No.	End Product of recycling	Quantity of End Product (Q_p)	Conversion factor determined by CPCB (C_F)	Weightage allocated to the end product (W_P)	Quantity eligible for generation of extended producer responsibility certificate ($Q_{EPR} = Q_P \times C_F \times W_P$)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Reclaimed			1.30	

	Rubber				
2.	Recovered Carbon Black usable as raw material for manufacture of new tyre.			1.25	
3.	Crumb rubber Modified Bitumen (CRMB)			1.10	
4.	Crumb rubber			1.00	
5.	Pyrolysis oil and char (usable as fuel only and not as raw material for manufacture of new tyre) (i) extracted from continuous pyrolysis method (ii) extracted from batch pyrolysis method			0.80 0.50	

(2) Term of Reference.—For the purpose of the Table referred to in sub-paragraph (1),—

(*i*) the quantity eligible for generation of extended producer responsibility certificate shall be calculated as per the following formula, namely—

$Q_{EPR} = Q_P \times C_F \times W_P$;

(*ii*) conversion factor CF for each end product shall be determined by the Central Pollution Control Board;

(*iii*) the weightage W_P shall be reviewed by the Steering Committee from time to time in view of the technological advancements, availability of material and other factors;

(*iv*) the weightage W_P for imported waste tyres shall be 1 for all categories and the value of waste tyre certificate shall be reduced

by dividing it by W_P of respective certificates when the extended producer responsibility certificates purchased by waste tyre importer are adjusted against their EPR obligation.

(3)(a) The validity of the extended producer responsibility certificate shall be two years from the end of the financial year in which it was generated.

(b) The expired certificate automatically extinguished after the period unless extinguished earlier as per sub-paragraph (2) of Paragraph 7.

(4)(a) Each extended producer responsibility certificate shall have a unique number containing year of generation, code of end product, recycler code and a unique code.

(b) The extended producer responsibility certificates shall be in the denominations of 100, 200, 500 and 1000 Metric Tonnes or as may be decided by the Central Pollution Control Board with the approval of the Steering Committee constituted under Paragraph 13.

6. Transaction of extended producer responsibility certificates.—(1) A producer can purchase extended producer responsibility certificates limited to its extended producer responsibility liability of current year (Year Y) plus any leftover liability of preceding years plus 10% of the current year liability.

(2) The extended producer responsibility obligation shall have to be fulfilled by the producers by proportionately purchasing extended producer responsibility certificate on quarterly basis.

(3) As soon as the producer purchases extended producer responsibility certificate, it shall be automatically adjusted against its liability, priority in adjustment shall be given to earlier liability and the extended producer responsibility certificate so adjusted shall be automatically extinguished and cancelled.

(4) The availability, requirement and other details of the extended producer responsibility certificate for every producer or recycler shall be made available on the portal.

(5) All such transactions shall be recorded and submitted by the producers or recyclers on the portal at the time of filing quarterly returns.

[51][(6) The Central Government may by, order establish one or more platform for exchange or transfer of extended producer responsibility certificates in accordance with the guidelines issued by the Central Pollution Control Board with the approval of the Central Government.

(7) The operation of the platform established under sub-paragraphs (6) shall be operated and regulated in accordance with guidelines made by the Central Government on the recommendation of the Central Pollution Control Board.

(8) The Central Pollution Control Board shall fix the highest and lowest price for exchange of extended producer responsibility certificates which

shall be equal to hundred per cent and thirty per cent, respectively of the environmental compensation for non-fulfilment of extended producer responsibility obligation under Paragraph 10 of this Schedule.

(9) The exchange price of extended producer responsibility certificate between registered entities through the portal shall be between the highest and lowest prices referred to in sub-paragraph (8).]

7. Responsibilities of the producer.—(1) The producer shall be responsible for fulfillment of extended producer responsibility by purchasing extended producer responsibility certificates from registered recyclers only.

(2) The producer shall be responsible to file annual and quarterly returns in the forms as specified by the Central Pollution Control Board on the portal on or before the end of the month succeeding the quarter to which the return relates and each registered entity shall have to file the quarterly return.

8. Responsibilities of the recycler.—(1) All the recycler shall submit on monthly basis the information regarding quantity of waste tyres used and end product produced, extended producer responsibility certificate sold and such other relevant information on the portal.

(2) All the recycler shall file annual and quarterly returns in the Form as specified on the portal on or before the end of the month succeeding the quarter to which the return relates.

[52][8. (A) Responsibilities of the retreader.—(1) All the retreader shall submit on monthly basis the information regarding quantity of waste tyres re-treaded, retreading certificate generated therefore and such other relevant information on the portal.

(2) All the retreader shall file annual and quarterly returns in the Form as specified on the portal on or before the end of the month succeeding the quarter to which the return relates.]

9. Portal for registration, filing of annual returns, extended producer responsibility certificate and tracing of materials.—(1) The Central Pollution Control Board shall develop the portal to establish an online system for the registration and filing of quarterly returns, generation and adjustment of extended producer responsibility certificate and submission of monthly information by recyclers.

(2) The portal shall act as the single point data repository with respect to the provisions of this Schedule for implementation of extended producer responsibility for waste tyre and contain the following information, namely—

(*i*) *For producer*.—import or production of new tyres of different years, quantity of waste or new tyres, quarterly return in respect of extended producer responsibility certificate purchase, adjustment of extended producer responsibility obligation for each year, the

current year extended producer responsibility obligation and brought forward obligation of preceding years.

(*ii*) *For recyclers*.—facility for submitting information and quantity of recycled material and end product, extended producer responsibility Certificate generated and sold and ensure that value of extended producer responsibility is reduced by diving it by W_P in case of waste tyre importer.

(*iii*) The portal shall provide information with respects to current unfulfilled extended producer responsibility obligations of different producers, the quantity of extended producer responsibility certificate with recyclers and surplus extended producer responsibility certificate with producers.

(*iv*) Any other facility which is required to streamline the implementation of the provisions of this Schedule with the approval of the Steering Committee constituted under Paragraph 13.

(3) Till the time the portal is developed, all activities related to implementation of extended producer responsibility shall be done in off-line manner.

(4) The Central Pollution Control Board shall specify the formats of all the relevant forms or returns for the extended producer responsibility in accordance with the provisions of this Schedule.

(5) The Central Pollution Control Board may charge such processing or registration fee from the producer and recyclers through portal as may be specified from time to time by the Central Pollution Control Board with the approval of the Steering Committee constituted under Paragraph 13.

[53][(6) *Relaxation of timelines for filing of returns*.—The Central Government may, if it is satisfied that it is necessary so to do in the public interest or for effective implementation of these rules, by order, relax any period within which any return or report is to be filed under these rules by a producer, recycler and retreader thereof, for a further period not exceeding nine months.]

10. Environmental Compensation.—(1) The Central Pollution Control Board shall lay down guidelines for imposition and collection of environmental compensation on the producers in case of non-fulfilment of obligations set out in this Schedule and use of false extended producer responsibility certificate and the said guidelines shall be in accordance with the provisions of this Schedule and shall require to be approved by the Steering Committee constituted under Paragraph 13 and Central Government before implementation.

(2) The environmental compensation shall also be levied on the recyclers for issue of false extended producer responsibility certificate and providing false information.

(3) The environmental compensation shall also be levied on

unregistered producers, recyclers and any entity which aids or abets the violation of the provisions of this Schedule.

(4)(a) The payment of environmental compensation shall not absolve the producers from the obligation set out in this Schedule and the unfulfilled extended producer responsibility obligation for a particular year shall be carried forward to the next year and so on and up to three years.

(b) In case, the shortfall of extended producer responsibility obligation is addressed after first year, 85% of the environmental compensation levied shall be returned to the producers, and in case, the shortfall of extended producer responsibility obligation is addressed after second year, 60% of the environmental compensation levied shall be returned to the producers, and in case, the shortfall of extended producer responsibility obligation is addressed after third year, 30% of the environmental compensation levied shall be returned to the producers, thereafter no environmental compensation shall be returned to the producer.

(5) Any false information resulting in over generation of extended producer responsibility certificates by recycler above 5% of the actual recycled waste shall result in revocation of registration and imposition of environmental compensation which shall not be returnable.

(6)(a) The funds collected under environmental compensation shall be kept in a separate escrow account by the Central Pollution Control Board and shall be utilised in collection and recycling or end of life disposal of uncollected and non-recycled or non-end of life disposal of waste tyres on which the environmental compensation is levied and on such other heads as decided by the said Steering Committee constituted under Paragraph 13.

(b) modalities for utilisation of the funds shall be recommended by the Steering Committee and approved by the Central Government, which may also issue instructions in this regard.

[54][11. Action for contravention.—Any person who fails to comply or contravenes the provisions of these rules shall be liable to a penalty in accordance with the provisions of Section 15 of the Act.]

12. Verification and Audit.—The Central Pollution Control Board by itself or through a designated agency shall verify compliance of producers or recyclers through inspection and periodic audit, as deemed appropriate and the actions against violations and for non-fulfillment of extended producer responsibility target, obligations and responsibilities shall be in accordance with the provisions of Paragraph 10.

13. Steering Committee for implementation of extended producer responsibility regime for waste tyre.—(1) There shall be a Steering Committee under the Chairmanship of the Chairman, Central Pollution Control Board or his nominee to oversee the overall

implementation of the extended producer responsibility regime for waste tyre and shall comprise of the following other members in addition to the Chairman, namely:

(*a*) one representative of the Ministry of Environment, Forest and Climate Change;

(*b*) one representative of the Department of Promotion of Industry and Internal Trade;

(*c*) one representatives of the Automobile Tyre Manufacturers Associations;

(*d*) one representatives of the Recycler Associations (viz. manufacturer of reclaimed rubber, crumb rubber, crumb rubber modified bitumen, recovered carbon black and tyre pyrolysis oil manufacturers);

(*e*) one representatives of the State Pollution Control Board or Pollution Control committee as co-opted by the Chairman of the Steering Committee;

(*f*) Head of the Concerned Division of the Central Pollution Control Board —Member- Convener.

(2) The Steering Committee shall monitor and supervise implementation of the provisions of this Schedule and shall decide the disputes arisen from time to time on the representations received in this regard.

(3) The Steering Committee shall review and revise the targets, weightage and permissibility of modes of recycling in view of the technological advancements and other factors with the approval of the Central Government.

(4) The Steering Committee shall take all such measures as it deems necessary for proper implementation of the provisions of this Schedule.]

FORM 1

[*See* Rule 6 (1)]

Application required for grant/renewal of authorisation for generation or collection or storage or transport or reception or recycling or reuse or recovery or pre-processing or co-processing or utilisation or treatment or disposal of hazardous and other waste

PART A: General (to be filled by all)

1. (*a*) Name and address of the unit and location of facility:

(*b*) Name of the occupier of the facility or operator of disposal facility with designation, Tel, Fax and e-mail:

(*c*) Authorisation required for (Please tick mark appropriate activity or activities:

(*i*) Generation □

(*ii*) Collection □

(*iii*) Storage □

(*iv*) Transportation □
(*v*) Reception □
(*vi*) Reuse □
(*vii*) Recycling □
(*viii*) Recovery □
(*ix*) Pre-processing □
(*x*) Co-processing □
(*xi*) Utilisation □
(*xii*) Treatment □
(*xiii*) Disposal □
(*xiv*) Incineration □

(*d*) In case of renewal of authorisation previous authorisation numbers and dates and provide copies of annual returns of last three years including the compliance reports with respect to the conditions of Prior Environmental Clearance, wherever applicable:

2. (*a*) Nature and quantity of waste handled per annum (in metric tonne or kilo litre)

(*b*) Nature and quantity of waste stored at any time (in metric tonne or kilo litre)

3. (*a*) Year of commissioning and commencement of production:

(*d*) Whether the industry works:

(*i*) 01 Shift □
(*ii*) 02 Shifts □
(*iii*) Round the clock □

4. Provide copy of the Emergency Response Plan (ERP) which should address procedures for dealing with emergency situations (viz. Spillage or release or fire) as specified in the guidelines of Central Pollution Control Board. Such ERP shall comprise the following, but not limited to:

- Containing and controlling incidents so as to minimise the effects and to limit danger to the persons, environment and property;
- Implementing the measures necessary to protect persons and the environment;
- Description of the actions which should be taken to control the conditions at events and to limit their consequences, including a description of the safety equipment and resources available;
- Arrangements for training staff in the duties which they are expected to perform;

- Arrangements for informing concerned authorities and emergency services; and
- Arrangements for providing assistance with off-site mitigatory action.

5. Provide undertaking or declaration to comply with all provisions including the scope of submitting bank guarantee in the event of spillage, leakage or fire while handling the hazardous and other waste.

PART B: To be filled by hazardous waste generators

1. (*a*) Products and by-products manufactured (names and product wise quantity per annum):

(*b*) Process description including process flow sheet indicating inputs and outputs (raw materials, chemicals, products, by-products, wastes, emissions, waste water etc.) Please attach separate sheets:

(*c*) Characteristics (waste-wise) and Quantity of waste generation per annum:

(*d*) Mode of management of (*c*) above:

(*i*) Capacity and mode of secured storage within the plant;

(*ii*) Utilisation within the plant (provide details);

(*iii*) If not utilised within the plant, please provide details of what is done with this waste;

(*iv*) Arrangement for transportation to actual users/ TSDF;

(*e*) Details of the environmental safeguards and environmental facilities provided for safe handling of all the wastes at point (c) above;

2. Hazardous and other wastes generated as per these rules from storage of hazardous chemicals as defined under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989

PART C: To be filled by Treatment, storage and disposal facility operators

1. Provide details of the facility including:

(*i*) Location of site with layout map;

(*ii*) Safe storage of the waste and storage capacity;

(*iii*) The treatment processes and their capacities;

(*iv*) Secured landfills;

(*v*) Incineration, if any;

(*vi*) Leachate collection and treatment system;

(*vii*) Fire fighting systems;

(*viii*) Environmental management plan including monitoring; and

(*ix*) Arrangement for transportation of waste from generators.

2. Provide details of any other activities undertaken at the Treatment, storage and disposal facility site.

3. Attach a copy of prior Environmental Clearance.

[55][PART D: To be filled by recyclers or pre-processors or co-processors or waste collectors or users of hazardous and other wastes]

1. Nature and quantity of different wastes received per annum from domestic sources or imported or both:
2. Installed capacity as per registration issued by the District Industries Centre or any other authorised Government agency. Provide copy:
3. Provide details of secured storage of wastes including the storage capacity:
4. Process description including process flow sheet indicating equipment details, inputs and outputs (input wastes, chemicals, products, by-products, waste generated, emissions, waste water, etc.). Attach separate sheets:
5. Provide details of end users of products or by-products:
6. Provide details of pollution control systems such as Effluent Treatment Plant, scrubbers, etc. including mode of disposal of waste:
7. Provide details of occupational health and safety measures:
8. Has the facility been set up as per Central Pollution Control Board guidelines? If yes, provide a report on the compliance with the guidelines:

9. Arrangements for transportation of waste to the facility:

Signature of the Applicant

Designation

Date.....

Place.....

FORM 2

[*See* Rule 6(2)]

Form for Grant or Renewal of Authorisation by State Pollution Control Board to the Occupiers, Recyclers, Reprocessors, Reusers, User and Operators of Disposal Facilities

1. Number of authorisation and date of issue :
2. Reference of application (No. and date) :
3. .....of .....is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at.....

Details of Authorisation

Sl. No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity (ton/annum)

(1) The authorisation shall be valid for a period of .....

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A. General conditions of authorisation:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or

otherwise transport the hazardous and other wastes except what is permitted through this authorisation.

4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.

6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty".

7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.

8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.

10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.

11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.

12. An application for the renewal of an authorisation shall be made as laid down under these rules.

13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

[56]

[15. (i) Any hazardous waste generated sporadically due to unforeseen conditions such as fire, natural calamity, chemical spill, etc, the occupier shall send such waste to the operator of disposal facility or actual user for the purpose of these rules.

(ii) The hazardous waste which is routinely generated in the consented manufacturing process in the authorised premises shall be included in the authorisation within one month from identification of any such waste:

Provided that it shall not apply in the case when production is beyond the consented capacity.]

B. Specific conditions:

Date: Signature of Issuing Authority Designation and Seal

FORM 3

[*See* Rules 6(5), 13(7), 14(6), 16(5) and 20(1)]

FORMAT FOR MAINTAINING RECORDS OF HAZARDOUS AND OTHER WASTES

1. Name and address of the facility :
2. Date of issuance of authorisation and its reference number :
3. Description of hazardous and other wastes handled (Generated or Received)

Date	Type of waste with category as per Schedules I, II and III of these rules	Total quantity (Metric Tonnes)	Method of Storage	Destined to or received from

*Fill up above table separately for indigenous and imported waste.

4. Date wise description of management of hazardous and other wastes including products sent and to whom in case of recyclers or pre-processor or utiliser:
5. Date of environmental monitoring (as per authorisation or guidelines of Central Pollution Control Board):

Signature of occupier

Date.....

Place.....

FORM 4

[*See* Rules 6(5), 13(8), 16(6) and 20(2)]

FORM FOR FILING ANNUAL RETURNS

[To be submitted to State Pollution Control Board by 30th day of June of every year for the preceding period April to March]

1. Name and address of facility:
2. Authorisation No. and Date of issue:

3. Name of the authorised person and full address with telephone, fax number and e-mail:

4. Production during the year (product wise), wherever applicable

[4a. [57] Import of wastes during the year (waste-wise), wherever applicable]

PART A: To be filled by [58][hazardous waste generators or importers]

1. Total quantity of waste generated category wise
2. Quantity dispatched
   (*i*) to disposal facility
   (*ii*) to recycler or co-processors or pre-processor
   (*iii*) others
3. Quantity utilised in-house, if any—
4. Quantity in storage at the end of the year—

PART B: To be filled by Treatment, storage and disposal facility operators

1. Total quantity received—
2. Quantity in stock at the beginning of the year—
3. Quantity treated—
4. Quantity disposed in landfills as such and after treatment—
5. Quantity incinerated (if applicable)—
6. Quantity processed other than specified above—
7. Quantity in storage at the end of the year—

PART C. To be filled by recyclers or co-processors or other users

1. Quantity of waste received during the year—
   (*i*) domestic sources
   (*ii*) imported (if applicable)
2. Quantity in stock at the beginning of the year—
3. Quantity recycled or co-processed or used—
4. Quantity of products dispatched (wherever applicable)—
5. Quantity of waste generated—
6. Quantity of waste disposed—
7. Quantity re-exported (wherever applicable)—
8. Quantity in storage at the end of the year—

Signature of the Occupier or Operator of the disposal facility

Date.....

Place.....

FORM 5

[*See* Rules 13(1) and 14(1)]

APPLICATION FOR IMPORT OR EXPORT OF HAZARDOUS AND OTHER WASTE FOR REUSE OR RECYCLING OR RECOVERY OR CO-PROCESSING OR UTILISATION

TO BE FILLED IN BY APPLICANT

Sl. No.	Description	Details to be furnished by the importer or exporter
(1)	(2)	(3)
1.	Importer or Exporter (name and address) in India	
	Contact person	
	Tel, fax and e-mail	
	Facility location/address	
	Reason for import or export	
2.	Importer or exporter (name and address) outside of India	
3.	Details of waste to be imported or exported	
	(*a*) Quantity (*b*) Basel No. (*c*) Single/multiple movement (*d*) Chemical composition of waste (attach details), where applicable (*e*) Physical characteristics (*f*) Special handling requirements, if applicable	
4.	For Schedule III A hazardous waste whether Prior Informed Consent has been obtained	
5.	For importer (*a*) Process details along with environmental safeguard measures (attach separate sheet) (*b*) Capacity of recycling or co-processing or recovery or utilization Enclose a copy each of valid authorisation and valid consent to operate from SPCB	
6.	Details of import against the Ministry of	

	Environment, Forest and Climate Change permission in the previous three years	
7.	Port of entry	

9. Undertaking

I hereby solemnly undertake that:

(*i*) The information is complete and correct to the best of my knowledge and legally-enforceable written contractual obligations have been entered into and that my applicable insurance or other financial guarantees are or shall be in force covering the transboundary movement.

(*ii*) The waste permitted shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

(*iii*) The record of consumption and fate of the imported waste shall be recorded and report sent to the SPCB every quarter.

(*iv*) The hazardous or other waste which gets generated in our premises by the use of imported hazardous or other wastes in the form of raw material shall be treated and disposed of as per conditions of authorisation.

(*v*) I agree to bear the cost of export and mitigation of damages if any.

(*vi*) I am aware that there are significant penalties for submitting a false certificate/ undertaking/ disobedience of the rules and lawful orders including the possibility of fine and imprisonment.

(*vii*) The exported wastes shall be taken back, if it is not acceptable to the importer.

Signature of the Applicant Designation

Date.....

Place.....

FORM 6

[*See* Rules 13(2), 13(10) and 14(5)]

TRANSBOUNDARY MOVEMENT- MOVEMENT DOCUMENT

Sl. No	Description		Details to be furnished by the exporter or importer
(1)	(2)		(3)
1	Exporter (Name and Address) Contact Person	: :	

	Tele, Fax and email	:	
2.	Generator(s) of the waste (Name and Address)1 Contact Person Tele, Fax and email	: : :	
	Site of generation	:	
3.	Importer or Actual user (Name and Address) Contact person Tele, Fax and email	: : :	
4.	Trader (Name and Address) Contact person Tele, Fax and email	: : :	
	Details of actual user (Name, Address, Telephone and email)	:	
5.	Corresponding to applicant Ref. No., If any	:	
6.	Bill of lading (attach copy)	:	
7.	Country of import/export	:	
8.	General description of waste	:	
	(*a*) Quantity (*b*) Physical characteristics (*c*) Chemical composition of waste (attach details), where applicable (*d*) Basel No. (*e*) UN Shipping name (*f*) UN Class (*g*) UN No (*h*) H Number (*i*) Y Number (*j*) ITC (HS) (*k*) Customs Code (H.S.) (*l*) Other (specify)		
9.	Type of packages	:	
	Number	:	
10.	Special handling requirements including emergency provision in case of accidents	:	
11.	Movement subject to single/multiple consignment		
	In case of multiple movement— (*a*) Expected dates of each shipment or expected frequency of the shipments (*b*) Estimated total quantity and quantities for	: :	

	each individual shipment		
12.	Transporter of waste (Name and Address)[1] Contact Person Tele, Fax and email	:	
	Registration number	:	
	Means of transport (road, rail, inland waterway, sea, air)[2]	:	
	Date of Transfer	:	
	Signature of Carrier's representative	:	
13.	Exporter's declaration for hazardous and other waste:		
	I certify that the information in Sl. Nos. 1 to 12 above are complete and correct to my best knowledge. I also certify that legally-enforceable written contractual obligations have been entered into and are in force covering the transboundary movement regulations/rules. Date: ..... Signature: ..... Name:		
TO BE COMPLETED BY IMPORTER (ACTUAL USER OR TRADER)			
14.	Shipment received by importer/actual user/trader[2/3]		
	Quantity received.....Kg/litres Date: Name: Signature:		
15.	Methods of recovery		
	R code*		
	Technology employed (Attached details if necessary)		
16.	I certify that nothing other than declared goods covered as per these rules is intended to be imported in the above referred consignment and will be recycled /utilized. Signature: Date:		
17.	SPECIFIC CONDITIONS ON CONSENTING TO THE MOVEMENT if applicable.		(attach details)

Notes: (1) Attach list, if more than one; (2) Select appropriate option; (3) Immediately contact competent authority in case of any emergency; (4) If more than one transporter carriers, attach

information as required in SL. No. 12.

List of abbreviations used in the Movement Document

Recovery Operations (*)

R1 Use as a fuel (other than in direct incineration) or other means to generate energy.

R2 Solvent reclamation/regeneration.

R3 Recycling/reclamation of organic substances which are not used as solvents.

R4 Recycling/reclamation of metals and metal compounds.

R5 Recycling/reclamation of other inorganic materials.

R6 Regeneration of acids or bases.

R7 Recovery of components used for pollution abatement.

R8 Recovery of components from catalysts.

R9 Used oil re-refining or other reuses of previously used oil.

R10 Land treatment resulting in benefit to agriculture or ecological improvement

R11 Uses of residual materials obtained from any of the operations numbered R1 to R10

Date: Signature:

Place: Designation:

FORM 7

[*See* Rule 13(2)(*c*)]

APPLICATION FORM FOR ONE TIME AUTHORISATION OF TRADERS FOR PART- D OF SCHEDULE III, WASTE

[To be submitted by trader to the State Pollution Control Board]

1.	Name and address of trader with Telephone, Fax Number and e-mail	:	
2.	TIN/VAT Number/Import/Export Code	:	
[59] [3.	Description along with Institute of Scrap Recycling Industries (ISRI) or any other equivalent code where applicable or composition of the waste being imported and the quantity]	:	
4.	Details of storage, if any	:	
5.	Names and address of authorised	:	

	actual user (s)		
[60] [5a.	Name and address of authorised actual user (s): [Applicable for import of Basel No. B3020 (Paper, paperboard and paper product wastes);	:	
5b.	Name and address of prospective actual user [Applicable for import of other wastes]]	:	
	Signature of the authorised person Date: Place:		

[61][FORM 7-A

[*See* Rule 13(2)(*c*)]

FORM FOR GRANT OF ONE-TIME AUTHORISATION BY STATE POLLUTION CONTROL BOARD TO THE TRADERS WHO ARE IMPORTING THE WASTE MENTIONED IN PART D OF SCHEDULE III

1. Number of Authorisation:

2. Reference: Application form for authorisation of traders for import of waste as per Part D of Schedule III, of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 (Unique application number) dated.....

3. [Trader Name and Address], having storage locations at [.....], is hereby granted an authorisation for import, storage and trading of other wastes contained in Part D of SCHEDULE III as follows:

Sl. No.	Name and Basel No. of Other Waste as per the Schedule III, Part D of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016	List and detailed address of actual or prospective users*	Quantity (ton/annum)

(Add additional rows as necessary)

*- Detailed list may be attached for each other waste.

4. This authorisation is granted as per the provisions of clause (*c*) of sub-rule (2) of Rule 13, of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.

5. This authorisation is subject to the following general and specific conditions—

A. General conditions:

(*i*) The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986 (29 of 1986), and the rules made thereunder.

(*ii*) This authorisation shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.

(*iii*) The person authorised shall not import, store and trade in the imported other wastes other than those wastes permitted through this authorisation.

(*iv*) Authorised person shall intimate the State Pollution Control Board regarding change in the storage location or closure of storage facility.

(*v*) The waste which gets generated during storage and trading of imported other wastes shall be treated and disposed of as per prevailing regulations.

(*vi*) The importer shall bear the cost of import and mitigation of damages if any caused during the process of import, storage and trading.

(*vii*) Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or the Central Pollution Control Board, as the case may be, from time to time.

(*viii*) Annual return as per FORM 4 shall be filed by June 30th for the period ensuring 31st March of the year.

(*ix*) The Authorised Trader shall be responsible to obtain other statutory permissions as may be required.

B. Specific conditions with respect to storage and handling of Other Waste:

(As may be specified by the Issuing Authority)

Date:

Signature of Issuing Authority
Designation and Seal]

FORM 8

[*See* Rules 17(1) and 18(2)]

LABELLING OF CONTAINERS OF HAZARDOUS AND OTHER WASTE

Handle with care

Waste category and characteristics as per Part C of Schedules II and III of these rules …….	Incompatible wastes and substances ……
Total quantity …….	Date of storage
Physical State of the waste (Solid/Semi-solid/liquid):	

Sender's name and address	Receiver's name and address
Phone……	Phone……
E-mail……	E-mail……
Tel. and Fax No……	Tel. and Fax No……
Contact person……	Contact person……
In case of emergency please Contact ……	

Note:

1. Background colour of label —fluorescent yellow.
2. The word 'HAZARDOUS WASTES' and 'HANDLE WITH CARE' to be prominent and written in red, in Hindi, English and in vernacular language.
3. The word 'OTHER WASTES' to be written prominently in orange, in Hindi, English and in vernacular language.
4. Label should be of non-washable material and weather proof.

FORM 9

[*See* Rule 18(2)]

TRANSPORT EMERGENCY (TREM) CARD

[To be carried by the transporter during transportation of hazardous and other wastes, provided by the sender of waste]

1. Characteristics of hazardous and other wastes:

Sl. No.	Type of waste	Physical properties/	Chemical constituents	Exposure hazards	First Aid requirements

2. Procedure to be followed in case of fire :
3. Procedure to be followed in case of spillage/accident/explosion :
4. For expert services, please contact :
   (*i*) Name and Address
   (*ii*) Telephone No. :

(Name, contact number and signature of sender)

Date……..

Place……..

FORM 10

[*See* Rule 19(1)]

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1.	Sender's name and mailing address (including	

	Phone No. and e-mail) :	
2.	Sender's authorisation No. :	
3.	Manifest Document No. :	
4.	Transporter's name and address (including Phone No. and e-mail) :	
5.	Type of vehicle :	(Truck/Tanker/Special Vehicle)
6.	Transporter's registration No. :	
7.	Vehicle registration No. :	
8.	Receiver's name and mailing address (including Phone No. and e-mail) :	
9.	Receiver's authorisation No. :	
10.	Waste description :	
11.	Total quantity : No. of Containers :	.....m^3 or MT .....Nos.
12.	Physical form :	(Solid/Semi—Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13.	Special handling instructions and additional information :	
14.	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:	Signature: Month Day Year ☐☐☐☐☐☐☐☐☐☐☐☐
15.	Transporter acknowledgement of receipt of Wastes	
	Name and stamp:	Signature: Month Day Year ☐☐☐☐☐☐☐☐☐☐☐☐

16.	Receiver's certification for receipt of hazardous and other waste
	Name and stamp: Signature: Month Day Year

FORM 11

[*See* Rule 22]

FORMAT FOR REPORTING ACCIDENT

[To be submitted by the facility or sender or receiver or transporter to the State Pollution Control Board]

1. The date and time of the accident
2. Sequence of events leading to accident :
3. Details of hazardous and other wastes involved in accident :
4. The date for assessing the effects of the accident on health or the environment :
5. The emergency measures taken :
6. The steps taken to alleviate the effects of accidents :
7. The steps take to prevent the recurrence of such an accident :

Date: Signature:

Place: Designation:

FORM 12

[*See* Rule 24(1)]

APPLICATION FOR FILING APPEAL AGAINST THE ORDER PASSED BY STATE POLLUTION CONTROL BOARD

1. Name and address of the person making the appeal :
2. Number, date of order and address of the authority which passed the order, against which appeal is being made : (certified copy of the order be attached)
3. Ground on which the appeal is being made :
4. Relief sought for :
5. List of enclosures other than the order referred in point 2 against which the appeal is being filed. :

Signature.....

Name and address.....

Date:

[1.] Ministry of Environment, Forest and Climate Change, Noti. No. G.S.R. 395(E), dated 4-4-2016, published in the Gazette of India, Extra., Part II, Section 3(i), dated 4-4-2016, pp. 53-97, No. 244

[2.] *Subs.* for "hazardous wastes" by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[3.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[4.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021). Prior to substitution it read as:

'23. "other wastes" means wastes specified in Part B and Part D of Schedule III for import or export and includes all such waste generated indigenously within the country;'

[5.] *Ins.* by G.S.R. 178(E), dt. 1-3-2019 (w.e.f. 5-3-2019).

[6.] *Subs.* by G.S.R. 641(E), dt. 9-10-2020 (w.e.f. 16-10-2020). Prior to substitution it read as:

"(*a*) ensure recognition and registration of workers involved in recycling, pre-processing and other utilisation activities;"

[7.] *Subs.* by G.S.R. 641(E), dt. 9-10-2020 (w.e.f. 16-10-2020). Prior to substitution it read as:

"(*c*) undertake industrial skill development activities for the workers involved in recycling, pre-processing and other utilisation;

(*d*) undertake annual monitoring and to ensure safety and health of workers involved in recycling, pre-processing and other utilisation."

[8.] *Ins.* by G.S.R. 178(E), dt. 1-3-2019 (w.e.f. 5-3-2019).

[9.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[10.] *Subs.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024). Prior to substitution it read as:

"(*i*) small generators (up to ten tonnes per annum) up to one hundred and eighty days of their annual capacity;"

[11.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021). Prior to substitution it read as:

"(1) The utilisation of hazardous and other wastes as a resource or after pre-processing either for co-processing or for any other use, including within the premises of the generator (if it is not part of process), shall be carried out only after obtaining authorisation from the State Pollution Control Board in respect of waste on the basis of standard operating procedures or guidelines provided by the Central Pollution Control Board."

[12.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021). Prior to substitution it read as:

"(2) Where standard operating procedures or guidelines are not available for specific utilisation, the approval has to be sought from Central Pollution Control Board which shall be granting approval on the basis of trial runs and thereafter, standard operating procedures or

guidelines shall be prepared by Central Pollution Control Board:"

[13.] *Ins.* by G.S.R. 593(E), dt. 21-7-2022 (w.e.f. 21-7-2022).

[14.] *Ins.* by G.S.R. 47(E), dt. 27-1-2021 (w.e.f. 27-1-2021).

[15.] *Subs.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024). Prior to substitution it read as:

"6-B. The import of 'post-industrial or pre-consumer polyethylene wastes' shall be permitted with a requirement of at least fifty per cent exports in terms of tonnage for 18 months from the date of this notification or till a decision is taken on the basis of review or audit undertaken to ascertain the effect of such import, whichever is later."

[16.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021). Prior to substitution it read as:

"(*c*) importer who is a trader, importing waste on behalf of actual users, shall obtain one time authorisation in Form 7 and copy of this authorisation shall be appended to Form 6."

[17.] *Ins.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[18.] *Ins.* by G.S.R. 677(E), dt. 18-9-2023 (w.e.f. 1-4-2024).

[19.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 1-4-2024).

[20.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 1-4-2024).

[21.] *Subs.* by Hazardous and Other Wastes (Management and Transboundary Movement) Second Amendment Rules, 2024, G.S.R. 698(E), dt. 12-11-2024 (w.e.f. 12-11-2024). Prior to substitution it read as:

"40. *Prosecution*.—Any person, who provides incorrect information required under this Chapter for obtaining extended producer responsibility certificates, uses or causes to be used false or forged extended producer responsibility certificates in any manner, wilfully violates any provision of this Chapter or fails to cooperate in the verification and audit proceedings, shall be prosecuted under Section 15 of the Act. This prosecution shall be in addition to the environmental compnesation levied under Rule 39 of this Chapter."

[22.] *Ins.* by G.S.R. 900(E), dt. 23-12-2022 (w.e.f. 23-12-2022).

[23.] *Omitted* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[24.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[25.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[26.] *Omitted* by G.S.R. 47(E), dt. 27-1-2021 (w.e.f. 27-1-2021).

[27.] *Omitted* by G.S.R. 47(E), dt. 27-1-2021 (w.e.f. 27-1-2021).

[28.] *Ins.* by G.S.R. 900(E), dt. 23-12-2022 (w.e.f. 23-12-2022).

[29.] *Subs.* by G.S.R. 500(E), dt. 12-7-2023 (w.e.f. 12-7-2023). Prior to substitution it read as:
"Used electrical and electronic assemblies imported for repair and to be re-exported back after repair within one year of import * * *"

[30.] *Ins.* by G.S.R. 544(E), dt. 11-6-2018 (w.e.f. 12-6-2018).

[31.] *Ins.* by G.S.R. 178(E), dt. 1-3-2019 (w.e.f. 5-3-2019).

[32.] *Ins.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[33.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[34.] *Ins.* by G.S.R. 47(E), dt. 27-1-2021 (w.e.f. 27-1-2021).

[35.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[36.] *Subs.* by G.S.R. 670(E), dt. 6-7-2016 (w.e.f. 6-7-2016).

[37.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[38.] *Omitted* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[39.] The words "Polysiloxanes" *omitted* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[40.] *Omitted* by G.S.R. 47(E), dt. 27-1-2021 (w.e.f. 27-1-2021).

[41.] *Omitted* by G.S.R. 178(E), dt. 1-3-2019 (w.e.f. 5-3-2019).

[42.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[43.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[44.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[45.] *Subs.* by G.S.R. 500(E), dt. 12-7-2023 (w.e.f. 12-7-2023). Prior to substitution it read as:
"Used electrical and electronic assemblies imported for repair and to be re-exported after repair within one year of import"

[46.] *Subs.* by G.S.R. 500(E), dt. 12-7-2023 (w.e.f. 12-7-2023). Prior to substitution it read as:
"(*e*) Certificate from exporting company for accepting the repaired and unrepairable electrical and electronic assemblies and the spares or part or component or consumables being re-exported."

[47.] *Ins.* by G.S.R. 544(E), dt. 11-6-2018 (w.e.f. 12-6-2018).

[48.] *Ins.* by G.S.R. 47(E), dt. 27-1-2021 (w.e.f. 27-1-2021).

[49.] *Ins.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[50.] *Ins.* by G.S.R. 593(E), dt. 21-7-2022 (w.e.f. 21-7-2022).

[51.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[52.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[53.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[54.] *Subs.* by Hazardous and Other Wastes (Management and Transboundary Movement) Second Amendment Rules, 2024, G.S.R. 698(E), dt. 12-11-2024 (w.e.f. 12-11-2024). Prior to substitution it read as:

"11. *Prosecution*.—Any person, who provides incorrect information for obtaining extended producer responsibility certificates, uses or causes to be used false or forged extended producer responsibility certificates in any manner, over generates extended producer responsibility certificates above 5% of the actual waste recycled, willfully violates the directions given under the provisions of this Schedule or fails to co-operate in the verification and audit proceedings, may be prosecuted under Section 15 of the Act and this prosecution shall be in addition to the environmental compensation levied under Paragraph 10."

[55.] *Subs.* by G.S.R. 178(E), dt. 1-3-2019 (w.e.f. 5-3-2019).

[56.] *Ins.* by G.S.R. 177(E), dt. 12-3-2024 (w.e.f. 12-3-2024).

[57.] *Ins.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[58.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[59.] *Subs.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[60.] *Ins.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

[61.] *Ins.* by G.S.R. 798(E), dt. 12-11-2021 (w.e.f. 15-11-2021).

ANNEXURE -II

Central Pollution Control Board
PARIVESH BHAWAN
East Arjun Nagar, Delhi – 110 032

No. B- 33014/7/IPC-II/2017-18/ July 07, 2017

OFFICE MEMORANDUM

Draft Guidelines for Pre-processing/Co-processing of Hazardous and Other Wastes had been prepared in Feb. 2017 and circulated among the SPCBs / PCCs and other Stake-holders for information/comments. Suggestions were received and have been incorporated wherever feasible. Accordingly, Final Guidelines have been prepared and are enclosed herewith for reference and further necessary action in the matter as deemed fit at the level of industries generating such wastes , SPCBs / PCCs , Pre-processors, Co-processors, TSDF and others concerned.

Reference of the Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules, 2016 shall also be taken wherever necessary.

This is issued with the approval of the Competent Authority, Central Pollution Control Board.

[N.K. Gupta]
Divisional Head – IPC-II

Distribution :

- ✓ All the SPCBs / PCCs
- ✓ Cement Manufacturers Association, Noida [U.P.]
- ✓ Confederation of Indian Industries, New Delhi
- ✓ TSDFs

Guidelines for Pre-Processing and Co-Processing of Hazardous and Other Wastes in Cement Plant as per H&OW(M & TBM) Rules, 2016

July, 2017

Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Government of India)
Parivesh Bhawan, East Arjun Nagar,
Shahdara, Delhi – 110032

CONTENTS

1.0 Background:

The rules notified in the year 2016 on management of Hazardous and Other Wastes, outlines the hierarchy of wastes management, wherein, prevention, minimization, reuse, recycling, recovery, utilisation including pre-processing and co-processing was envisaged prior to considering the option of disposal through incineration or secured landfilling.

Substantial factions of the industrial, commercial, domestic and other wastes contain materials that have the potential for use as an alternative raw material or as a supplementary fuel for energy recovery. The current waste generation scenario in India is as follows.

- About 7.4 Million tonnes of hazardous wastes is annually generated in India, out of which around 3.98 Million tonnes is recyclable and can be used for resource or energy recovery.

- About 65 Million TPA of MSW is generated in the country which contains about 15-20 % of non-recyclable Segregated Combustible Fraction (SCF) which can be utilized for energy recovery.

- About 200 million tonnes of non-hazardous wastes of industrial origin also gets generated in the country such as fly-ash, pyro-metallurgical slags, sludge from WTPs, dried sewage sludge, Plastic & other packaging materials, date expired and off-specification FMCGs materials and food & kindred products, used pneumatic tyres, etc. having potential for resource or energy recovery.

- Large quantity of agro-wastes that do not have potential to be used as cattle feed etc.

Environmentally sound utilization of wastes for resource or energy recovery can be practiced in various industrial processes. However, utilization by co-processing in cement Kiln is considered as an effective and sustainable option. There is dual benefit in co-processing of wastes in cement kilns, in terms of utilizing the waste as a supplementary fuel as well as an alternative raw material

The production of cement in India is about 300 Million Tons per annum, for which estimated coal and raw material (Lime stone, Iron ore, Clay, Bauxite etc.) requirement are 50 Million Tons per annum and 450 Million Tons per annum, respectively. The country, therefore, has vast potential to utilize large quantum of wastes such as non-recyclable hazardous & other wastes, segregated combustible fractions from MSW or Municipal Solid Wastes (MSW) based Refuse Derived Fuel (RDF), non-hazardous industrial wastes, plastics wastes, tyre wastes, non-usable bio-mass etc. as an alternative fuel and raw material (AFR) in cement kilns. Such utilization would help in recovering energy and material value present in them thereby reducing the consumption of primary fossil fuels and raw materials. Utilising these materials as AFRs will also reduce large quantity of GHG emissions of the country which is in line with our commitment made in the Paris agreement.

Many trial runs for co-processing of different kind of hazardous and other wastes in cement kiln have been conducted as per the technical support provided by CPCB since the year 2005. These wastes have been permitted by CPCB and then authorized by SPCBs to implement regular co-processing in

various cement kilns under Rule 11 of the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. CPCB has also published guidelines on co-processing of wastes in cement plants in the year 2010.

Subsequently, these rules have been superseded with re-notification vide GSR 395 (E) dated 04.04.2016 as the Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 (HOWM Rules 2016).

The Rule 9 of the HOWM Rules 2016 is reproduced below:

> *"**Utilisation of hazardous and other wastes.-**(1) The utilisation of hazardous and other wastes as a resource or after pre-processing either for co-processing or for any other use, including within the premises of the generator (if it is not part of process), shall be carried out only after obtaining authorization from the State Pollution Control Board in respect of waste on the basis of standard operating procedures or guidelines provided by the Central Pollution Control Board.*
>
> *(2) Where standard operating procedures or guidelines are not available for specific utilisation, the approval has to be sought from Central Pollution Control Board which shall be granting approval on the basis of trial runs and thereafter, standard operating procedures or guidelines shall be prepared by Central Pollution Control Board:*
>
> *Provided, if trial run has been conducted for particular waste with respect to particular utilization and compliance to the environmental standards has been demonstrated, authorization may be granted by the State Pollution Control Board with respect to the same waste and utilisation, without need of separate trial run by Central Pollution Control Board and such cases of successful trial run, Central Pollution Control Board shall intimate all the State Pollution Control Board regarding the same.*
>
> *(3) No trial runs shall be required for co-processing of waste in cement plants for which guidelines by the Central Pollution Control Board are already available; however, the actual users shall ensure compliance to the standards notified under the Environment (Protection) Act,1986 (29 of 1986), for cement plant with respect to co-processing of waste:*
>
> *Provided that till the time the standards are notified, the procedure as applicable to other kind of utilisation of hazardous and other waste, as enumerated above shall be followed."*

The above provisions have prompted CPCB to bring out these revised guidelines to facilitate SPCBs/PCCs to grant authorisation for utilization of different kinds of wastes, including Hazardous & other wastes, as AFRs through co-processing in cement kilns in an environmentally sound manner.

2.0 Benefits of Co-processing:

Co-processing in cement kiln is considered as environmentally sustainable option for the management of different kinds of wastes including hazardous and other wastes. In co-processing, these wastes are not only destroyed at a higher temperature of up to 1450^{o}C and long residence time during which its inorganic content gets fixed with the clinker and becomes part of cement apart from using the energy content of the wastes, thus no residues are left. While in case of incineration, the residual ash requires to be land filled as hazardous waste. Further the acidic gases, if any generated during co-processing gets neutralized in the large alkaline environment available within the kiln system. This phenomenon also reduces the non-renewable resources requirement such as coal and lime stone etc. Thus the utilization of wastes in cement kilns through co-processing provides a win–win option of waste disposal.

Co-processing of wastes in the cement plants would require a large scale management of Hazardous and other wastes. This would mean that a large quantum of waste will be received, stored, handled and pre-processed in the cement plants or TSDFs or stand-alone pre-processing facilities so as to make an homogenised mixture of wastes suitable for co-processing in the cement kilns. This waste mix would get prepared from different kinds of wastes such as the ones listed in HOWM Rules, 2016 and also those which are not listed like SCF, RDF, plastic & other packaging wastes, tyre chips, non-hazardous industrial wastes, biomasses, agro-wastes (which are not suitable for use as cattle feed), non recyclable materials from ware houses such as date expired or off-specification FMCG, food & kindred and other products, etc. Further it may require installation of different systems for feeding such homogenised mixtures into cement kilns. Fig 1 given in Annexure 1 provides an overview of the pre-processing of the waste in a facility and co-processing in cement kiln.

Hence, there is a need to define appropriate methodology with which, necessary authorization can be granted by SPCBs to cement plants or pre-processing facilities apart from TSDFs for collection, transportation, receipt, storage, handling & pre-processing of wastes and also for co-processing operation in cement kilns.

3.0 Authorization for pre-processing and/or co-processing:

As per HOWM Rules, 2016, utilisation of hazardous and other wastes for co-processing or for any other use shall be carried out only after obtaining authorization from the State Pollution Control Board in respect of waste on the basis of standard operating procedures or guidelines provided by the Central Pollution Control Board.

Further, no trial runs would be necessary for grant of authorisation for co-processing of wastes in cement kilns since Ministry of Environment, Forests and Climate Change has notified the Emission Standards for co-processing of wastes in cement kiln vide GSR No. 497 (E) dated 10.5.2016 under the Environment (Protection) Rules, 1986. Such co-processing shall be carried out as per the guidelines and SOPs outlined in this document

SPCBs may grant Authorisation to cement plants for co-processing of wastes listed in Schedule I, Schedule II and Schedule III of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Authorisation for co-processing of commonly recyclable hazardous wastes

listed in Schedule-IV may be considered only if there are no recyclers for such wastes at reasonable distance as may be decided by SPCBs.

Further, SPCBs may also grant consent to the cement plants under Air (P&C) Act, 1981 for co-processing of any wastes not listed in HOWM Rules, 2016 like SCF, RDF, plastic & other packaging wastes, tyre chips, non-hazardous industrial wastes, biomasses, agro-wastes (which are not suitable for use as cattle feed) and date expired or off-specification FMCG and food & kindred other products which are not-recyclable. While co-processing all such wastes including hazardous & other wastes, cements plants shall comply with the emission standards prescribed for co-processing of wastes notified by MoEF&CC vide GSR No. 497 (E) dated 10.05.2016.

Use of wastes for co-processing in cement kilns does not warrant the requirement of EC as per MoEF&CC Notification No. S.O.3518 (E) dated 23.11.2016

As per HOWM Rules, 2016, every person who is engaged in generation, collection, transportation, receipt, storage, and handling of hazardous and other wastes for pre-processing and /or co-processing shall obtain an authorization or its renewal by applying in Form 1 from the State Pollution Control Board / Pollution Control Committee.

Accordingly, cement plants may co-process the pre-processed hazardous wastes received from TSDFs or stand-alone pre-processing facilities or their captive pre-processing facilities only after obtaining such authorization.

Every TSDF or standalone pre-processing facility or cement plant who is engaged in pre-processing of wastes for co-processing shall have minimal requisite infrastructure facilities & operational controls as mentioned below;

S.No	Type of operations	Check-list
i.	Type of packaging	May use liners, Bags Small / Jumbo, Drums, Containers, Bulkers, Tankers, etc. suitable for handling of hazardous wastes as per CPCB guidelines
ii.	Reception	Weighing bridge
iii.	Waste characterisation / qualification	Laboratory
iv.	Storage	Shall install covered sheds with Impervious flooring. Waste shall be stored in storage tanks/Containers/bins. Bulky wastes may be handled on impervious lined flooring under shed.
v.	Equipment for Size reduction	Shredder, Grinder, mixers, Cutter, Hammer, Jaw Crusher, Chipper, Hydro-pulper machines, etc.
vi.	Feed material preparation equipment	Impregnation, Drying, Screening, Crushing, Pelletisation, Granulation, Others
vii.	Moving machinery	Shall use machinery like trucks, Bob cat, Forklifts, loaders, dumpers, Arm handlers, Wheal loaders, Crawler loaders, Telescopic etc.
viii.	sorting equipment	Shall use equipment like Metal detectors, Electro-Magnetic separators, etc.
ix.	Screening material	Shall use equipment such as disc screen, Rotary screen, Trommel screen, Oscillating screens etc.

S.No	Type of operations	Check-list
x.	Conveyers to transport the material from one to another place	Shall use belt conveyors, Inclined Belt conveyors, Cleated belt conveyors, chain conveyors, bucket conveyors, closed conveyors, pipe conveyors etc
xi.	Feeding arrangements (applicable to cement plants alone)	Weigh feeders (Volumetric and Gravimetric feeding), Apron and Gottwald feeders etc. for liquid, solid and semi-solid waste feeding, including facilities for impregnation of wastes.
xii.	Safety equipment (applicable to cement plants alone)	Rotary Air Lock, Safety shut off gate, Double slide gates are utilized into the feeding mechanism to avoid any back fire due to any pressure build-up into the kiln.
xiii.	Fugitive Emission Control Systems	Fume extraction systems with vacuum ducts connected to Scrubbers / bag filters VOC emission control systems Biological treatment etc. ID fan and stack.
xiv.	Fire protection	Approved by fire safety auditor / fire department should be provided
xv.	Spillage/leachate collection / containment measures.	Shall install collection pits, impervious liners, segregation of storm water drainage systems
xvi.	Electrical fittings / Equipment	Systems shall be designed to handling flammable / explosive materials (If relevant)
xvii.	Odour control	The facility must have appropriate odor control facility to deal with the odor nuisance.
xviii.	Safety Equipment	There shall be provision of emergency showers and eye wash stations. Use of PPEs, ear-plug etc.
xix.	Facility has implemented a monitoring plan for checking the health of the operating personnel as per the statutory requirement	Medical surveillance of the operating personnel as per HOWM Rules 2016
xx.	Emergency Response Plan	Emergency Response Plan to deal with spills, fires and emergencies as per CPCB guidelines
xxi.	CEMS	Shall install CEMS for PM, NOx & SO_2 and connected to SPCB / CPCB for online data transmission (applicable to cement plants alone)

TSDFs, Stand alone Pre-processing Facilities & Cement plants shall undertake pre-processing of and co-processing of wastes as per the Standard Operating Procedures (SOPs) specified in these guidelines.

SPCBs shall grant authorisation to the waste generators to send their waste for management to any of the suitable pre-processing or co-processing facility that is approved by the SPCBs.

4.0 Trial Runs

Trial runs for co-processing of hazardous wastes would not be necessary except for few specific wastes such as Persistent Organic Compounds (PoPs), PCBs, obsolete and date expired pesticides, Ozone Depleting Substances

etc. listed for restrictions in international conventions, for which trial studies were not yet conducted. Kiln specific trial runs may be required for such wastes to study the destruction and removal efficiencies (as per the requirement of Stockholm convention) in the given kiln, compliance to emission standards, safe transport, storage and handling etc. prior to issuance of authorisation by SPCBs. In such cases, SPCBs may consult CPCB for conducting such kiln specific trial studies.

5.0 Standard Operating Procedures

5.1 Handling of Hazardous & other wastes:

The hazardous wastes need to be handled in an environmentally safe manner avoiding the possibilities of contaminating the environment and eliminate the chances of accidents leading to environmental damage. The requirements of handling, including labelling, packaging, transport and storage applicable to the hazardous & other wastes have been described in following sub-sections.

5.1 Responsibilities of occupier for handling of hazardous & other wastes

"Occupier" in relation to any factory or premises, means a person who has control over the affairs of the factory or the premises and includes in relation to any hazardous waste the person in possession of the hazardous waste.

The occupier shall take all adequate steps while handling hazardous wastes to:

(a) Contain contaminants and prevent accidents and limit their consequences on human beings and the environment; and

(b) Provide persons working on the site with the training, equipment and information necessary to ensure their safety.

5.2 Packaging of Hazardous & other wastes:

The containers utilized for storing and handling Hazardous and other wastes for the purpose of co-processing must be able to withstand normal handling and retain integrity for a minimum period of six months. In general, packaging of hazardous substances must meet the following requirements:

(i) All packaging materials including containers shall be of such strength, construction and type as not to break open or become defective during transportation.

(ii) All packaging materials including containers shall be so packed and sealed that spillages of hazardous wastes / substances are prevented during transportation due to jerks and vibrations caused by uneven road surface.

(iii) Re-packing materials including that used for fastening must not be affected by the contents or form a dangerous combination with them.

(iv) Packaging material should be such that there will be no significant chemical or galvanic action among any of the material in the package.

(v) Bulk transportation of hazardous wastes in trucks without suitable packaging or containers shall not be allowed.

(vi) The containers when used for packaging of the hazardous & other wastes shall meet the following requirements:

Container shall be of mild steel with suitable corrosion-resistant coating and roll-on roll-off cover, which may either be handled by articulated crane or by a hook lift system comfortably for a large variety of wastes. Other modes of packaging, like collection in 22-liter plastic or steel drums, PP and HDPE/LDPE containers, HDPE liner bags etc., also work for variety of waste. However, all such container should be amenable to mechanical handling.

- It should be leak proof.
- In general, the containers for liquid hazardous waste should be completely closed / sealed. There should be no gas generation due to any chemical reaction within the container, and thus should be devoid of air vents.
- Container should be covered with a solid lid or a canvas to avoid emissions of any sort including spillage, dust etc. and to minimize odour generation both at the point of loading as well as during transportation.
- Container used for transportation of waste should be able to withstand the shock loads due to vibration effect/undulations of pavements etc.
- Container should be easy to handle during transportation and emptying.
- As far as possible, manual handling of containers should be minimized. Appropriate material handling equipment is to be used to load, transport and unload the containers. Drums should not be rolled on or off vehicles. Preferably, equipment such as fork lift & pallets shall be used.
- Where a two-tier or three-tier storage is envisaged the frame should have adequate strength to hold the containers. Palletised drums may be stacked not more than 2 layers high in the transport vehicle.
- One-way containers (especially 16-liter drums) are also allowed. The multi-use container should be re-useable provided it should be cleaned and free from deterioration or defects.
- Loads are to be properly placed on vehicles. Hazardous & other waste containers are not to overhang, perch lean or be placed in other unstable base. Load should be secured with straps, clamps, braces or other measures to prevent movement and loss. Design of the container should be such that it can be safely accommodated on the transport vehicle.
- Non-compatible wastes shall not be collected in the same container. These wastes shall be segregated & packed separately. Non - compatible wastes shall not be transported together under any circumstance.

5.3 Labelling of Hazardous & other wastes

There are two types of labeling requirements:

(i) Labelling of individual transport containers (ranging from a pint-size to a tank); and

(ii) Labelling of transport vehicles.

All hazardous & other waste containers must be clearly marked with the contents. The marking must be irremovable, waterproof and firmly attached. Previous content labels shall be obliterated when the contents are different. Proper marking of containers is essential.

Containers that contain hazardous waste shall be labelled with the words "HAZARDOUS WASTE" in Vernacular language, Hindi / English. The information on the label must include the code number of the waste, the waste type, the origin (name, address, telephone number of generator), hazardous property (e.g. flammable), and the symbol for the hazardous property (e.g. the red square with flame symbol).

The label must withstand the effects of rain and sun. Labelling of containers is important for tracking the wastes from the point of generation up to the final point of disposal. The following are the requirements for labeling:

- The label should contain the name and address of the occupier and facility where it is being sent for pre-processing or co-processing i.e. labelling of container shall be provided with a general label as per Form 8 of the HOWM Rules, 2016.

- Emergency contact phone numbers shall be prominently displayed viz; the phone number of concerned officer of the sender and receiver, Regional Officer of the SPCB / PCC, Fire Station, Police Station and other agencies concerned.

Explanation: As a general rule, the label has to state the origin/ generator of the waste. He / she and only he / she – is responsible and shall know, in case of any accident / spillage etc. what kind of wastes it is, what hazard may occur and which measures should be taken. The second in the line is the collector / transporter / disposer /co-processor / pre-processor, who has to know the risk and what to do to minimize risks and hazards.

5.4 Collection and transportation of Hazardous & other wastes

The transportation of the Hazardous wastes has to be undertaken by the transporter who is engaged by either authorised sender or receiver. The responsibility of safe transportation of hazardous & other waste to the site for pre-processing or co-processing shall rest with either waste generator or the occupier of the pre-processing / co-processing facility that engages the transporter for the waste transportation. The detailed guidelines for collection and transportation of hazardous and other wastes have been provided at **Annexure-2**.

5.5 Storage of Hazardous & other wastes

The storage period of hazardous and other wastes shall be in accordance with the Rule 8 of the Hazardous & Other wastes (Management and Transboundary Movement) Rules 2016. The minimal requisite facilities for storage of hazardous and other wastes are given at **Annexure-3**.

5.5 Waste reception

Waste Characterization plays an important part in any treatment process of the waste which may be required before pre-processing and ultimately co-processing into the cement kilns. Upon receipt of the waste, it shall be weighed and property logged. It shall then undergo a visual inspection to confirm the physical appearance. A representative sample of the waste shall be collected and send to the onsite laboratory for finger printing analysis. Finger print analysis is performed to confirm that a particular waste stream belongs to an offsite waste generation source or not, based on its characteristics. The results of the finger printing analysis should be compared with the results of earlier analysis. Upon confirmation, this shall then be sent for pre-processing or co-processing.

The operator of the pre-processing facility of the cement plant shall perform following finger print analysis for each of the consignment of waste received for pre-processing or co-processing from generation site;

- Moisture content,
- Ash content,
- Net Calorific Value (NCV),
- Chloride and Sulphur content.
- Chemical compatibility
- Any other specific parameter, which may be decided on merit of each case keeping the clinker production process in focus.
- In case of liquid samples, viscosity, pH, suspended particle content etc shall also be performed.
- Heavy metal analysis, Reactive Sulphide, Reactive Cyanide or Halide analysis should be performed if sample comes from a sector which is suspected to have these in the waste material.

The results of this finger print analysis confirm that the waste belongs to already tested and verified waste stream which is suitable for co-processing into the kiln and do not have any side effects on clinker and cement quality parameters.

As the main product of the kiln is clinker, there must not be any side effect on its quality while utilizing the waste streams as AFRs. For pre-qualification for co-processing or pre-processing, a representative sample should be collected from the waste generator's site and analysed in a laboratory for above said parameter which shall form basis for comparing the finger print analysis of the waste consignments.

Quality Control - The quality of the pre-processed wastes (AFRs) largely depends on the quality control process followed during the quality assessment stage. Starting from sampling like collection of a representative sample, its storage in suitable container, avoiding any adulteration during transportation to lab, sample preparation in lab, performing test as per BIS standards for different quality parameters and carefully observing, recording and comparing

the results for specific waste streams is the key to define and confirm its suitability for pre-processing / co-processing in to the cement kiln.

Samples of wastes received at the pre-processing facility or the cement plant for pre-qualification must be preserved for one year for traceability considerations.

Samples of waste collected from regular consignments for finger print analysis must be preserved for one month for traceability consideration.

Samples that are beyond times as mentioned above must be sent to the TSDF or standalone pre-processing facility or to the cement plant for ensuring its disposal through co-processing.

5.6 Acceptance process for Hazardous & other wastes

Appropriate knowledge of the hazardous and other wastes is necessary to ensure that it will not adversely affect the process, safety or environment while handling it during pre-processing or co-processing. Hence, appropriate characterization of the waste for its acceptance and safe handling is an essential requirement.

Characterization of Hazardous and other waste for acceptance comprises two stages: pre-acceptance (or screening) and on-site acceptance. Pre-acceptance involves the provision of assessing the representative samples of the waste to allow operators to determine suitability of the infrastructure to handle the waste before receiving the same in the facility. The second stage concerns procedures when the waste arrives at the facility to confirm previously approved characteristics.

Failure to adequately screen waste samples prior to acceptance and a confirmation of its composition on arrival at the installation may lead to subsequent problems, inappropriate storage, mixing of incompatible substances, and accumulation of wastes could occur.

Hence, the pre-processing / co-processing facility must have appropriate laboratory facility for characterizing solid, liquid and sludge wastes with qualified analysts to ensure that proper waste acceptance process is practiced. This laboratory shall be equipped with facilities to test Moisture, Calorific value, Ash, Chorine, Fluorine, Carbon, Hydrogen, Sulphur, Nitrogen, Phosphorous, alkali and heavy metals, flash point, mixing compatibility, reactive sulphide, reactive Cyanide or halides etc.

In case the waste received at cement plant or standalone pre-processing facility does not meet the required criteria, in such case, the receiver should make arrangement for transfer of such waste to TSDF for final disposal by adopting necessary manifest system.

6.0 Pre-processing of wastes for co-processing:

Due to the heterogeneity of wastes, pre-processing is required to produce a relatively uniform waste stream for co-processing in cement kilns. This waste stream should comply with the technical and administrative requirements of cement manufacture and guarantee that emission standards and product quality are met. The proposal in this regard shall be submitted to SPCB by the cement plant or standalone pre-processing facility or TSDF. Waste mix having

uniform characteristics needs to be prepared from different waste streams for trouble free co-processing in a cement kiln.

The characteristics of the waste mix that need to be uniform pertain to particle size, chemical composition and heat content. For optimum operation, kilns require very uniform waste mix flows in terms of quality and quantity. Uniform quality of waste mix can be achieved by pre-processing different types of wastes by different physical processes in a pre-processing facility.

Pre-Processing is defined as pre-treatment of waste streams coming from different sectors and industries to make it suitable/homogenised for feeding into the kiln system to avoid process fluctuations. Pre-processing involves only physical transformations like size reduction (By Shredding and cutting), separation of foreign/undesirable materials (magnetic materials separation by Magnetic separator, use of metal detectors to remove metallic particles), impregnation (introducing and proper mixing of biomass/saw dust in semi solid streams to soak extra flowing liquids & maintaining good flow ability) and desired size selection (Size selection by screening operation, manual size selection by handpicking of large material size on very low speed Belt conveyors).

Pre-processing produces a homogenised Alternative Fuel mix from different incoming waste streams from various industrial sectors and reduces the possibilities of process fluctuations during Co-Processing the pre-processed fuels.

Various types of equipment are utilized during pre-processing operations like Shredder, Grinder, Cutter, Hammer, Jaw Crusher, Chipper and Hydro pulper machines for size reduction. Mixers for homogenizing the waste mix into large vessels/pits. Moving machinery like trucks, Bob cat, Forklifts, loaders, dumpers, Arm handlers, Wheel loaders, Crawler loaders, Telescopic handlers etc for material movement from one to another place and loading unloading of the material. Metal detectors, Electro-Magnetic separators, metal sorting equipments are utilized to remove small metallic traces which may be present into the incoming hazardous and other wastes from various sources. Different type of screens like Disc screen, Rotary screen, Trommel screen, Oscillating/ vibrating screens are used to separate the differently sized portions of the processed waste and choosing the right fraction for feeding into the system. Various types of Belt conveyors like flat belt conveyors, Inclined Belt conveyors, Cleated belt conveyors, chain conveyors, bucket conveyors, closed conveyors, pipe conveyors etc are utilised to transport the material from one to another place, usually pre-processed waste from the processing area to feeding area.

The pre-processing facility must have appropriate design to ensure that the waste homogenization operation is carried out in an environmentally sound manner and has equipment & facilities that are designed to handle the required hazardous wastes.

The rejects produced from the pre-processing facility, if any, may be sent to the TSDF, the authorisation for which may be obtained from concerned SPCB.

The pre-processing area must have impervious concrete floor and should be adequately covered to avoid exposure of rain to the material being stored and handled while pre-processing or co-processing.

Fume extraction systems with vacuum ducts and fume hoods should be installed at receiving pits/tanks, mixing units, blending units, shredders, transfer points, dryers, impregnation units, granulators, pelletizes, crushers, grinders, blenders etc. where there is source of such emissions. Such fume extraction systems should be connected to scrubbers / bag filters / VOC emission control through carbon adsorption, thermal or biological treatment etc. depending on type of emissions. The cleaned gases should be vented through ID fan and stack.

A fire protection system of approved design should be in place in the storage and pre-processing area.

The storage, handling and pre-processing facility should have appropriate spillage / leachate collection and storage system with impervious liners to avoid contamination of the ground water and soil.

The storm water and spillage / leachate drainage systems should be so designed that there should be no contamination of the storm water with the spillage or leachate from the storage, handling and pre-processing area.

The electrical and instrumentation fitting should be conforming to the standards.

The facility must have appropriate odor control facility to deal with the odor nuisance.

Emergency showers and eye wash stations should be provided within the storage, handling and pre-processing work area for immediate emergency use following exposure to the wastes.

Abatement techniques should be in place for control of noise to required levels.

7.0 Co-processing of wastes in Cement kiln:

Co-processing is defined as the use of waste as raw material, or as a source of energy, or both to replace natural mineral resources (material recycling) and fossil fuels such as coal, petroleum and gas (energy recovery) in industrial processes, mainly in energy intensive industries (EII) like cement production. In Co-processing, the combustible waste is utilized as fuel (Alternative Fuels) into the kiln system for maintaining the high temperature during clinker production. Some of the waste streams like biomass, small quantity waste streams, etc which have suitable quality parameters may be directly fed into the kiln system. However, majorly waste streams, especially when volumes are more, are fed after pre-processing which make it homogenized to reduce the process fluctuations.

Various equipment are utilized for feeding the pre-processed AFR into kiln system. Automated mechanical extraction machines such as walking Floor and various belt conveyors as mentioned above are utilized for transporting material from processing area to feeding point. Different kinds of volumetric and gravimetric dosing machinery are utilized for feeding the AFR material into the kiln in a controlled manner. Various safety equipments like Rotary Air Lock, Safety shut off valves & gates & Double slide gates are utilized into the

feeding mechanism to avoid any back fire due to pressure build-up inside the kiln. Bag filters are utilised at transfer points to avoid any dust emission into the atmosphere in case of feeding fine AFRs.

For optimal performance (co-processing without additional emissions), waste materials (pre-processed or as received) should be fed to the cement kiln through appropriate feed points, in adequate proportions and with proper waste quality and emission monitoring systems.

Different feed points can be used to feed the waste materials into the cement kiln for co-processing. The most common ones are:

- Main burner at the rotary kiln outlet end
- Rotary kiln inlet end
- Pre-calciner
- Mid kiln (for long dry and wet kilns)

Appropriate feed points have to be selected according to the physical, chemical and toxicological characteristics of the waste materials. Wastes of high calorific value have to be always fed into the high temperature combustion zones of the kiln system. Wastes containing stable toxic components and also wastes containing more than 1.5% chlorine should be fed to the main burner to ensure complete combustion in the high temperature and long retention time.

Alternative raw materials containing constituents that can be volatilized at operating temperatures in the pre-heater system have to be fed into the high temperature zones of the kiln system.

Coal feeding circuit and raw material feeding circuits of the cement plant must not be utilised to feed any type of wastes for co-processing unless a trial is performed to demonstrate the suitability of the same and specific approval from the SPCB is obtained along with the authorisation. SPCBs may consult CPCB in specific cases in this regard.

Feeding of alternative raw materials containing volatile (organic and inorganic) components to the kiln via the normal raw meal supply should be avoided unless it has been demonstrated by trial runs in the kiln that there is no VOC emission from the stack. Such trial runs should be carried out with permission from SPCBs. SPCB should consult CPCB if they feel that trial is needed in specific difficult cases.

Destruction of waste materials that are covered under the Stockholm convention and Montreal Protocol such as PCBs, Expired or obsolete pesticides, Ozone Depleting Substances etc. must however be undertaken in a given kiln only after obtaining specific approval from SPCB and other concerned organisations. For this, SPCB in consultation with CPCB will provide steps to be followed including implementing a trial as per a defined protocol.

7.1 Suitability of Substances for co-processing:

The decision on what type of substances can be used is based on the clinker production processes, the raw material and fuel compositions , the feeding points, the air pollution control devices and the given waste management

problems. The Accept - Refuse Chart in **Annexure-4** could be used by plant operators to help them in considering, which type of substance is suitable for co processing.

As a basic rule, waste accepted for co-processing must be safe enough to handle in the given facility and shall contribute to recovery of material or energy value present in it or provide its safe disposal.

Sometimes, some waste streams are not suitable in large volumes but can be co-processed in small volumes with controlled feed rate into the system.

The wastes listed below are normally not recommended till otherwise proved / evidenced for and hence need not be considered for pre and co-processing.

- Biomedical waste
- Asbestos containing waste.
- Electronic scrap.
- Entire batteries.
- Explosives.
- Corrosives.
- Mineral acid wastes.
- Radioactive Wastes.
- Unsorted municipal garbage.

7.2 Operating Conditions:

Cement plants shall ensure to prevent waste feed in following conditions;

i. at start up, until the temperature of 850°C in calciner or 1100°C at kiln inlet as the case may be.

ii. Whenever the temperature of 850°C or 1100°C as the case may be is not maintained.

iii. Whenever emission monitoring show that any emission limits value is exceeded due to disturbances or failures of air pollution control devices.

iv. In case of disturbed process condition in the kiln

The management of the pre and co-processing plant shall be in the hands of a skilled person, competent to manage the hazardous waste in an environmentally sound manner.

8.0 Emission standards:

The cement kilns undertaking co-processing of the different wastes as above must comply with the following notified emission standards notified vide GSR 497 (E) dated 10.5.2016;

"S. No.	Industry	Parameter	Standards		
(1)	(2)	(3)	(4)		
"10A.	Cement Plant with co-processing of wastes	A- Emission Standards			
		Rotary Kiln – with co-processing of Wastes			
			Date of Commissioning	Location	Concentration not to exceed, in mg/Nm^3
			(a)	(b)	(c)
		Particulate Matter (PM)*	on or after the date of notification (25.8.2014)	anywhere in the country	30
			before the date of notification (25.8.2014)	critically polluted area or urban centres with population above 1.0 lakh or within its periphery of 5.0 kilometer radius	30
				other than critically polluted area or urban centres	30
		SO_2*	irrespective of date of commissioning	anywhere in the country	100, 700 and 1000 when pyritic sulphur in the limestone is less than 0.25%, 0.25 to 0.5% and more than 0.5% respectively.
		NOx**	After the date of notification (25.8.2014)	anywhere in the country	(1) 600
			Before the date of notification (25.8.2014)	anywhere in the country	(2) 800 for rotary kiln with In Line Calciner (ILC) technology. (3) 1000 for rotary kiln using mixed stream of ILC, Separate Line Calciner (SLC) and suspension pre-heater technology or SLC technology alone or without calciner.
		HCl			10 mg/Nm^3
		HF			1 mg/Nm^3
		TOC			10 mg/Nm^3 **
		Hg and its compounds			0.05 mg/Nm^3
		Cd +Tl and their compounds			0.05 mg/Nm^3
		Sb+As+Pb+Co+Cr+Cu+Mn+Ni+V and their compounds			0.5 mg/Nm^3
		Dioxins and Furans			0.1 ngTEQ/ Nm^3

Continuous Emission Monitoring System (CEMS) should be installed & functioning for the parameters PM, SO_2 and NO_x in the first phase and the data should be uplinked to CPCB and SPCB servers. Additional emission parameters for CEMS may be added in future as per the directions of CPCB or SPCBs form time to time.

Other parameters shall be monitored manually once in a year and data should be submitted to SPCBs/CPCB.

SPCB / PCC shall monitor the emission from the cement plant to verify the compliance of notified emission standards. In case, SPCB/PCC does not have

the emission monitoring facilities, they can engage any EPA recognized / NABL accredited laboratory for the purpose.

9.0 Procedure for obtaining Authorisation

For co-processing of hazardous and other wastes, cement plants shall obtain Consent to Establish (CTE) and Consent to Operate (CTO) prior to obtaining authorisation under HOWM Rules, 2016.

The proposal for co-processing may include any kind of hazardous & other waste (as listed in the Schedules of HOWM rules, 2016) and non-hazardous wastes such as segregated combustible fractions from MSW, Refuse Derived Fuel (RDF) from MSW, Plastic wastes, Tyre chips, biomasses, food and other products, agro-wastes etc. with exceptions as described in section 7.1 of this guidelines.

The cement plants /standalone pre-processing facilities / TSDFs shall have valid authorisation for receiving, transporting, handling, storing, pre-processing or co-processing of hazardous and other wastes, for which they shall apply for authorisation as per Form 1 of HOWM Rules, 2016.

Application for authorisation shall provide details of the infrastructure available at their end to receive, characterize, transport, handle, store, pre-process and co-process wastes with minimum requisite facilities as specified in section 3.0 and 6.0 of these guidelines.

SPCB / PCC shall undertake physical inspection and verify the required equipment for pre-processing and co-processing of hazardous and other wastes. Format for verifying adequacy of the infrastructure for Pre-processing / Co-processing of waste materials is given below;

Format for verifying adequacy of the infrastructure for Pre-processing / Co-processing of waste materials

S.No	Type of operations	Check-list
i	Nature of the waste materials applied for	a. Solid b. Liquid c. Sludge d. Gas e. Hazardous f. Non-Hazardous g. Flammable h. Toxic i. Corrosive j. Explosive
ii	Type of packaging	a. Liners b. Bags Small / Jumbo c. Drums d. Containers

S.No	Type of operations	Check-list
		e. Bulkers f. Tankers g. Other (pl specify)
iii	Type of material handled	a. Solids b. Liquids c. Sludges d. Gases e. Flammable f. Toxic g. Corrosive
iv	Reception	Weighing bridge
v	Type packaging	Loose Bags Drums Containers Bulkers Tankers
vi	Laboratory for Waste characterisation	a. Yes b. No
vii	Storage	Covered sheds Impervious flooring Storage tanks/Containers/bins
viii	Equipment for Size reduction	Shredder, Grinder, mixers, Cutter, Hammer, Jaw Crusher, Chipper, Hydro-pulper machines others (pl. specify)
ix	Feed material preparation equipment	Impregnation Drying, Screening Crushing Pelletisation

S.No	Type of operations	Check-list
		Granulation Others
x	Moving machinery	like trucks, Bob cat, Forklifts, loaders, dumpers, Arm handlers, Wheal loaders, Crawler loaders, Telescopic
xi	sorting equipment	Metal detectors, Electro-Magnetic separators, etc.
xii	Screening material	Disc screen, Rotary screen, Trommel screen, Oscillating screens etc.
xiii	Conveyers to transport the material from one to another place	belt conveyors, Inclined Belt conveyors, Cleated belt conveyors, chain conveyors, bucket conveyors, closed conveyors, pipe conveyors etc
xiv	Feeding arrangements	Weigh feeders (Volumetric and Gravimetric feeding), Apron and Gottwald feeders etc. for liquid, solid and semi-solid waste feeding. Facilities for impregnation of wastes.
xv	Safety equipment	Rotary Air Lock, Safety shut off gate, Double slide gates are utilized into the feeding mechanism to avoid any back fire due to any pressure build-up into the kiln.
xvi	Fugitive Emission Control Systems	Fume extraction systems with vacuum ducts Scrubbers / bag filters / VOC emission control systems Biological treatment etc. ID fan and stack.
xvii	Fire protection Approved design should be provided	Yes No

S.No	Type of operations	Check-list
xviii	Spillage/leachate collection / containment measures. Collection pits, impervious liners, segregation of storm water drainage systems	Yes No
xix	Electrical fittings / Equipment / Systems are designed to handle flammable / explosive materials (If relevant)	Yes No
xx	Odour control The facility must have appropriate odor control facility to deal with the odor nuisance.	Yes No
xxi	Safety Equipment Provision of emergency showers and eye wash stations, PPEs, ear-plug etc.	Yes No Remarks:
xxii.	Facilities implemented at the location have been approved by the office of the Factory Inspector	Yes No
xxiii.	Facility has implemented a monitoring plan for checking the health of the operating personnel as per the statutory requirement	Yes No
xxiv.	Facility has prepared an Emergency Response Plan	Yes No
xxv.	CEMS installed for PM, NOx& SO_2 and connected to SPCB / CPCB for	a. Yes b. No

S.No	Type of operations	Check-list
	online data transmission	

SPCBs shall attach the verified check-list to their inspection report. In case of refusal, SPCB shall communicate the reasons for the same.

SPCBs may also grant authorization for utilization of chemical gypsum, stabilized jarosite, other similar waste material having potential to be used as set retarder and other high volume low-effect wastes as specified under HOWM Rules, 2016 in cement mill, for which cement plant shall apply to SPCB in form 1. Cement plant shall provide details of the infrastructure available at their end to receive, characterize, transport, handle, store, pre-process and utilize wastes and illustrate their suitability to manage these wastes in an environmentally sound and safe manner with requisite facilities given in section 3.0 and 6.0 as applicable.

Waste generator shall also obtain authorisation for sending chemical gypsum, stabilized jarosite, and other high volume low-effect wastes as specified under HOWM Rules, 2016 for utilization in cement mill.

Before undertaking pre-processing or co-processing of a waste stream which were introduced for co-processing or pre-processing, the facility operator shall give intimation to SPCB / PCC as per the format given at Annexure - 5

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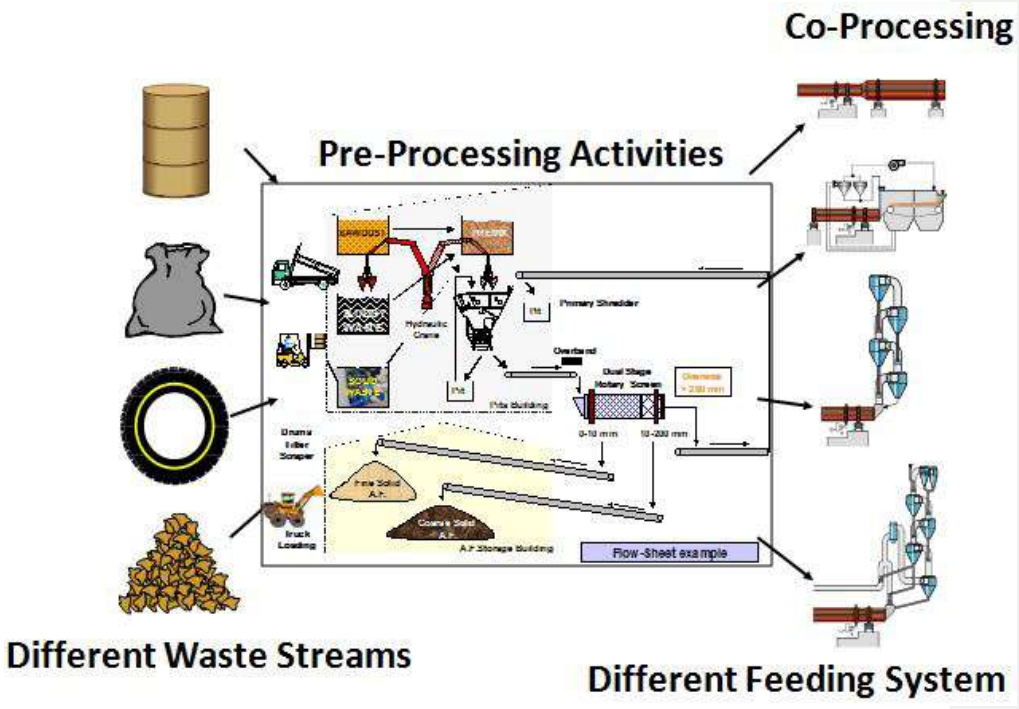
Annexure 1

Schematic Representation of Pre and Co-Processing in Cement Kiln



Annexure-2

Collection & Transportation of Hazardous Wastes

The occupier of the hazardous waste shall ensure that wastes are packaged in a manner suitable for safe handling, storage and transport as specified in section 5.2 of these guidelines. Labeling on packaging is readily visible and material used for packaging shall withstand physical conditions and climatic factors as specified in Section 5.3.

In case of transportation of hazardous and other waste, the responsibility of the safe transport shall be either of the sender or the receiver whosoever arranges the transport and has the necessary authorization for the transport from the concerned State Pollution Control Board. The authorization for the transport shall be obtained either by the sender or the receiver on whose behalf the transport is being arranged.This responsibility should be clearly indicated in the manifest. Thus the occupier involved in transportation of hazardous wastes for co-processing or pre-processing shall comply with the following requirements;

(a) Ensure that information regarding characteristics of wastes particularly in terms of being corrosive, reactive, Ignitable or toxic is provided on the label.

(b) The transport of hazardous waste containers shall be in accordance with the provisions of the Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016, (herein after referred as HW (M & TBM) Rules) and the rules made by the Central Government under the Motor Vehicle Act, 1988 and other guidelines issued from time to time.

(c) Provide the relevant information in Form 9 to the transporter, regarding the hazardous nature of the waste and measures to be taken in case of an emergency and shall mark the hazardous wastes containers as per Form 8.

(d) All hazardous waste containers shall be provided with a general label as given in Form 8 of the HW (M& TBM) Rules.

(e) Intimate both the State Pollution Control Boards before handing over the waste to the transporter.In case of transportation of hazardous through a State other than the State of origin and destination, the sender shall give prior intimation to the concerned State Pollution Control Boardof the States of transit before handing over the hazardous wastes to the transporter.

(g) Manifest System shall be applicable for movement of wastes within the country only

h) The sender of the waste shall prepare seven copies of the Manifest in Form 10comprising of colour code indicated below and all seven copies shall be signed by the sender:

Copy number with colour code	Purpose
Copy 1 (White)	To be forwarded by the sender to the State Pollution Control Board or Committee after signing all the seven

	copies.
Copy 2 (Yellow)	To be retained by the sender after taking signature on it form the transporter and the rest of the five copies to be carried by the transporter.
Copy 3 (Pink)	To be retained by the receiver (actual user or treatment storage and disposal facility operator) after receiving the waste and the remaining four copies are to be duly signed by the receiver.
Copy 4 (Orange)	To be handed over to the transporter by the receiver after accepting waste.
Copy 5 (Green)	To be sent by the receiver to the State Pollution Control board/Committee.
Copy 6 (Blue)	To be sent by the receiver to the sender.
Copt 7 (Grey)	To be sent by the receiver to the State Pollution Control Board of the sender in case the sender is in another State.

Note:

i. The sender shall forward copy 1 (white) to the State Pollution Control Board, and in case of hazardous waste is likely to be transported through any transit State, the sender shall intimate State Pollution Control Boards of the transit States about the movement of the waste.

ii. No transporter shall accept waste from the sender for transport unless it is accompanied by signed copies 3 to 7 of the manifest.

iii. The transporter shall submit copies 3 to 7 of the manifest duly signed with date to the receiver along with the waste consignment.

iv. The receiver after acceptance of the waste shall hand over copy 4 (orange) to the transporter and send copy 5 (green) to his State Pollution Control Board and send copy 6 (blue) to the sender and the copy 3 (pink) shall be retained by the receiver.

v. The copy 7 (grey) shall only be sent to the State Pollution Control Board of the sender, if the sender in another State.

i) The transporter engaged for transportation of hazardous wastes for co-processing meets the following requirements;

   i) Vehicle used for transportation shall be in accordance with the provisions under the Motor Vehicle Act, 1988, and rules made thereunder.

   ii) Transporter shall possess requisite copies of the certificate (valid authorization obtained from the concerned SPCB/PCC for transportation of waste by the waste generator and operator of a facility) for transportation of hazardous waste.

   iii) Transporter should have valid “Pollution under Control Certificate” (PUCC) during the transportation of hazardous waste and shall be properly displayed.

iv) Vehicle shall be painted preferably in blue colour with white strip of 15 to 30 cm width running centrally all over the body. This is to facilitate easy identification.

v) Vehicle should be fitted with mechanical handling equipment as may be required for safe handling and transportation of the wastes.

vi) The words "HAZARDOUS WASTE" shall be displayed on all sides of the vehicle in Vernacular Language, Hindiand English.

vii) Name of the facility operator or the transporter, as the case may be, shall be displayed.

viii) Emergency phone numbers and TREM Card in Form 9 of HW (M& TM) Rules,2016.

ix) Vehicle shall be fitted with roll-on /roll-off covers if the individual containers do not possess the same.

x) Carrying of passengers is strictly prohibited and those associated with the waste haulers shall be permitted only in the cabin.

xi) Transporter shall carry documents of manifest for the wastes during transportation as required under Rule 19 of the HW (M & TBM) Rules.

xii) The trucks shall be dedicated for transportation of hazardous wastes and they shall not be used for any other purpose.

xiii) Each vehicle shall carry first-aid kit, spill control equipment and fire extinguisher.

xiv) Hazardous Waste transport vehicle shall run only at a speed specified under Motor Vehicle Act in order to avoid any eventuality during the transportation of hazardous waste.

xv) Educational qualification for the driver shall be minimum of 10^{th} pass (SSC). The driver of the transport vehicle shall have valid driving license of heavy vehicles from the State Road Transport Authority and shall have experience in transporting the chemicals.

xvi) Driver (s) shall be properly trained for handling the emergency situations and safety aspects involved in the transportation of hazardous wastes. He should aware of procedures outlined in Emergency Response Plan and trained on emergency spill control procedures.

xvii) The design of the trucks shall be such that there is no spillage during transportation.

Responsibilities of the hazardous waste Transporter

The sender or receiver whoever is involved in transportation of hazardous wastes shall be responsible for:

i) Obtaining requisite authorization from SPCB/PCC for transport of hazardous waste (in addition to any other permission that may be required under the Motor Vehicle (Amendment) Act of 1981).

ii) The transport vehicles shall be designed suitably to handle and transport the hazardous wastes of various characteristics.

iii) The transporting should follow all the Rules pertaining to transportation of hazardous waste as stipulated under HW (M& TM) Rules,2016.

iv) Transporting the wastes in closed container at all time.

v) Delivering the wastes at designated points only.

vi) Informing SPCB/PCC in Form 11 of the HW (M & TBM) Rules, or local authority, occupier / operator of a facility, and others concerned immediately in case of spillage, leakage or other accidents during transportation.

vii) The transporter shall train the driver with regard to the emergency response measures to be taken during the transportation of waste.

viii) Cleaning of vehicles shall be carried out at designated places as authorized by SPCB/PCC.

ix) Clean-up in case of contamination - Liable for taking up immediate emergency response measures in the event of spillage, improper disposal, fire or mishandling of hazardous waste. The main objective of the emergency response measures is to secure immediate human & environmental safety and contain/control further spillage or release of hazardous waste or release of fumes/gases. Each occupier, transporter, operator or cement plant responsible for transportation of hazardous waste shall develop Emergency Response Plan (ERP) as stipulated in "Guidelines on Implementing Liabilities for Environmental Damages due to Handling & Disposal of Hazardous Waste and Penalty" published by CPCB.

Letter of Intimation

The letter of intimation to SPCBs in case of sending wastes for co-processing from one State to another State is given below:

Date : __ ____ 201_

To,

State Pollution Control Board / Pollution Control Committee
(Belonging to State in which waste generator is located)
_____
_____

Subject : Letter of intimation for sending our wastes for co-processing located in another state.

This is to inform you that we have finalized arrangement with _____ (Name of the cement plant) to send our following hazardous & other wastes to them for undertaking co-processing. This cement plant is located in the State of _____.

1. _____ HW Category no. _____.
2. _____ HW Category no. _____.
3. _____ HW Category no. _____.

The route of the vehicle transporting these wastes will be passing through following states.

1.
2.
3.

We agree to maintain appropriate date wise & waste wise records of transport and receipt of the same at the receiving cement plant for your kind review as per the need.

Further, as mandated by the rules, we agree to file returns to you towards the co-processing of all the Hazardous Wastes carried out in our facility on an yearly basis.

Yours faithfully,
(Authorised Signatory)
Copy to SPCB / PCC (Receiving state)
Copy to SPCB / PCC (in between states)

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¶
Deleted: ¶

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Annexure - 3

Storage And Handling Requirements For Hazardous And Other Wastes

The minimum requirements for ensuring safe storage of hazardous and other wastes at TSDFs / Cement Plants / Standalone Pre-processing facilities shall be as below.

Storage Sheds

i. Flammable, ignitable, reactive and non-compatible wastes should be stored separately and never should be stored in the same storage shed.

ii. Storage area may consist of different sheds for storing different kinds of hazardous wastes and these sheds should be provided with suitable openings.

iii. Adequate storage capacity (i.e. 25% of the annual capacity of the hazardous waste utilization as a supplementary resource or for energy recovery, or after processing) should be provided in the premises.

iv. Storage area should be designed to withstand the load of material stocked and any damage from the material spillage.

v. Storage area should be provided with the flameproof electrical fittings and it should be strictly adhered to.

vi. Automatic smoke, heat detection system should be provided in the sheds. Adequate fire fighting systems should be provided for the storage area, along with the areas in the facility.

vii. There should be at least 15 m distance between the storage sheds.

viii. Loading and unloading of wastes in storage sheds should only be done under the supervision of the well trained and experienced staff.

ix. Fire break of at least 04 meter between two blocks of stacked drums should be provided in the storage shed. One block of drum should not exceed 300 MT of waste.

x. Minimum of 1 meter clear space should be left between two adjacent rows of pallets in pair for inspection.

xi. The storage and handling should have at least two routes to escape in the event of any fire in the area.

xii. Doors and approaches of the storage area should be of suitable sizes for entry of fork lift and fire fighting equipment;

xiii. The exhaust of the vehicles used for the purpose of handling, lifting and transportation within the facility such as forklifts or trucks should be fitted with the approved type of spark arrester.

xiv. In order to have appropriate measures to prevent percolation of spills, leaks etc. to the soil and ground water, the storage area should be provided with concrete floor or steel sheet depending on the

characteristics of waste handled and the floor must be structurally sound and chemically compatible with wastes.

xv. Measures should be taken to prevent entry of runoff into the storage area. The Storage area shall be designed in such a way that the floor level is at least 150 mm above the maximum flood level.

xvi. The storage area floor should be provided with secondary containment such as proper slopes as well as collection pit so as to collect wash water and the leakages/spills etc.

xvii. All the storage yards should be provided with proper peripheral drainage system connected with the sump so as to collect any accidental spills in roads or within the storage yards as well as accidental flow due to fire fighting.

Storage in Drums / Containers

i. The container shall be made or lined with the suitable material, which will not react with, or in other words compatible with the hazardous wastes proposed to be stored.

ii. The stacking of drums in the storage area should be restricted to three meters high on pallets (wooden frames). Necessary precautionary measures should be taken so as to avoid stack collapse. However, for waste having flash point less than 65.5˚C, the drums should not be stacked more than one height.

iii. Stacking of drums may be done on specially rakes designed for holding pallets up to three rows, with height not exceeding 4.5 meters.

iv. No drums should be opened in the storage sheds for sampling etc. and such activity should be done in designated places outside the storage areas;

v. Drums containing wastes stored in the storage area should be labeled properly indicating mainly type, quantity, characteristics, source and date of storing etc.

Measures for Spillage/leakage control

i. The storage areas should be inspected daily for detecting any signs of leaks or deterioration if any. Leaking or deteriorated containers should be removed and ensured that such contents are transferred to a sound container.

ii. Incase of spills / leaks/dry adsorbents/cotton should be used for cleaning instead of water.

iii. Proper slope with collection pits be provided in the storage area so as to collect the spills/leakages.

iv. Storage areas should be provided with adequate number of spill kits at suitable locations. The spill kits should be provided with compatible sorbent material in adequate quantity.

Record Keeping and Maintenance:

Proper records with regard to the industry –wise type of waste received, characteristics as well as the location of the wastes that have been stored in the facility need to be maintained.

Miscellaneous

i) Smoking shall be prohibited in and around the storage areas;

ii) Good house-keeping need to be maintained around the storage areas.

iii) Signboards showing precautionary measures to be taken, in case of normal and emergency situations should be displayed at appropriate locations.

iv) To the extent possible, manual operations with in storage area should be avoided. In case of manual operation, proper precautions need to be taken, particularly during loading / unloading of liquid hazardous waste in drums.

v) A system for inspection of storage area to check the conditions of the containers, spillages, leakages etc. should be established and proper records should be maintained.

vi) The wastes containing volatile solvents or other low vapor pressure chemicals should be adequately protected from direct exposure to sunlight and adequate ventilation should be provided.

vii) Tanks for storage of liquids waste should be properly dyked and should be provided with adequate transfer systems.

viii) Storage sites should have adequate & prompt emergency response equipment systems for the hazardous waste stored on-site. This should include fire fighting arrangement based on the risk assessment, spill management, evacuation and first aid. For this purpose, on-site and off-site accident/emergency plan should be in place.

ix) Immediately on receipt of the hazardous waste, it should be analyzed and depending upon its characteristics its storage should be finalized.

x) Only persons authorized to enter and trained in hazardous waste handling procedures should have access to the storage site.

xi) Mock drill for onsite emergency should be conducted regularly and records maintained.

StorageTime

Normal storage of incinerable hazardous wastes at TSDFs / Cement Plants / Standalone Pre-processing facilitiesshould be restricted to maximum of 3 months. However State Pollution Control Board/Pollution Control Committee may extend the period upto 6 months in accordance with the Hazardous and other wastes (M & TM) Rules, 2016.

Hazard Analysis and Safety Audit:

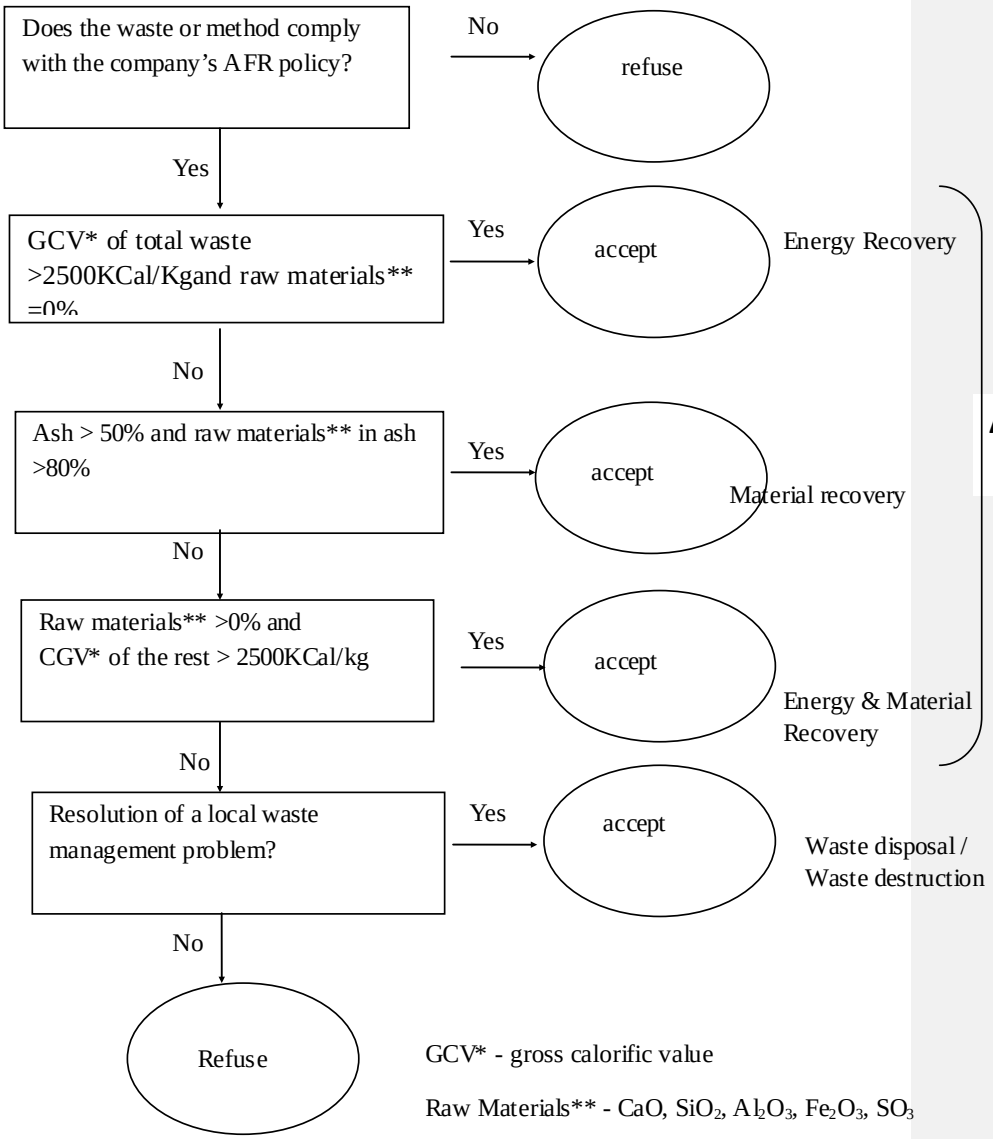
For every pre-processing and co-processing facility, a preliminary hazard analysis should be conducted. Safety Audit internally by the Operator every year & externally once in two years by a reputed expert agency should be carried out and same should be submitted to the SPCB/PCC. The code of practice and reporting shall comply to IS 14489.

Such conditions should be stipulated by SPCBs while granting authorization under the HW (M & TBM) Rules to the operators / pre-processing / co-processing facility.

***

Annexure -4

Acceptance / Refuse chart



GCV* - gross calorific value

Raw Materials** - CaO, SiO_2, Al_2O_3, Fe_2O_3, SO_3

Annexure-5

THE 'LETTER OF INTIMATION' TO SPCBs FOR UNDERTAKING CO-PROCESSING / PRE-PROCESSING OF WASTES

(to be applied when new wastes are introduced for co-processing, which were not entioned in while seeking authorization)

Date : __ ____ 20_ _

To,

State Pollution Control Board / Pollution Control Committee

_____
_____
_____

Subject : Letter of intimation for undertaking pre-processing / co-processing of _____ from _____ in our pre-processing / co-processing facility

This is to inform you that we have finalized arrangement with _____ (Name of the industry / municipality / pre-processing agency) to undertake pre-processing / co-processing of following hazardous / non-hazardous waste being generated by them for pre-processing / co-processing in our facility.

1.
2.
3.
4.

We agree to maintain appropriate date wise & waste wise records of receipt, pre-processing, co-processing and stock of these wastes and agree to submit the same for scrutiny on demand.

Further, as mandated by the rules, we agree to file returns to you towards the co-processing of all the Hazardous Wastes carried out in our facility on an yearly basis.

Yours faithfully,

(Authorised Signatory)