TNPCB & YOU

A READY RECKONER FOR ENTREPRENEURS

2025

TAMIL NADU POLLUTION CONTROL BOARD

TNPCB & YOU

A READY RECKONER FOR ENTREPRENEURS

2025

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CAUTION NOTE

Tamil Nadu Pollution Control Board

76, Mount Salai, Guindy,Chennai – 600 032.

Web: www.tnpcb.gov.in

தங்கம் தென்னரசு
நிதி மற்றும் சுற்றுச்சூழல் & காலநிலை
மாற்றத் துறை அமைச்சர்

தலைமைச் செயலகம்,
சென்னை – 600 009.

வாழ்த்துரை

தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம், 1982 ஆம் ஆண்டு தொடங்கி, சுற்றுச்சூழல் மேலாண்மை மற்றும் மாசு கட்டுப்பாடு தொடர்பான நடவடிக்கைகளை முன்னெடுத்து, தனது தொய்வற்ற முயற்சிகளால் 43 ஆண்டுகளை நிறைவு செய்துள்ளது என்பதில் பெருமிதம் கொள்கிறேன். மத்திய மற்றும் மாநில அரசுகளின் சுற்றுச்சூழல் பாதுகாப்பு விதிகள், சுற்றறிக்கை, அறிவிப்பு, அரசாணை மற்றும் வாரியத்தின் செயல்முறைகளை வழங்குவதில் தொடர்ந்து செயல்படுவது பாராட்டத்தக்கது.

தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம், புதிய தொழில் முனைவோருக்கும் பொதுமக்களுக்கும் மாசு கட்டுப்பாடு சட்டங்கள், சுற்றுச்சூழல் மேலாண்மை விதிகள் போன்றவற்றை விளக்கி, **'தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம் மற்றும் நீங்கள்'** என்ற தொகுப்பை வெளியிடுவதில் தொடர்ந்து முன்னோடியாக உள்ளது. இதன் ஆறாவது பதிப்பு வெளி வந்த நிலையில், 2025 ஆம் ஆண்டுக்கான புதிய பதிப்பை வெளியிட தகுந்த நடவடிக்கைகளை மேற்கொண்டு வருவது வரவேற்கத்தக்கது.

இந்த புதிய தொகுப்பு தொழில் முனைவோர், தொண்டு நிறுவனங்கள், கல்வி நிறுவனங்கள், மற்றும் அரசு அலுவலர்கள் உள்ளிட்ட பலருக்கு ஒரு பயனுள்ள வழிகாட்டியாக அமையும். இத்தொகுப்பைத் தயாரிக்கப் பாடுபட்ட அனைத்து அதிகாரிகளுக்கும் எனது மனமார்ந்த பாராட்டுக்களை தெரிவித்துக்கொள்கிறேன்.

புறந்தூய்மை நீரானமையும் அகந்தூய்மை
வாய்மையால் காணப்படும்.

(குறள் 298)

Outward purity the water will bestow:
Inward purity from truth alone

அன்புடன்,

(தங்கம் தென்னரசு)

Dr. P. Senthil Kumar, I.A.S.,
Principal Secretary to Government,
Environment Climate Change and Forests Department
Government of Tamil Nadu

MESSAGE

Since its establishment in 1982, the Tamil Nadu Pollution Control Board (TNPCB) has diligently enforced the Environment (Protection) Act, 1986, the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981, along with associated Rules and Regulations. One of its key objectives has been to collect and disseminate crucial information on air and water pollution and their mitigation.

The Central and State Government, along with the Central Pollution Control Board and TNPCB, periodically release Guidelines, Notifications, and Circulars to ensure effective Environmental Governance. These directives serve as essential references for Industries and the Public, aiding in their compliance with regulatory and administrative procedures.

To enhance awareness, TNPCB has been consistently publishing a compilation of such relevant Rules and Government orders since 1999. The sixth edition was released in 2023, and now, TNPCB proudly presents the seventh edition **'TNPCB & You 2025'** which has been meticulously updated to include the latest regulations and guidelines.

This edition will serve as a ready reckoner for entrepreneurs, Industrialists, and other stakeholders involved in Environmental management. It embodies TNPCB's commitment to fostering a sustainable and eco-friendly industrial ecosystem in Tamil Nadu.

10/1/25

Dr. P. Senthilkumar, I.A.S.,
Principal Secretary to Government
Environment Climate Change and Forests Department
Government of Tamil Nadu

Dr. JAYANTHI. M, IFS.,
Chairperson

FOREWORD

The seventh edition of **'TNPCB & You – 2025'** serves as an updated compendium of Central enactments, Rules, and Notifications pertaining to Environmental Management and Pollution Control. This edition includes updated Waste Management Regulations, Industry classifications, and effluent/emission discharge Standards, offering comprehensive guidance to Industries and Stakeholders.

To attract new entrepreneurs and promote the ease of doing business in Tamil Nadu, the State Government has implemented several proactive measures. In alignment with these initiatives, TNPCB has streamlined its processes, enabling swift issuance of Consent through the Online Consent Management and Monitoring System (OCMMS) and empowering field officers with decision-making authority.

This well-curated compilation will undoubtedly serve as an invaluable reference for all Stakeholders engaged in Environmental Management. I commend the dedicated efforts of the Board's Engineers and Staff in producing this essential resource.

Dr. Jayanthi M., I.F.S.,

Chairperson, TNPCB.

Thiru. R. Kannan, M.Tech.,
Member Secretary

Tamil Nadu
Pollution Control Board

Pollution Prevention Pays

PREFACE

The Tamil Nadu Pollution Control Board (TNPCB), established in 1982, is a statutory body entrusted with implementing the Water Act, 1974, the Air Act, 1981, and the Environment (Protection) Act, 1986. Through close collaboration with the State Government, TNPCB has consistently addressed critical environmental issues and promoted sustainable pollution control practices.

In recent years, several Government orders, Board proceedings, and Guidelines have been issued by the Central and State Governments, the Central Pollution Control Board, and TNPCB. As part of its awareness initiative, TNPCB has periodically published a compilation of these rules and Guidelines since 1989.

I am delighted to present the seventh edition of **'TNPCB & You – 2025',** which reflects the tireless efforts of the Board's Engineers and Experts. This updated volume will undoubtedly serve as a ready reference for entrepreneurs, Industry Professionals, and Government Officials, supporting the collective goal of a Sustainable and Environmentally secure Tamil Nadu.

As Thiruvalluvar aptly said:

"மணிநீரும் மண்ணும் மலையும் அணிநிழற்
காடும் உடைய தரண்"

(திருக்குறள் 742)

("A fort possesses crystal-clear water, fertile land, and shaded forests as its defense.")

Warm Regards,

R. Kannan
Member Secretary

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CHAPTER 1

ABOUT TNPCB

1.1 INTRODUCTION

Tamil Nadu Pollution Control Board (TNPCB) was constituted by the Government of Tamil Nadu on 27th February, 1982 in pursuance of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974). It enforces the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and the rules made under these Acts.

1.2 FUNCTIONS OF TNPCB

The main functions of the TNPCB under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 are as follows:

(i) To plan a comprehensive programme for the prevention, control and abatement of water and air pollution.

(ii) To advise the State Government on any matter concerning the prevention, control or abatement of water and air pollution.

(iii) To collect and disseminate information relating to water and air pollution and the prevention, control or abatement thereof.

(iv) To inspect sewage and trade effluent treatment plants for their effectiveness and review plans, specifications for corrective measures.

(v) To inspect industrial plants or manufacturing process, any control equipment and to give directions to take steps for the prevention, control or abatement of air pollution.

(vi) To inspect air pollution control areas for the purpose of assessment of quality of air therein and to take steps for the prevention, control or abatement of air pollution in such areas.

(vii) To lay down, modify or annul effluent standards for the sewage and trade effluents and for the emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source.

(viii) To evolve best economically viable treatment technology for sewage and trade effluents.

(ix) To collect samples of sewage and trade effluents and emissions of air pollutants and to analyze the same for specific parameters.

(x) To collaborate with Central Pollution Control Board in organizing the training of persons engaged or to be engaged in programme relating to prevention, control or abatement of water and air pollution and to organise mass education programme relating thereto.

(xi) To perform such other functions as may be prescribed by the State Government or Central Pollution Control Board.

1.3 CONSTITUTION OF TNPCB

The TNPCB is constituted by the State Government as per Section 4 of the Water (Prevention and Control of Pollution), Act, 1974. It comprises a full time Chairman, 5 officials nominated by the State Government, 5 persons to represent local authorities, 3 non-officials to represent the interests of agriculture, fishery or industry or trade, 2 persons to represent the companies or corporations owned by the State Government and a full time Member Secretary.

1.4 VISION OF TNPCB

Tamil Nadu being pollution free with a healthy and vibrant environment for present and future generations through sustainable practices.

1.5 ORGANISATIONAL SET UP

The TNPCB has established its organization structure with a three-tier system consisting of head-office at Chennai and nine zonal offices headed by Joint Chief Environmental Engineers (JCEE) and 44 district offices headed by District Environmental Engineers (DEE). For effective monitoring, the Board has formed seven flying squads headed by Environmental Engineers, and two offices in industrial hot spot areas headed by Assistant Environmental Engineers. To assist the Board in monitoring the industries, eight Advanced Environmental Laboratories, and 10 District Environmental Laboratories are functioning. These laboratories carry out analysis on samples of sewage, trade effluents, emissions and hazardous wastes.

1.6 ENVIRONMENTAL LEGISLATIONS

The various environmental legislations with which the TNPCB is concerned are given below. Most of the legislations are implemented directly by the Board and some by other departments of the Government.

1. The Water (Prevention and Control of Pollution) Act, 1974 as amended.
2. The Tamilnadu Water (Prevention and Control of Pollution) Rules, 1983.
3. The Air (Prevention and Control of Pollution) Act, 1981 as amended.
4. The Tamilnadu Air (Prevention and Control of Pollution) Rules, 1983.
5. The Environment (Protection) Act, 1986.
6. The Environment (Protection) Rules, 1986 as amended.
7. Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended in 1994 & 2000.
8. The Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms / genetically engineered organisms or cells Rules, 1989.
9. The Public Liability Insurance Act, 1991 as amended in 1992.
10. The Public Liability Insurance Rules, 1991.
11. Coastal Regulation Zone Notification, 2019.
12. The Environment Impact Assessment Notification, 2006 as amended.
13. The National Green Tribunal Act, 2010.
14. The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996
15. Utilization of Fly Ash from Coal or Lignite based Thermal Power Plants Notification, 1999 as amended in 2003.

16. Noise Pollution (Regulation and Control) Rules, 2000.
17. Ozone Depleting Substances (Regulation and Control) Rules, 2000.
18. The Batteries (Management and Handling) Rules, 2022 as amended.
19. The Solid Wastes Management Rules, 2016 as amended.
20. The Bio-Medical Waste Management Rules, 2016 as amended.
21. The Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 as amended.
22. The Plastics Waste Management Rules, 2016 as amended.
23. Construction and Demolition Waste Management Rules, 2016.
24. The E-Waste (Management) Rules, 2022 as amended.

Note: *In view of introduction of Goods and Services Tax from 01.07.2017, The Water (Prevention and Control of Pollution) Cess, Act, 1977 is fully repealed as per the Section 18(1) of the Section 18(1) of the Taxation Laws (Amendment) Act, 2017 (No. 18 of 2017).*

1.7 MONITORING OF INDUSTRIES

With the increasing pace of industrialization in Tamilnadu, the need for continuous monitoring of pollution due to industrial sources has become significant. Industries are required to provide pollution control measures to meet the standards prescribed by the Board. The field officers of the Board inspect the industries under their jurisdiction periodically to assess the adequacy of pollution control measures provided by the industries to treat sewage, trade effluent and emissions and to monitor their performance. They also investigate complaints of pollution received from the public, organizations and the Government. For effective monitoring, industries are categorized as **Red, Orange, Green and White** according to their pollution potential (Refer Chapter 7.2). Also the industries have been classified as **Large, Medium and Small** scale based on the gross fixed assets of the industry (Refer Chapter 7.1). Depending upon the category and size, industries are monitored periodically. Details of monitoring regime are in Chapter 8.7.5.

1.8 PROCEDURE FOR ISSUE OF CONSENT

Industry requires to obtain consent for discharge of sewage / trade effluent into any stream or well or into sewer or land under the Water (Prevention and Control of Pollution) Act, 1974 and to operate the plant in air pollution control area (entire State of Tamilnadu) under the Air (Prevention and Control of Pollution) Act, 1981. The consent is issued to industries in two stages. **'Consent to Establish'** is issued depending upon the suitability of the site before the industry takes up the construction activity. **'Consent to Operate'** is issued before commissioning the industrial unit after the compliances of conditions of 'Consent to Establish' issued.

1.9 ADDRESS OF THE OFFICES AND LABORATORIES OF TAMIL NADU POLLUTION CONTROL BOARD

Head Office: 76, Mount Salai, Guindy, Chennai – 600 032.
Phone: 044 – 2235 3134 to 2235 3142
Fax: 044 - 2235 3068
e.mail: tnpcb-chn@gov.in Web site: www.tnpcb.gov.in

JCEE (Monitoring):

Office Headed by Joint Chief Environmental Engineer

Sl. No	Zonal Office	Postal Address	Jurisdiction DEEs office
1	Chennai	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, First Floor, 950/1, Poonamallee High Road, Arumbakkam, Chennai-600 106 Email ID :jceemchn@tnpcb.gov.in Phone: 044 26220219	**Chennai** 1. Ambattur 2. Chennai 3. Thiruvallur 4. Gummidipoondi 5. Manali(MERRC)
2	Chengalpattu	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, No.60, 2nd Floor, Bharathiyar Street, Maraimalai Nagar, Chengalpattu District-603209 Email ID :jceemcpt@tnpcb.gov.in	**Chengalpattu** 1.Maraimalai Nagar 2.Sriperumbudur 3.Chennai South @ Velacherry
3	Coimbatore	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, 4th Floor, No.34, Bharathi park 8th cross street, Saibaba colony, Coimbatore- 641011. Email ID :jceemcbe@tnpcb.gov.in Phone: 0422-2445007	**Coimbatore** 1. Coimbatore (North) 2. Coimbatore (South) 3. Tiruppur (North) 4. Tiruppur (South) 5. Ooty
4	Cuddalore	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, No.14B/2, Bethel Tower, Pondy Road, Manjakuppam, Cuddalore- 607001. Email ID :jceemcud@tnpcb.gov.in Phone:04142-221047	**Cuddalore** 1.Cuddalore 2.Nagapattinam 3.Thiruvarur 4.Villupuram
5	Madurai	The Joint Chief Environmental Engineer Tamil Nadu Pollution Control Board, SIDCO Industrial Estate, Kappalur, Thirumangalam Taluk, Madurai - 625 008. Email ID :jceemmdu@tnpcb.gov.in Phone: 0452 - 2489739	**Madurai** 1. Madurai 2. Theni 3. Sivagangai 4. Virudhunagar 5.Ramanathapuram 6. Dindigul
6	Salem	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, No.9,4th Cross Street, Brindhavan Road, Fairlands, Salem - 636 016. Email ID :jceemslm@tnpcb.gov.in	**Salem** 1. Erode 2. Namakkal 3. Perundurai 4. Salem

		Phone: 0427 - 2445526	5. Dharmapuri 6. Kumarapalayam
7	Tirunelveli	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, No.30/2 SIDCO Industrial Estate, Pettai, Tirunelveli - 627 010. Email ID :jceemtnv@tnpcb.gov.in Phone: 0462 - 2342931	**Tirunelveli** 1. Tirunelveli 2. Thoothukudi 3. Nagercoil 4. Tenkasi
8	Trichy	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, No.25, Developed Plots, Thuvakudy, Trichy - 620 015. Email ID :jceemtry@tnpcb.gov.in Phone: 0431 - 2502020	**Trichy** 1. Trichy 2. Ariyalur 3. Pudukkottai 4. Thanjavur 5.Perambalur 6.Karur
9	Vellore	The Joint Chief Environmental Engineer, Tamil Nadu Pollution Control Board, Auxilium College Road , (Opposite to Auxilium College) Gandhi Nagar,Vellore -632 006. Email ID :jceemvlr@tnpcb.gov.in Phone: 0416 - 2242120	**Vellore** 1. Vellore 2. Hosur 3. Thiruvannamalai 4. Vaniyambadi 5.Ranipet

District Office:

Office Headed by District Environmental Engineer

Sl. No	District Office	Postal Address	Jurisdiction Taluks
Chennai Zone			
1	Ambattur	Tamil Nadu Pollution Control Board, 77-A, South Avenue Road, Ambattur Industrial Estate, Ambattur Taluk,Chennai District, Chennai - 600 058. Email ID :deeamb@tnpcb.gov.in Phone: 044 26880130	Ambattur, Madavaram, Maduravoyal Taluks
2	Chennai	Tamil Nadu Pollution Control Board, Second Floor, 950/1, Poonamallee High Road, Arumbakkam, Chennai-600 106. Email ID : deechn@tnpcb.gov.in Phone: 044 - 26223603	Ayanavaram Perambur Tondiarpet Purasaiwalkam Aminjikarai Mambalam
3	Thiruvallur	Tamil Nadu Pollution Control Board, Master plan complex, Adjacent to sub Treasury Near Tollgate, Tiruvallur-602001	R.K.Pet, Uthukottai, Pallipet, Tiruvallur, Tiruttani, Poonamallee, Avadi

		Email ID :deetlr@tnpcb.gov.in Phone: 044 - 27664425	
4	Gummidipoondi	Tamil Nadu Pollution Control Board, 88A, First Cross Road, SIPCOT Industrial Complex, Gummidipoondi - 601201. Email ID : deegmp@tnpcb.gov.in Phone: 044-27922465	Pooneri, Gummidipoondi
5	Manali (MERRC)	Tamil Nadu Pollution Control Board, No.33/80,Ist Main Road, Ramakrishna Nagar,Ernavoor,Chennai-600057. Email ID :deemnl@tnpcb.gov.in	Thiruvottiyur
Chengalpattu Zone			
6	Maraimalai Nagar	Tamil Nadu Pollution Control Board, MaraimalaiAdigalar Street, Next to Municipal Office, Maraimalai Nagar, Chennai-603 209. Email ID : deemmn@tnpcb.gov.in Phone: 044 - 27454422	Maduranthagam Pallavaram Chengalpattu, Thirukalukundram Vandalur, Cheyyur Tambaram Thiruporur
7	Sriperumbudur	Tamil Nadu Pollution Control Board, Plot No.CP-5B, SIPCOT Industrial Growth Centre, Oragadam, Sriperumpudur Taluk, Kanchipuram District-602105 Email ID : deespr@tnpcb.gov.in Phone: 9884800236	Kundrathur, Uthiramerur Sriperumbudur Walajabad Kanchipuram
8	Chennai South @ Velacherry	Tamil Nadu Pollution Control Board, Ist Floor, No.14, 2nd Main Road, Jagannathapuram, Rajalaxmi Nagar, Velacherry, Chennai-600042. Email ID : deechs@tnpcb.gov.in	Sholinganallur Mylapore Velachery Guindy, Alandur
Coimbatore Zone			
9	Coimbatore (North)	Tamil Nadu Pollution Control Board, No.5, Ramasamy Nagar, Near Fire Service Station, Kavundampalayam Coimbatore - 641 030. Email ID : deecbn@tnpcb.gov.in Phone: 0422 - 2444608,2433826	Mettupalayam Coimbatore North Annur
10	Coimbatore (South)	Tamil Nadu Pollution Control Board, Coimbatore South, Plot No.E-55A,	Pollachi Perur Sulur

		SIDCO Industrial Estate, Pollachi Main Road, Kurchi, Coimbatore-641 021. Email ID : deecbs@tnpcb.gov.in Phone: 0422 - 2675608	Madukkarai, Coimbatore South, Anaimalai, Kinathukadavu, Vaalparai.
11	Tiruppur (North)	Tamil Nadu Pollution Control Board, Kumaran Complex, Kumaran Road, Tiruppur - 641 601. Email ID : deetpn@tnpcb.gov.in Phone: 0421 - 2236210	Avanashi Tiruppur South Uthukkuli Tiruppur North
12	Tiruppur (South)	Tamil Nadu Pollution Control Board, 12A, Pollachi By-Pass Road, Palladam, Tiruppur - 641 664. Email ID : deetps@tnpcb.gov.in Phone: 04255-252225	Dharapuram Udumalaipettai Palladam Madathukulam
13	Ooty	Tamil Nadu Pollution Control Board, Additional Collectorate Building, Block-II Finger Post, The Nilgiris-643005 Email ID : deenlg@tnpcb.gov.in Phone: 0423 - 2443109	Gudalur Udhagamandalam Coonoor Kothagiri Pandalur Kundah
Cuddalore Zone			
14	Cuddalore	Tamil Nadu Pollution Control Board, Plot No A-3, SIPCOT Industrial Complex, Kudikadu, Cuddalore - 607 005. Email ID : deecud@tnpcb.gov.in Phone: 04142 - 239867	Thittakudi Virudhachalam Kattumannarkoil Chidambaram Panruti Cuddalore Veppur, Srimushnam, Bhuvanagiri Kurunjipadi
15	Nagapattinam	Tamil Nadu Pollution Control Board, District Collectorate, Master Plan Complex, Nagapattinam - 611 001. Email ID : deenpm@tnpcb.gov.in Phone: 04365 - 221832	Kilvelur Nagapattinam Thirukkuvalai Vedaranyam Seerkaazhi Tharangampadi Kutthalam Mayiladuthurai
16	Thiruvarur	Tamil Nadu Pollution Control Board, No.2, Shri Guru Nagar, First Street, Vijayapuram, Thiruvarur-610001 Email ID : deetvr@tnpcb.gov.in	Valangaimaan Kudavasal Nannilam Needamangalam Thiruthuraipoondi Thiruvarur Koothanallur Mannargudi

17	Villupuram	Tamil Nadu Pollution Control Board, District Collectorate Master Plan Complex, Back side of Taluk office, Villupuram – 605 602. Email ID : deevpm@tnpcb.gov.in Phone: 04146 - 228955	Vikravandi Chinnasalem Marakkanam Melmalayanoor Thirukkoyilur Thiruvennainallur Kalvarayan Hills Ulunderpettai Sankarapuram Kallakurichi Vanapuram Gingee Tindivanam Vanur Villupuram
Madurai Zone			
18	Madurai	Tamil Nadu Pollution Control Board, SIDCO Industrial Estate, Kappalur, Thirumangalam Taluk, Madurai - 625 008 Email ID : deemdu@tnpcb.gov.in Phone: 0452 - 2489738	Peraiyur Madurai West Madurai South Melur Vadipatti Thirumangalam Usilampatti Kallikude Madurai East Thiruparangundram
19	Theni	Tamil Nadu Pollution Control Board, SAR Complex, Door No.15/4, 12A/3, Back to National Theater, Theni District - 625 531. Email ID : deeten@tnpcb.gov.in Phone: 04546 – 264426	Andipatti Periyakulam Uthamapalayam Bodinacknur Theni
20	Sivagangai	Tamil Nadu Pollution Control Board, Collectorate Complex, Sivagangai-630 561. Email ID :deesvg@tnpcb.gov.in Phone: 04575 - 243903	Manamadurai Sivagangai Thirupathur Devakottai Karaikudi Kalaiyarkoil Ilayangkudi Singampunari Thiruppuvanam
21	Virudhunagar	Tamil Nadu Pollution Control Board, No.23, Master Plan Area, Sathur Road, Collectorate, Virudhunagar - 626 002. Email ID :deevdr@tnpcb.gov.in Phone: 04562 242442	Thiruchuzhi Kariapatti Vempakottai Sivakasi Watrap Rajapalayam Srivilliputhur Sattur Virudhunagar.
22	Ramanathapuram	Tamil Nadu Pollution Control	Ramanathapuram

		Board, D.No.1-1984, Jothi Nagar Collectorate Post, Sakkarakottai Village, Ramanathapuram - 623504. Email ID : deermd@tnpcb.gov.in Phone: 04567 222297	Paramakudi Madukulathur Kamuthi Kadalaadi Keelakarai Rajasingamangalam Rameswaram
23	Dindigul	Tamil Nadu Pollution Control Board, Collectorate Complex, Dindigul -624 004. Email ID : deedgl@tnpcb.gov.in Phone: 0451 2461868	Gujiliamparai Dindigul west Nilakottai Natham Palani Oddanchathiram Vedasandur Kodaikannal Dindigul East
Salem Zone			
24	Erode	Tamil Nadu Pollution Control Board, CMP Plot,SIDCO Industrial Estate Chennimalai Road, Erode- 638 001. Email ID : deeerd@tnpcb.gov.in Phone: 0424 - 2271596 & 0424 - 2272596	Kodumudi Modakkurichi Erode
25	Namakkal	Tamil Nadu Pollution Control Board, Collectorate Campus, Near Tamil Nadu Civil Supply Corporation, Namakkal - 637 003. Email ID : deenml@tnpcb.gov.in Phone: 04286 - 280722	Sendamangalam Namkkal Rasipuram
26	Perundurai	Tamil Nadu Pollution Control Board, Plot No:J 2 (W), Near SIPCOT arch Kovai main road, Olappalayam-po, Perundurai 638052 Email ID : deepnd@tnpcb.gov.in Phone: 04294 - 234288	Bhavani Nambiyur Sathyamangalam Gobichettipalayam Perundurai Thalavadi Anthiyur
27	Salem	Tamil Nadu Pollution Control Board, Siva Tower, Post Box No. 457, No 1/276, Meyyanur Main Road, Salem - 636 004. Email ID : deeslm@tnpcb.gov.in Phone: 0427 - 2448526	Salem Yercaudu Gangavalli, Attur VAzhappadi Mettur, Omalur Sanakagiri Thalaivasal Edappadi Salem (South) Salem (West) Kadayampatti
28	Dharmapuri	Tamil Nadu Pollution Control Board,	Pennagaram Harur

		SF.No.415/1,Adhiyamankottai - Hosur Bypass road, A.Reddihalli village(Near to Don Bosco College), Dharmapuri Taluk ,Dharmapuri District - 636 809. Email ID : deedmp@tnpcb.gov.in Phone: 04342 270005	Paappireddipatti Nallampalli Karimangalam Dharmapuri Palacode
29	Kumarapalayam	Tamil Nadu Pollution Control Board, No. 298/A, Salem Main Road, Thiruvaluvar Nagar, Kumarapalayam Namakkal District – 638183 Email ID : deekmp@tnpcb.gov.in	Paramathi velur Thiruchengode Kumarapalayam
Tirunelveli Zone			
30	Tirunelveli	Tamil Nadu Pollution Control Board, 30/2 SIDCO Industrial Estate, Pettai, Tirunelveli - 627 010. Email ID : deetnv@tnpcb.gov.in Phone: 0462 - 2342931	Ambasamudram Tirunelveli Palayamkottai Nanguneri Radhapuram Manur Cheranmadevi Tisayanvilai
31	Thoothukudi	Tamil Nadu Pollution Control Board, C7 & C9, SIPCOT Industrial Complex, Meelavittan, Thoothukudi – 628 008. Email ID : deettn@tnpcb.gov.in Phone: 0461-2341298	Kayathur Eral Srivaigundam Tiruchendur Ettayapuram Kovilpatty Sattankulam Vilathikulam Ottapidaram Thoothukkudi
32	Nagercoil	Tamil Nadu Pollution Control Board, No.318/46A, Water Tank Road, Nagercoil, Kanyakumari District - 629 001 Email ID : deengl@tnpcb.gov.in Phone: 04652-229442	Thiruvattar Kalkulam Agastheeswaram Vilavancode Killiyoor Thovalai
33	Tenkasi	Tamil Nadu Pollution Control Board, No.31/1, ST-05, NGO Colony, 6th Street, Melagaram(post), Tenkasi District-627818. Email ID : deetks@tnpcb.gov.in	Sivagiri Tenkasi Alangulam VKPudur Thiruvengadam Kadayanallore Sencottai
Trichy Zone			
34	Trichy	Tamil Nadu Pollution Control Board, No.25, Developed Plots,	Srirangam Mannachanallur Thuraiyur

		Thuvakudy, Trichy - 620 015. Email ID : deetry@tnpcb.gov.in Phone: 0431 - 2501558	Musiri Manapparai Lalgudi Thiruverumbur Thirucherapallai West Marungapuri Thiruchirapalli West Marungapuri Thiruchirapalli East Thottiam
35	Ariyalur	Tamil Nadu Pollution Control Board, SF.No.4/326, Trichy Main Road, Keelapalur Village, Ariyalur Taluk, Ariyalur District - 621 707 . Email ID : deeary@tnpcb.gov.in Phone: 04329 - 250055	Ambattur Maduravoyal Madhavaram Udayarpalayam Andimadam Ariyalur
36	Pudukottai	Tamil Nadu Pollution Control Board, SIPCOT Industrial Complex, Thiruvengaivasal, Pudukkotai – 622 002. Email ID : deepdk@tnpcb.gov.in Phone: 04322 - 244688	Thirumayyam Aranthangi Pudukkottai Viralimalai Ponnamaravathi Avudaiyarkoil Alangudi Iluppur Gandarvakottai Karambakudi Kulathur Manalmelkudi
37	Thanjavur	Tamil Nadu Pollution Control Board, Plot No.23, T.S. No.3303/1, SIDCO Industrial Complex, Nanchikottai Salai, Opp. to Ulavarsanthai, Thanjavur - 613 006. Email ID : deetnj@tnpcb.gov.in Phone: 04362 -256558	Thanjavur Budalur Peravurani Papnasam Pattukottai Orathanadu Thiruvaiyaru Thiruvidaimaruthur
38	Perambalur	Tamil Nadu Pollution Control Board, S.F. No. 18/6, U.D.R S.F. No. 18/15, Plot No.9 & 10, Thuraimangalam Village, Perambalur Municipality, Perambalur Taluk & District. Email ID : deepmb@tnpcb.gov.in	Perambalur Kunnam Alathur Veppanthattai
39	Karur	Tamil Nadu Pollution Control Board, S.F.No.654 part, 655 Part, L.N.S.Village,L.G.B.Nagar, Arivuthirukkovil Road, Karur-639002.	Kuzhithalai Karur Manmangalam Kadavur Pugalur Krishnarayapuram

		Email ID : deekar@tnpcb.gov.in	Aravakurichi
Vellore Zone			
40	Vellore	Tamil Nadu Pollution Control Board, Auxilium College Road ,(Opposite to Auxilium College) Gandhi Nagar, Vellore -632 006. Email ID : deevlr@tnpcb.gov.in Phone: 0416 - 2242700	Anaicut Katpadi KV Kuppam Pernampattu Gudiyatham Vellore
41	Hosur	Tamil Nadu Pollution Control Board, Plot No:140A, SIPCOT Industrial Complex, Hosur -635 126. Email ID : deehsr@tnpcb.gov.in Phone: 04344 - 278922	Krishnagiri Shoolagiri Anchetty Burgur Denkanikottai Hosur Pochampalli Uthangarai
42	Thiruvannamalai	Tamil Nadu Pollution Control Board, Collectorate Master Plan Complex, Venkikal, Thiruvannamalai District -606 604. Email ID : deetvm@tnpcb.gov.in Phone: 04175-233118	Polur Tiruvannamalai Jamunamarathur Chengum Cheyyar Vandavasi Arani Thandaranpattu Vembakkam Kalasapakkam Chetpet Kizhpennathur
43	Vaniyambadi	Tamil Nadu Pollution Control Board, 392, Plot no. PP2, SIDCO Industrial Estate, Vaniyambadi - 635 751. Email ID : deevbd@tnpcb.gov.in Phone: 04174-234831	Natrampalli Ambur Vaniyambadi Tirupattur
44	Ranipet	Tamil Nadu Pollution Control Board, No.A-417, Tamil Nadu Housing Board, Seekarajapuram, Walaja Taluk, Ranipet District-632 515. Email ID :deerpt@tnpcb.gov.in	Kalavai Arcot Arakkonam Walajah Sholingur Nemili

Flying Squad headed by Environmental Engineer

Sl. No	District	Address	Jurisdiction
1	Chennai	Tamil Nadu Pollution Control Board, Third Floor, 950/1, Poonamallee High Road, Arumbakkam, Chennai-600 106. Email:eefschn@tnpcb.gov.in	Chengalpattu & Kanchipuram District
2	Erode	Tamil Nadu Pollution Control Board, CMP Plot,SIDCO Industrial Estate	Erode District

		Chennimalai Road, Erode- 638 001. Phone: 0424- 2273596 Email: eefserd@tnpcb.gov.in	Kumarapalayam and Pallipalayam Taluk
3	Salem	Tamil Nadu Pollution Control Board, Plot No.A-27, Door No.68/136K, Gangai Street, Nedunchalai Nagar, Salem-636005 Phone: 0427-2442251 Email: eefsslm@tnpcb.gov.in	Salem District Karur District Namakkal District except Kumarapalayam and Pallipalayam Taluk
4	Tiruppur	Tamil Nadu Pollution Control Board, 16, Rayapuram East Street, Tiruppur-641601 Phone: 0421-2241131 Email: eefstpr@tnpcb.gov.in	Tiruppur District Coimbatore Part
5	Vellore	Tamil Nadu Pollution Control Board, Auxilium College Road,(Opposite to Auxilium College) Gandhi Nagar, Vellore - 632 006. Email: eefsvlr@tnpcb.gov.in	Vellore District
6	Manali(MERRC)	Tamil Nadu Pollution Control Board, No.33/80,Ist Main Road, Ramakrishna Nagar,Ernavoor,Chennai-600057. Email:eefsenr@tnpcb.gov.in	Manali & Chennai
7	Ennore (MERRC)	Tamil Nadu Pollution Control Board, No.33/80,Ist Main Road, Ramakrishna Nagar,Ernavoor,Chennai-600057. Email:eefsenr@tnpcb.gov.in	Ennore & Tiruvallur District

Offices in industrial hot spot areas headed by Assistant Environmental Engineers

Sl. No	**Industrial hot spot**	**Address**	**Jurisdiction**
1	Mettur	Tamil Nadu Pollution Control Board, No.708, Block No.25, Ward-B, Beard Shell Garden, Adhiparasakthi Kovil Street, Mettur Dam, Mettur, Salem District-636401 Email ID : aeemtr@tnpcb.gov.in	Edappadi, Omalur, Sangagiri Mettur Kadayampatti
2	Pallavaram	Tamil Nadu Pollution Control Board, MaraimalaiAdigalar Street, Next to Municipal Office, Maraimalai Nagar, Chennai-603 209. Email ID : aeetnpcbpallavaram@gmail.com	Pallavaram Taluk Tambaram Taluk

Laboratories:

Advanced Environmental Laboratories, Tamil Nadu Pollution Control Board

Sl. No	District	Address	Jurisdiction
Chennai Zone			
1	Chennai	Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 600 032. Email: aelchn@tnpcb.gov.in	Cooum Nungambakkam Mylopore
Coimbatore Zone			
2	Coimbatore	Tamil Nadu Pollution Control Board, 3rd & 4th Floor No: 05, Ramasamy Nagar, Near Fire Service Station, Kovundampalayam, Coimbatore - 641 030. Email: aelcbe@tnpcb.gov.in	Coimbatore North Coimbatore South Ooty
Cuddalore Zone			
3	Cuddalore	Tamil Nadu Pollution Control Board, Plot No A3, SIPCOT Industrial Complex, Kudikadu, Cuddalore - 607 005. Email: aelcud@tnpcb.gov.in	Cuddalore District Villupuram
Madurai Zone			
4	Madurai	Tamil Nadu Pollution Control Board, Survey No. 668 &669,SidcoIndl Estate, Kappalur, Thirumangalam Taluk, Madurai-625 008. Email: aelmdu@tnpcb.gov.in	Madurai Virudhunagar
Salem Zone			
5	Salem	Tamil Nadu Pollution Control Board, 1/276, Siva Tower, Meyyanur Main Road, Salem-636 004. Email: aelslm@tnpcb.gov.in	Dharmapuri Salem, Namakkal Kumarapalayam
Tirunelveli Zone			
6	Tirunelveli	Tamil Nadu Pollution Control Board, 30/2, SIDCO Indl. Estate, Pettai, Tirunelveli-627 010. Email: aeltnv@tnpcb.gov.in	Tirunelveli Kanyakumari Tenkasi
Trichy Zone			
7	Trichy	Tamil Nadu Pollution Control Board, No: 25, Developed Plots, SIDCO Industrial Complex, Thuvakudi, Trichy-620 015. Email: aeltry@tnpcb.gov.in	Trichy Perambalur Ariyalur Pudukottai Thanjavore
Vellore Zone			
8	Vellore	Tamil Nadu Pollution Control Board,	Vellore District

		Auxilium College Road, Gandhi Nagar, Vellore-632 006. Email: aelvlr@tnpcb.gov.in	Thiruvannamalai Thirupatthur Ranipet

District Environmental Laboratories, Tamil Nadu Pollution Control Board

Sl. No	District	Address	Jurisdiction
Chennai Zone			
1	Ambattur	Tamil Nadu Pollution Control Board, 77-A South Avenue Road, Ambattur Industrial Estate, Ambattur, Chennai-600 058. Email: delamb@tnpcb.gov.in	Thiruvallur Gummidipoondi Ambattur
2	Manali[At] Arumbakkam	Tamil Nadu Pollution Control Board, 950/1,Poonamalli High Road, Arumbakam, Chennai-600 106. Email: delary@tnpcb.gov.in	Manali Gummidipoondi Tiruvallur
Chengalpattu Zone			
3	Maraimalai Nagar	Tamil Nadu Pollution Control Board, Maraimalaiadigalar Street, Next to Municipal Office, Maraimalai Nagar,Chennai-603 209, Kancheepuram District. Email: delmmn@tnpcb.gov.in	Maraimalai Nagar Pallavaram Thiruporur
4	Oragadam@ Sriperumbudur	Tamil Nadu Pollution Control Board, Plot No.CP-5B, SIPCOT Industrial, Growth Centre Vandalur, Wallajahbad Road, Oragadam, Sriperumpudur Taluk, Kanchipuram Dis-602105 Email:delspr@tnpcb.gov.in	Sriperumbudur
Coimbatore Zone			
5	Tiruppur	Tamil Nadu Pollution Control Board, Kumaran Complex,2nd Floor, Kumaran Road,Tiruppur-641 601. Email: deltpr@tnpcb.gov.in	Tiruppur(N) Tiruppur (S) EE(FS) Jurisdiction
Cuddalore Zone			
6	Nagapattinam	Tamil Nadu Pollution Control Board, District Collectorate, Master Plan Complex, Nagapattinam - 611 001. Email:delnpm@tnpcb.gov.in	Thiruvarur Nagapattinam
Madurai Zone			
7	Dindigul	Tamil Nadu Pollution Control Board, Collectorate Complex, Dindigul -624 004. Email: deldgl@tnpcb.gov.in	Dindigul Kodaikanal

Salem Zone			
8	Perundurai	Tamil Nadu Pollution Control Board, Plot No:J 2 (W), Near SIPCOT arch Kovai main road, Olappalayam-po, Perundurai-638 052. Email: delpnd@tnpcb.gov.in	Erode Perundurai
Tirunelveli Zone			
9	Thoothukudi	Tamil Nadu Pollution Control Board, C7 & C9, SIPCOT Industrial Complex, Meelavittan, Thoothukudi – 628 008. Email:delttn@tnpcb.gov.in	Thoothukudi
Vellore Zone			
10	Hosur, Krishnagiri Dt	Tamil Nadu Pollution Control Board, S149-A, SIPCOT Industrial Complex, Hosur- 635 126. Email: delhsr@tnpcb.gov.in	Hosur

CHAPTER 2

EARLY POLLUTION CONTROL LEGISLATIONS

2.1 THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT, 1974

2.1.1 The Water (Prevention and Control of Pollution) Act, 1974 *(as amended upto February 2024)*

Salient Features

Sections	
Section 4	**Constitution of State Board:-** Empowers the State Government to constitute State Board with the following members:- a Chairman, not exceeding five officials to represent the Government, not exceeding five persons from the local authorities, not exceeding three non-officials to represent the interest of agriculture, fishery or industry or trade or any other interest, two persons to represent the companies or corporations of State Government, and a full-time Member-Secretary.
Section 17	**Functions of State Board:-**Empowers the Board to lay down standards for sewage / trade effluent among other functions.
Section 20	**Power to obtain information:-** Empowers the Board to obtain information and give direction to furnish to it information regarding construction, installation or operation of such establishment or of any disposal system and such other particulars as may be prescribed.
Section 21	**Power to take samples of effluents and procedure to be followed in connection therewith:-** Empowers the Board to collect samples of sewage/ trade effluent from any industry.
Section 23	**Power to entry and inspection:-** Empowers the Board to enter any industry at any time for the purpose of performing any of the functions of the Board.
Section 24	**Prohibits the pollution of a stream or well by disposal of polluting matter etc.:-** No person shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the State Board to enter (whether directly or indirectly) into any stream or well or sewer or on land
Section 25 & 26	**Restrictions on new outlets and new discharges:-**Consent of the Board for the establishment / operation of any industry and for discharge of sewage / trade effluent into any stream or well or sewer or on land or into marine coastal areas to be obtained. (List of industries for which the Tamil Nadu Electricity Board has to give power supply only after the industries produce consent to establish order issued by the Tamil Nadu Pollution Control Board is given in GO Ms No. 111 E&F Dept. Dated 21.9.2011). The Central Government may in consultation with the Central Board exempt certain categorized of industrial plants from this provisions. (Amendment 2024)

Section 27	**Refusal or withdrawal of consent by State Board:-** Empowers the Board for Refusal or withdrawal of consent to any industry.
Section 28	**Appeals:-**Provides for appeal against the orders of the Board under Section 25 or 26 or 27. The appeal has to be made to the Appellate Authority, within thirty days from the date of communication of the order.
Section 29	**Revision:-** Empowers the State Government to pass order on any orders passed by the Board.
Section 30	**Power of State Board to carryout certain works:-** Empowers the Board to carry our certain works when the concerned industry has failed to carry out the directions of the Board and to recover the cost from that industry.
Section 31	**Furnishing of information to State Board and other agencies in certain cases:-** Requires furnishing of information by the person incharge of the place to the Board about the accidental discharge of poisonous, noxious or polluting matter.
Section 32	**Emergency measures in case of pollution of stream or well:-** Empowers the Board to take action on the presence of noxious any poisonous or polluting matter in any stream or well or sewer or land and issuing orders restraining or prohibiting the discharge of any such matter into any stream or well or sewer or on land or into marine coastal areas.
Section 33A	**Power to give directions:-** Empowers the Board to issue directions for closure of the industry or for stoppage of electricity, water supply or any other service.
Section 33B	**Appeal to National Green Tribunal:-** Provides for appeal to National Green Tribunal by any person aggrieved an order of the appellate authority under Section 28, order passed by the State Government under section 29, directions issued under section 33-A by the Board.
Section 43	**Penalty for contravention of provisions of section 24:-** Whoever contravention of Section 24 shall be liable to pay penalty which shall not be less than ten thousand rupees, but which may extend to fifteen lakhs rupees and where such contravention continues, he shall be liable to pay an additional penalty of ten thousand rupees every day during which such contravention continues. (Amendment 2024).
Section 44	**Penalty for contravention of provisions of section 25 or section 26:-** Where for the purpose of grant of a consent in pursuance of the provisions of section 25 or section 26, the use of a meter or gauge or other measure or monitoring device is required and such device is used for the purposes of those provisions, any person who knowingly or willfully alters or interferes with that device so as to prevent it from monitoring or measuring correctly shall be liable to pay penalty which shall not be less than ten thousand rupees, but which may extend to fifteen lakh rupees.

	(Amendment 2024).
Section 58	**Bar of Jurisdiction:-** No Civil Court shall have jurisdiction to entertain any suit or proceeding in respect of any matter which an Appellate Authority constituted under the Water Act is empowered to determine. No injunction shall be granted by any Court or authority in respect of any action taken or to be taken in pursuance of any power conferred by or under this Act.
Section 64	Empowers the State Government to make rules to carry out the purposes of this Act.

Note: Ministry of Law and Justice vide the gazette notification dated 15th February 2024 notified the Water (P&CP) Amendment Act,2024. Until printing of this book, the said Amendment Act had not yet been adopted in the State of Tamil Nadu.

2.1.2 The Tamil Nadu Water (Prevention and Control of Pollution) Rules, 1983

The Government of Tamil Nadu vide G.O. Ms. No. 2, Environment Control, dated 26th September 1983 has notified The Tamil Nadu Water (P&CP) Rules, 1983

Salient Features

Rules	
Rule 15	**Power and duties of the Chairman.-** The Chairman shall have overall control over the functions of the Board. Subject to general financial rules and service rules of the Government, shall have power in respect of the following matters, to the extent such power is not conferred on the Member-Secretary.
Rule 16	**Powers and duties of the Member-Secretary.-** Subject to the overall control of the Chairman, the Member-Secretary shall exercise the powers provided in the Rule 16
Rule 20	**Appointment of consulting Engineer.-** For the purpose of assisting the Board in the performance of its functions, the Board may appoint any qualified person to be Consulting Engineer for a period not exceeding four months, and assign him such duties as are necessary for the purpose.
Rule 25	**Form of notice.-** The notice of intention to analyze a sample under clause (a) of sub-section (3) of section 21 of the Act shall be in Form I of Schedule-I
Rule 26 A	**Consent fee.–** Consent fee shall be paid at the rates by the industries and the local bodies specified in the Table in Rule 26A and as revised from time to time.
Rule 27	**Procedure for making inquiry into an application for consent.-** (1) On receipt of an application under section 25 or section 26, the Board may depute any of its officers accompanied by as many assistants as may be necessary, to visit the premises of the applicant. .. (2) Such officer shall, before visiting any premises of the applicant for the purpose of inspection under sub-rule (1) give notice to the applicant of his intention to do so in Form IV of Schedule I . The

	applicant shall provide to such officer all facilities that such officer may legitimately require for the purpose.
Rule 27 A	**Form and manner in which appeal may be preferred under section 28 and the procedure to be followed by the appellate authority .-** (1) Every appeal under section 28 against an order passed by the Board under section 25, section 26 or section 27 shall be made in Form IV-A of Schedule-I.
Rule 28	**Furnishing of information under section 31(1).-** Every person incharge of any place where any industry or trade is being carried on shall, on happening of any accident, unforeseen act or event as contemplated in sub-section (1) of section 31, forthwith intimate the occurrence thereof to the Board, the Collector of the District, the Revenue Divisional Officer, the District Health Officer, the Executive Authority of the municipal or local body concerned and the nearest police station.
Rule 28-C	**Fees payable for the laboratory's report.** - Fees payable for laboratories report on the analysis of tests of samples of water or of sewage or trade effluent shall be as specified in the Annexure I to III to this rule.
Schedules & Forms	
Schedule-I	
Form-I	Notice of Intention to have sample analyzed
Form-II	Form for Industries – Application for Consent for discharge /continuation of discharge under Section 25 / 26 of Water (P&CP) Act, 1974
Form-III	Form for Local Bodies – Application for Consent for discharge /continuation of discharge under Section 25 / 26 of Water (P&CP) Act, 1974
Form-IV	Notice of Inspection
Form-IV-A	Form of Appeal under Section 28 of Water (P&CP) Act, 1974
Form-IV-B	Form of Notice issue by Appellate Authority to the Appellant
Form-V	Report by the Government Analyst
Form-VI	Report by the Board Analyst
Form-VII	Proposals for revised Estimate
Form-VII-A	Detailed Budget estimate
Form-VIII, Form-IX, Form-X	Omitted by G.OMs.No. 270 Environment and Forest, dated 10th July 1992
Form-XI	Receipts and Payments for the year ended 31st March …
Form-XII	Income and Expenditure Account for the year ended 31st March …
Form-XIII	Balance Sheet as at 31st March ……
Form-XIV	Annual Statement of Accounts - Expenditure on works as on 31st March …
Form-XV	Annual Statement of Accounts - Fixed Assets & Other Assets as on 31st March…
Schedule-II	Budget and Account Heads
Schedule-III	Annual Report for the Financial Year April… to March…

2.1.3. Notice of Intention to have Sample analysed

FORM I

Tamilnadu Pollution Control Board

(Notice of Intention to have sample analysed)
(See rule 25 of the Tamil Nadu Water
(Prevention & Control of Pollution) Rules, 1983)

To

.....

.....

Take notice as the person in charge or having control over the place from where the sample is taken that it is intended to have analysed the sample of water / sewage effluent / trade effluent which is being taken today the ..... day of ..... 19..... from *

Your attention is particularly invited to clause (e) of Sub-section (3) of Section 21 of the Water (Prevention and control of Pollution) Act, 1974 (Central Act 6 of 1974) under which you have an option to request the person taking the sample to send one container containing the sample to the State Water Laboratory for analysis at your cost.

(Name and Designation of the
Person who takes the Sample)

* here specify the stream, well, plant, vessel or place from where the sample is taken.

Copy to
1). .....
2). .....

2.1.4. Notice of Inspection

FORM IV

Tamil Nadu Pollution Control Board
NOTICE OF INSPECTION

(See rule 27 (2) of the Tamil Nadu Water
(Prevention and Control of Pollution) Rules, 1983)

No..... Dated :.....

To

.....

.....

Take notice that for the purpose of enquiry under section 25/26 of the Water (Prevention and Control Pollution) Act, 1974, (Central Act 6 of 1974) the following officers of the Board namely :-

(i) Thiru.....
(ii) Thiru.....
(iii) Thiru.....

and the person authorized by the Board to assist them shall inspect the

(a) Water works _____
(b) Sewage Works _____
(c) Waste treatment plant _____
(d) Factory _____
(e) Disposal system _____
(f) Any other parts thereof or pertaining thereto under your management / control on date(s) _____ between _____ hours. _____ when all facilities requested by them for such inspection should be made available to them on the site. Take notice that refusal or denial to the above stated demand shall amount to obstruction punishable under section 42 of the said Act.

(By order of the Board)

Member – Secretary

Copy to :-
1.

2.

2.1.5 Standards for Discharge of Trade Effluent *(TNPCB B.P. Ms. No. 30 Dated: 21.02.1984)*

Sl. No	**Parameters**	**Standards for discharge of trade effluent into**			
		Inland surface water	**Public sewers**	**On land for irrigation**	**Marine coastal areas**
(1)	(2)	(3)	(4)	(5)	(6)
1	Color and odor	-	-	-	-
2	Suspended Solids, mg/L	100	600	200	a) For Process waste water- 100 b) For Cooling water effluent 10 percent above total suspended matter of influent cooling water
3	Particle size of Suspended solid	shall pass 850 micron IS sieve	-	-	a. Floatable solids maximum 3 mm b. settable solids maximum 850 micron
4	Dissolved solids (inorganic) mg/L	2100	2100	2100	-

5	pH value	5.5 to 9	5.5 to 9	5.5 to 9	5.5 to 9
6	Temperature	40°C at the point of discharge	45°C at the point of discharge	-	45°C at the point of discharge
7	Oil & Grease, mg/L	10	20	10	20
8	Total Residual Chlorine, mg/L	1	-	-	1
9	Ammonical Nitrogen (as N), mg/L	50	50	-	50
10	Total Kjeldahl Nitrogen (as N), mg/L	100	-	-	100
11	Free Ammonia (as NH_3), mg/L	5	-	-	5
12	Biochemical Oxygen Demand (3 days at 27°C), mg/L	30	350	100	100
13	Chemical Oxygen Demand, mg/L	250	-	-	250
14	Arsenic (as As), mg/L	0.2	0.2	0.2	0.2
15	Mercury (as Hg), mg/L	0.01	0.01	0.01	0.01
16	Lead (as Pb), mg/L	0.1	1	1	1
17	Cadmium(as Cd), mg/L	2	1	1	2
18	Hexavalent Chromium (as Cr^{+6}), mg/L	0.1	2	1	1
19	Total Chromium (as Cr), mg/L	2	2	2	2
20	Copper (as Cu) mg/L	3	3	3	3
21	Zinc (as Zn) mg/L	1	1.5	1.5	1.5
22	Selenium (as Se) mg/L	0.05	0.05	0.05	0.05
23	Nickel (as Ni) mg/L	3	3	3	3
24	Boron (as B) mg/L	2	2	2	2
25	Percent Sodium %	-	60	60	-
26	Residual Sodium Carbonate mg/L	-	-	5	-
27	Cyanide (as CN) mg/L	0.2	2.0	0.2	0.2
28	Chloride (as Cl)	1000	1000	600	-

	mg/L				
29	Fluoride (as F) mg/L	2	15	2	15
30	Dissolved Phosphates (as P) mg/L	5	-	-	-
31	Sulphates (as SO_4) mg/L	1000	1000	1000	1000
32	Sulphide (as S) mg/L	2	-	2	5
33	Pesticides	Absent	Absent	Absent	Absent
34	Phenolic Compounds (as C_6H_5OH) mg/L	1	5	5	5
35	Radioactive materials a) Alpha emitters micro curie/ml	10^{-7}	10^{-7}	10^{-8}	10^{-7}
	b). Beta emitters micro curie /ml	10^{-6}	10^{-6}	10^{-6}	10^{-7}

2.1.6 Textile CETP - Inlet Effluent Quality Standards *(Source: BP No. 46 Dated 24.07.2024)*

S.No	Name of CETPs	Treatment System	Inlet Parameters						
			pH	Total Suspended Solids	Total Dissolved Solids	Biological Oxygen Demand	Chemical Oxygen Demand	Chlorides	Sulphates
1	M/s. Andipalayam Common Effluent Treatment Plant Pvt. Limited, Tiruppur	ZLD	9-11	200-250	9000-10000	400-600	1500-2000	1000-1600	3500-4500
2	M/s. Angeripalayam Common Effluent Treatment Plant Limited, Tiruppur	ZLD	9-11	100-300	9000-12000	300-400	1000-1800	3000-4000	3500-5000
3	M/s. Chinnakkarai Common Effluent Treatment Plant Private Limited, Tiruppur	ZLD	8-10	150-350	9500-10500	250-350	1400-1600	1600-2000	2900-3500
4	M/s.Eastern Common Effluent Treatment Company Private Limited, Tiruppur	ZLD	9-11	100-200	9000-10000	400-500	1600-1800	800-1000	4000-5000
5	M/s. Kallikadu Common Effluent Treatment Plant Private Limited, Tiruppur	ZLD	8.5-11	200-300	6000-10000	300-400	1000-1600	3000-4000	400-1800
6	M/s. Kasipalayam Common Effluent Treatment Plant Private Limited, , Tiruppur	ZLD	9-10	150-200	9000-10000	500-600	1800-2000	1000-1200	4000-5000
7	M/s. Mangalam Common Effluent Recycling Technologies India (P) Ltd, , Tiruppur	ZLD	9-11	400-600	10000-11500	500-600	1600-1800	1000-1600	4500-6000
8	M/s. Mannarai Common Effluent Treatment Plant (P) Limited, , Tiruppur	ZLD	8.5-11	150-300	9000-10000	400-500	1600-1800	1200-1500	5000-6000
9	M/s. Park Common Effluent Treatment Plant Private Ltd, Tiruppur	ZLD	8.5-9.5	350-450	9000-10000	350-450	1500-1800	5000-6000	500-1000
10	M/s. Rayapuram Common Effluent Treatment Plant Pvt	ZLD	8-10	150-250	9000-10000	250-350	1200-1600	1000-1800	3800-5300

	Ltd, Tiruppur								
11	M/s. Sirupooluvapatti CETP Private Limited, Tiruppur	ZLD	9.5-10.5	150-200	10000-11000	300-400	1400-1800	900-1100	4500-5500
12	M/s. S.Periyapalayam CETP Private Limited, Tiruppur	ZLD	8-10	150-200	9000-10000	200-300	1200-1600	900-1000	4000-5000
13	M/s. Tiruppur Murugampalayam Common Effluent Treatment Company Pvt. Ltd, , Tiruppur	ZLD	9-11	100-200	10000-11000	400-500	1600-1800	1500-2000	4500-5000
14	M/s. Veerapandi CETP Limited, Tiruppur	ZLD	9-11	150-200	10000-11000	300-400	1600-1800	800-1000	4000-5000
15	M/s. Vettuvapalayam Common Effluent Treatment And Recycling Plant Private Limited. (Bleaching Unit) , Tiruppur	ZLD	9-5-10.5	100-200	3000-4500	300-400	1000-1200	1200-1800	400-500
16	M/s.Arulpuram Common Effluent Treatment Company Pvt Ltd, Tiruppur	ZLD	9-11	150-300	10000-11000	400-600	1600-1900	1200-2000	4000-5000
17	M/s.Kunnankalpalayam CETP Private Limited, Tiruppur	ZLD	9-10	200-300	9500-10500	500-600	1800-2000	1500-1900	3000-4000
18	M/s.Karaipudur CETP Pvt. Ltd, Tiruppur	ZLD	9-11	300-400	9000-11000	80-100	1400-1800	800-1000	4000-5000
19	M/s.Perundurai Common Effluent Treatment Plant (Textiles), Perundurai	ZLD -Wash Water	7-11	300-400	2100-3000	500-900	1000-1800	Alkalinity-1500	Total hardness 200-300
		ZLD -Dye Bath	7-12	500-800	35000-55000	700-900	1400-2000	Alkalinity--1500-9000	Total hardness 300-500

Note: All parameters in mg/L except pH

2.1.7 Tannery CETP - Inlet Effluent Quality Standards *(Source: BP No. 28 dated 05.04.2023)*

SI. No	Name of the CETPs	Treatment System		General Parameters				Specific Parameters				
			pH	Total Suspended Solids	Total Dissolved Solids	Biological Oxygen Solids	Chemical Oxygen Demand	Total Chromium	Ammoniacal Nitrogen	Chlorides	Sulphides (as S)	Oil & grease
1	M/s. Vanitec Limited, Vellore	ZLD	6.0 – 9.0	3000	20000	2500	5000	45	400	9500	300	300
2	M/s. Ambur Tannery Effluent Treatment Company Ltd, Thuthipet Sector, Vellore	ZLD	6.0 – 9.0	3000	20000	2500	5000	45	350	9500	250	300
3	M/s. Ambur Tannery Effluent Treatment Co Ltd (Maligai Thope Sector) Vellore	ZLD	6.0 – 9.0	3000	18000	2500	5000	45	300	9000	250	300
4	M/s. TALCO Pernambut Tannery Effluent Treatment Company Limited, Vellore	ZLD	6.0 – 9.0	3000	20000	2500	5000	45	350	10500	250	300
5	M/s. Ranipet Tannery Effluent Treatment Company Limited Vellore	ZLD	6.0 – 9.0	3000	20000	2800	6000	45	400	10500	250	300
6	M/s. Visharam Tanners Enviro Control Systems Private Limited, Vellore	ZLD	6.0 – 9.0	3000	17000	2500	5500	45	350	10000	250	300
7	M/s. Ranipet Sidco Finished Leathers Effluent Treatment Company (P) Ltd, Vellore	ZLD	5.0 – 8.0	2000	9000	2500	6000	45	50	2500	65	75
8	M/s. SIPCOT -	ZLD	5.0	2000	7500	2000	5000	45	50	2000	65	75

	SIDCO Phase – II Entrepreneur Finished Leather Effluent Treatment Co Ltd Vellore		– 8.0									
9	M/s. Pallavaram Tanners Industrial Effluent Treatment Company Ltd Kancheepuram	Dilution with sewage	5.0 – 8.0	2000	6500	2000	4300	45	50	1500	35	75
10	M/s. TALCO Dindigul Tanners Enviro Control System Pvt Ltd, Dindigul	Partially ZLD and Partially dilution with sewage	6.0 – 9.0	3000	18000	2500	5000	45	350	8000	150	300
11	M/s. Madhavaram Leather Manufacturers Facility (P) Limited, TALCO Industrial Estate, Madhavaram, Chennai-600060.	Dilution with manufactures Facility Private Limited, Madhavaram, Chennai, Sewage	5.0 – 8.0	2000	6500	2000	4300	45	50	1500	35	75
12	M/s. Perundurai Leather Industries Eco-Security Private Limited, Erode	ZLD	6.0 – 9.0	3000	20000	3000	5500	45	350	10500	250	300
13	M/s. TALCO Trichy Tannery Effluent Treatment Company, Trichy	ZLD	6.0 – 9.0	3000	17000	2500	5000	45	350	8000	250	300

Note: All parameters in mg/L except pH

2.1.8 Standards for Sewage Treatment Plants (STPs) (Source: MoEF&CC Notification G.S.R. 1265(E) dated 13.10.2017)

Sl.No.	Parameters	Effluent discharge standards (applicable to all mode of disposal)	
		Location	Concentration not to exceed
1	pH	**Anywhere** in the country	6.5-9.0
2	Bio-Chemical Oxygen Demand (BOD)	Metro Cities*, all State Capitals except in the State of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura Sikkim, Himachal Pradesh, Uttarakhand, Jammu and Kashmir, and Union territory of Andaman and Nicobar Islands, Dadar and Nagar Haveli Daman and Diu and Lakshadweep	20
		Areas/regions other than mentioned above	30
3	Total Suspended Solids (TSS)	Metro Cities*, all State Capitals except in the State of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura Sikkim, Himachal Pradesh, Uttarakhand, Jammu and Kashmir and Union territory of Andaman and Nicobar Islands, Dadar and Nagar Haveli Daman and Diu and Lakshadweep	<50
		Areas/regions other than mentioned above	<100
4	Fecal Coliform (FC) (Most Probable Number per 100 milliliter, MPN/100ml	Anywhere in the country	<1000

*Metro Cities are Mumbai, Delhi, Kolkata, Chennai, Bengaluru, Hyderabad, Ahmedabad and Pune.

Note:

(i). All values in mg/l except for pH and Fecal Coliform.

(ii). These standards shall be applicable for discharge into water bodies as well as for land disposal/applications.

(iii). The standards for Fecal Coliform shall not apply in respect of use of treated effluent for industrial purposes.

(iv). These Standards shall apply to all STPs to be commissioned on or after the 1st June, 2019 and the old/existing STPs shall achieve these standards within a period of five years from date of publication of this notification in the Official Gazette.

(v). In case of discharge of treated effluent into sea, it shall be through proper marine outfall and the existing shore discharge shall be converted to marine outfalls, and in cases where the marine outfall provides a minimum initial dilution of 150 times at the point of discharge and a minimum dilution of 1500 times at a point 100 meters away from discharge point, then, the existing norms shall apply as specified in the general discharge standards.

(vi). Reuse/Recycling of treated effluent shall be encouraged and in cases where part of the treated effluent is reused and recycled involving possibility of human contact, standards as specified above shall apply.

(vii). Central Pollution Control Board/State Pollution Control Boards/Pollution Control Committees may issue more stringent norms taking account to local condition under section 5 of the Environment (Protection) Act, 1986].

2.1.9 Drinking Water – Specification (IS 10500:2012)

Table 1 Organoleptic and Physical Parameters

Sl.No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
i)	Colour, Hazen units, *Max*	5	15
ii)	Odour	Agreeable	Agreeable
iii)	*p*H value	6.5-8.5	No relaxation
iv)	Taste	Agreeable	Agreeable
v)	Turbidity, NTU, *Max*	1	5
vi)	Total dissolved solids, mg/l, *Max*	500	2000

Table 2 General Parameters Concerning Substances Undesirable in Excessive Amounts

Sl.No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
i)	Aluminium (as Al), mg/l, *Max*	0.03	0.2
ii)	Ammonia (as total ammonia-N), mg/l, *Max*	0.5	No relaxation
iii)	Anionic detergents (as MBAS), mg/l, *Max*	0.2	1.0
iv)	Barium (as Ba), mg/l, *Max*	0.7	No relaxation
v)	Boron (as B), mg/l, *Max*	0.5	1.0
vi)	Calcium (as Ca), mg/l, *Max*	75	200
vii)	Chloramines (as Cl_2), mg/l, *Max*	4.0	No relaxation
viii)	Chloride (as Cl), mg/l, *Max*	250	1000
ix)	Copper (as Cu), mg/l, *Max*	0.05	1.5
x)	Fluoride (as F) mg/l, *Max*	1.0	1.5
xi)	Free residual chlorine, mg/l, *Min*	0.2	1
xii)	Iron (as Fe), mg/l, *Max*	0.3	No relaxation
xiii)	Magnesium (as Mg), mg/l, *Max*	30	100
xiv)	Manganese (as Mn), mg/l, *Max*	0.1	0.3
xv)	Mineral oil, mg/l, *Max*	0.5	No relaxation
xvi)	Nitrate (as NO_3), mg/l, *Max*	45	No relaxation

xvii)	Phenolic compounds (as C_6H_5OH), mg/l, *Max*	0.001	0.002
xviii)	Selenium (as Se), mg/l, *Max*	0.01	No relaxation
xix)	Silver (as Ag), mg/l, *Max*	0.1	No relaxation
xx)	Sulphate (as SO_4) mg/l, *Max*	200	400
xxi)	Sulphide (as H_2S), mg/l, *Max*	0.05	No relaxation
xxii)	Total alkalinity as calcium carbonate, mg/l, *Max*	200	600
xxiii)	Total hardness (as $CaCO_3$), mg/l, *Max*	200	600
xxiv)	Zinc (as Zn), mg/l, *Max*	5	15

Table 3 Parameters Concerning Toxic Substances

Sl.No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
i)	Cadmium (as Cd), mg/l, *Max*	0.003	No relaxation
ii)	Cyanide (as CN), mg/l, *Max*	0.05	No relaxation
iii)	Lead (as Pb), mg/l, *Max*	0.01	No relaxation
iv)	Mercury (as Hg), mg/l, *Max*	0.001	No relaxation
v)	Molybdenum (as Mo), mg/l, *Max*	0.07	No relaxation
vi)	Nickel (as Ni), mg/l, *Max*	0.02	No relaxation
vii)	Pesticides, µg/l, *Max*	See Table 5	No relaxation
viii)	Polychlorinated biphenyls, mg/l, *Max*	0.0005	No relaxation
ix)	Polynuclear aromatic hydro-carbons (as PAH), mg/l, *Max*	0.0001	No relaxation
x)	Total arsenic (as As), mg/l, *Max*	0.01	0.05
xi)	Total chromium (as Cr), mg/l, *Max*	0.05	No relaxation
xii)	Trihalomethanes:		
	a) Bromoform, mg/l, *Max*	0.1	No relaxation
	b) Dibromochloromethane, mg/l, *Max*	0.1	No relaxation
	c) Bromodichloromethane, mg/l, *Max*	0.06	No relaxation
	d) Chloroform, mg/l, *Max*	0.2	No relaxation

Table 4 Parameters Concerning Radioactive Substances

Sl.No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
i)	Radioactive materials:		
	a) Alpha emitters Bq/l, *Max*	0.1	No relaxation
	b) Beta emitters Bq/l, *Max*	1.0	No relaxation

Table 5 Pesticide Residues Limits and Test Method

Sl.No	Pesticide	Limit µg/l
i)	Alachlor	20
ii)	Atrazine	2
iii)	Aldrin/ Dieldrin	0.03
iv)	Alpha HCH	0.01

v)	Beta HCH	0.04
vi)	Butachlor	125
vii)	Chlorpyriphos	30
viii)	Delta HCH	0.04
ix)	2,4- Dichlorophenoxyacetic acid	30
x)	DDT (*o, p* and *p, p* – Isomers of DDT, DDE and DDD)	1
xi)	Endosulfan (alpha, beta, and sulphate)	0.4
xii)	Ethion	3
xiii)	Gamma — HCH (Lindane)	2
xiv)	Isoproturon	9
xv)	Malathion	190
xvi)	Methyl parathion	0.3
xvii)	Monocrotophos	1
xviii)	Phorate	2

Table 6 Bacteriological Quality of Drinking Water

Sl.No	Organisms	Requirements
i)	*All water intended for drinking*: a) *E. coli* or thermotolerant coliform bacteria	 Shall not be detectable in any 100 ml sample
ii)	*Treated water entering the distribution system*: a) *E. coli* or thermotolerant coliform bacteria b) Total coliform bacteria	 Shall not be detectable in any 100 ml sample Shall not be detectable in any 100 ml sample
iii)	*Treated water in the distribution system*: a) *E. coli* or thermotolerant coliform bacteria b) Total coliform bacteria	 Shall not be detectable in any 100 ml sample Shall not be detectable in any 100 ml sample

2.1.10 Designated Best Use Water Quality Criteria *(Source: cpcb.nic.in/ wqstandards/)*

Designated Best Use	Class of water	Criteria
Drinking water source without conventional treatment but after disinfection	**A**	(i). Total Coliforms Organism MPN/100ml shall be 50 or less (ii). pH between 6.5 and 8.5 (iii). Dissolved Oxygen 6mg/l or more (iv). Biochemical Oxygen Demand 5 days 20^{o}C 2mg/l or less
Outdoor bathing (Organized)	**B**	(i). Total Coliforms Organism MPN/100ml shall be 500 or less (ii). pH between 6.5 and 8.5 (iii). Dissolved Oxygen 5mg/l or more (iv). Biochemical Oxygen Demand 5 days 20^{o}C 3mg/l or less

Drinking water source after conventional treatment and disinfection	**C**	(i). Total Coliforms Organism MPN/100ml shall be 5000 or less (ii). pH between 6 to 9 (iii). Dissolved Oxygen 4mg/l or more (iv). Biochemical Oxygen Demand 5 days 20^{o}C 3mg/l or less
Propagation of Wild life and Fisheries	**D**	(i). pH between 6.5 to 8.5 (ii). Dissolved Oxygen 4mg/l or more (iii). Free Ammonia (as N) 1.2mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	**E**	(i). pH between 6.0 to 8.5 (ii). Electrical Conductivity at 25^{0}C micro mhos/cm Max. 2250 (iii). Sodium Absorption Ratio Max. 26 (iv). Boron Max. 2mg/l

2.1.11 Primary Water Quality Criteria for Bathing Waters (*Water used for organized outdoor bathing) (Source: cpcb.nic.in/ wqstandards/)*

CRITERIA		**RATIONALE**
1. Fecal Coliform MPN/100 ml	500 (desirable) 2500 (Maximum Permissible)	To ensure low sewage contamination. Fecal coliform and fecal streptococci are considered as they reflect the bacterial pathogenicity
2. Fecal Streptococci MPN/100 ml	100 (desirable) 500 (Maximum Permissible)	The desirable and permissible limits are suggested to allow for fluctuation in environmental conditions such as seasonal change, changes in flow conditions etc.
2. pH	Between 6.5 -8.5	The range provides protection to the skin and delicate organs like eyes, nose, ears etc. which are directly exposed during outdoor bathing.
3. Dissolved Oxygen	5 mg/1 or more	The minimum dissolved oxygen concentration of 5 mg/1 ensures reasonable freedom from oxygen consuming organic pollution immediately upstream which is necessary for preventing production of anaerobic gases (obnoxious gases) from sediment
4. Biochemical Oxygen demand 3 day, 27°C	3 mg/1 or less	The Biochemical Oxygen Demand of 3mg/l or less of the water ensures reasonable freedom from oxygen demanding pollutants and prevent production of obnoxious gases";

2.1.12 Water Quality Standards for Coastal Waters Marine Outfalls*(Source: cpcb.nic.in/ wqstandards/)*

Class	**Designated best use**
SW-I (see Table 1.1)	Salt pans, Shell fishing, Mariculture and Ecologically Sensitive Zone.

SW-II (see Table 1.2)	Bathing, Contact Water Sports and Commercial fishing.
SW-III(see Table 1.3)	Industrial cooling, Recreation (non-contact) and Aesthetics.
SW-IV (see Table 1.4)	Harbour.
SW-V (see Table 1.5)	Navigation and Controlled Waste Disposal.

Table 1.1 Primary Water Quality Criteria For Class SW-I Waters (For Salt pans, Shell fishing, Mariculture and Ecologically Sensitive Zone)

Sl.No	Parameter	Standards	Rationale/Remarks
1	pH range	6.5-8.5	General broad range, conducive for propagation of aquatic lives, is given. Value largely dependent upon soil-water interaction.
2	Dissolved Oxygen	5.0 mg/l or 60 percent saturation value, whichever is higher.	Not less than 3.5 mg/l at any time of the year for protection of aquatic lives.
3	Colour and Odour	No noticeable colour or offensive odour.	Specially caused by chemical compounds like creosols, phenols, naphtha, pyridine, benzene, toluene etc. causing visible colouration of salt crystal and tainting of fish flesh.
4	Floating Matters	Nothing obnoxious or detrimental for use purpose.	Surfactants should not exceed an upper limit of 1.0 mg/I and the concentration not to cause any visible foam
5	Suspended Solids	None from sewage or industrial waste origin	Settleable inert matters not in such concentration that would impair any usages specially assigned to this class
6	Oil and Grease (including Petroleum Products)	0.1 mg/I	Concentration should not exceed 0.1 mg/l as because it has effect on fish eggs and larvae.
7	Heavy Metals Mercury (as Hg) Lead (as Pb) Cadmium (as Cd)	 0.01 mg/l 0.01 mg/l 0.01 mg/l	Values depend on: (i) Concentration in salt, fish and shell fish. (ii)Average per capita consumption per day. (iii) Minimum ingestion rate that induces symptoms of resulting diseases.

Table 1.2 Primary Water Quality Criteria for Class SW-II Waters (For Bathing, Contact Water Sports and Commercial Fishing)

Sl.No	Parameter	Standards	Rationale/Remarks
1	pH range	6.5-8.5	Range does not cause skin or eye irritation and is also conducive for propagation of aquatic life
2	Dissolved Oxygen	4.0 mg/I or 50 percent saturation value whichever is higher	Not less than 3.5 mg/1 at anytime for protection of aquatic lives.
3	Colour and Odour	No noticeable colour or offensive odour	Specially caused by chemical compounds like creosols phenols, naptha, benzene pyridine, volume etc. causing visible colouration of water and tainting of and odour in fish flesh
4	Floating Matters	Nothing obnoxious or detrimental for use purpose	None in concentration that would impair usages specially assigned to this class.
5	Turbidity	30 NTU (Nephelo Turbidity Unit)	Measured at 0.9 depth
6	Fecal Coliform	100/100 ml (MPN)	The average value not exceeding 200/100 ml. in 20 percent of samples in the year and in 3 consecutive samples in monsoon months
7	Biochemical Oxygen Demand (3 days at 27°C)	3 mg/1	Restricted for bathing (aesthetic quality of water). Also prescribed by IS:2296-1974

Table 1.3 Primary Water Quality Criteria for Class SW-III Waters [For Industrial cooling, Recreation (non-contact) and Aesthetics]

Sl.No	Parameter	Standards	Rationale/Remarks
1	pH range	6.5-8.5	The range is conducive for propagation of aquatic species and restoring natural system
2	Dissolved Oxygen	3.0 mg/1 or 40 percent saturation value whichever is higher	To protect aquatic lives
3	Colour and Odour	No noticeable colour or offensive odour	None in such concentration that would impair usages specifically assigned to this class.
4	Floating Matters	No Visible /obnoxious floating debris, oil	As in (3) above

		slick, scum	
5	Fecal Coliform	500/100 ml (MPN)	Not exceeding 1000/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months
6	Turbidity	30 NTU	Reasonably clear water for Recreation, Aesthetic appreciation and Industrial cooling purposes.
*7	Dissolved Iron (as Fe)	0.5 mg/1 or less	It is desirable to have the collective concentration of dissolved Fe and Mn less or equal to 0.5 mg/I to avoid scaling effect
*8	Dissolved Manganese (as Mn)	0.5 mg/I or less	

* Standard included exclusively for Industrial Cooling purpose. Other parameters same.

Table 1.4 Primary Water Quality Criteria for Class SW-IV Waters (For Harbour Waters)

Sl.No	Parameter	Standards	Rationale/Remarks
1	pH range	6.5-9.0	To minimize corrosive and scaling effect
2	Dissolved Oxygen	3.0 mg/1 or 40 percent saturation value whichever is higher	Considering bio-degradation of oil and inhibition to oxygen production through photosynthesis
3	Colour and Odour	No visible-colour or offensive odour	None from reactive. chemicals which may corrode paints/metallic surfaces
4	Floating materials Oil, grease and scum (including Petroleum products)	10 mg/1	Floating matter should be free from excessive living organisms, which may clog) or coat operative parts of marine vessels/equipment.
5	Fecal Coliform	500/100 ml (PAN)	Not exceeding 1000/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months
6	Biochemical Oxygen Demand (3 days at 27°C)	5 mg/1	To maintain water relatively free from pollution caused by sewage and other decomposable wastes

Table 1.5 Primary Water Quality Criteria for Class SW-V Waters (For Navigation and Controlled Waste Disposal)

Sl. No	Parameter	Standards	Rationale/Remarks
1	pH range	6.0-9.0	As specified by New England Interstate Water Pollution Control Commission
2	Dissolved Oxygen	3.0 mg/l or 40 percent saturation value whichever is higher	To protect aquatic lives
3	Colour and Odour	None is such concentration that would impair any usages specifically assigned to this class.	As in (1) above
4	Sludge deposits, Solid refuse floating oil, grease & scum	None except for such small solids, amount that may result from discharge of appropriately treated sewage and/or individual waste effluents.	As in (1) above
5	Fecal Coliform	500/100 ml (MPN)	Non exceeding 1000/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months

2.1.13 Parameters to be analyzed for the Industrial Effluent Samples (Source: TNPCB Circular Memo No. 177/DDL/TNPCB/MDS/94 dated 24.3.94)

Sl.No	Type of industry	Parameters
1	Aluminium	Core Parameters, Fluoride, Aluminium, Sodium, Calcium
2	Asbestos	Core Parameters, Fluoride
3	Beverages	Core Parameters
4	Cement, Concrete, Lime & Gypsum	Core Parameters, Calcium & Phosphate
5	Caustic Soda	Core Parameters, Mercury, Total Residual Chlorine
6	Cold Storage/Refrigerator	Core Parameters, Sulphide, Ammonical Nitrogen
7	Dairy	Core Parameters
8	Distillery	Core Parameters, Sulphide, Total Kjeldahl Nitrogen, Phosphate, Potassium, Volatile solids
9	Dye Stuff/Dye Intermediate	Core Parameters, Phenolic Compounds, Total Kjeldahl Nitrogen, Cadmium, Copper, Manganese, Lead, Nickel, Zinc, Chromium
10	Engineering with Electroplating / Heat Treatment	Core Parameters, Cyanide, Hexavalent & Total Chromium, Nickel, Zinc, Copper, Lead, Cadmium
11	Fertilizers – Nitrogenous	Core Parameters, Ammonical Nitrogen, Total Kjeldahl Nitrogen, Phosphate, Sulphide, Hexavalent

		& Total Chromium, Free Ammonia, Nitrate Nitrogen, Arsenic, Cyanide, (Wherever required)
12	Fertilizer - Phosphatic	Core Parameters, Fluoride, Phosphate, Total & Hexavalent Chromium
13	Film Processing Unit	Core Parameters, Silver, Cyanide, Thiocyanate
14	Glass/Ceramic	Core Parameters, Zinc, Chromium
15	Glue	Core Parameters
16	Inorganic Chemicals/Alkalis	Core Parameters, Fluorides, Cyanide, Sulphide, Phosphate, Arsenic, Cadmium, Total & Hexavalent Chromium, Copper, Lead, Zinc, Mercury, Aluminium
17	Leather Tanning	Core Parameters, Ammonical Nitrogen, Sulphide, Total & Hexavalent Chromium, Percent Sodium, Phenolic compounds
18	Meat/Slaughter House	Core Parameters, Ammonical Nitrogen, Total Kjeldahl Nitrogen, Sulphide
19	Organic Chemicals	Core Parameters, Total Kjeldahl Nitrogen, Fluoride, Cyanide, Phenolic Compounds, Pesticides
20	Petroleum Refinery	Core Parameters, Cyanide, Phenolic Compounds, Total Chromium (use of chromium in cooling system), Hexavalent Chromium, Sulphide, Zinc, Phosphate
21	Pulp & Paper	Core Parameters, Ammonical Nitrogen, Total Kjeldahl Nitrogen, Sulphide, Phenolic Compounds, Percent Sodium
22	Rubber Products	Core Parameters, Phenolic Compounds
23	Starch/Sugar	Core Parameters, Total Kjeldahl Nitrogen, Percent
24	Steel	Core Parameters, Cyanide, Total & Hexavalent Chromium, Copper, Nickel, Zinc, Total Iron
25	Textile/Bleaching	Core Parameters, Total Residual Chlorine
26	Textile/Processing	Core Parameters, Total Kjeldahl Nitrogen, Percent Sodium, Sulphide, Phenolic Compounds
27	Thermometers	Core Parameters, Mercury
28	Viscose Rayon	Core Parameters, Zinc, Total Chromium
29	Polyster Fibres	Core Parameters, Zinc, Total Chromium, Phenolic Compounds
30	Sewage	Total Suspended Solids, BOD
31	Petrochemicals	Core Parameters, Phenolic Compounds, Sulphide, Fluoride, Total & Hexavalent Chromium
32	Pharmaceuticals Manufacturing & Formulation Industry	Core Parameters, Mercury, Hexavalent Chromium, Lead, Cyanide, Phenolic compounds, Sulphide, Phosphate (Parameters other than core parameters to be analysed depending upon the products)
33	Paint Industry	Core Parameters, Bio Assay Test, Phenolic Compounds, Lead, Total & Hexavalent Chromium, Copper, Zinc, Nickel
34	Sea Food Industry	Core Parameters, Total Kjeldahl Nitrogen, Ammonical Nitrogen, Nitrate Nitrogen
35	Synthetic Rubber	Core Parameters
36	Integrated Iron & Steel Plant	Core Parameters, cyanide, Phenolic compounds, Ammonical Nitrogen,

37	Food & Fruit Processing Industry	Core Parameters
38	Natural Rubber Processing Industries (Centrifuging & Cleaning units)	Core Parameters, Kjeldahl Nitrogen, Ammonical Nitrogen, Sulphide.

Core Parameters: *pH, Total Suspended Solids, Total Dissolved Solids, Chlorides, Sulphates, Biochemical Oxygen Demand, Chemical Oxygen Demand, Oil & Grease.*

2.1.14 Consent Fee Applicable Under the Water (P&CP) Act, 1974 (As per Rule 26A)

[G.O. Ms No.40, Environment and Forests (EC 1) Department, Dated 09.04.2018]

Sl. No	Gross Fixed Assets	Amount of Consent Fee (Rupees)		
		Red Category	Orange Category	Green Category
1	Upto Rs. 1 lakhs	400	300	200
2	Above Rs. 1 lakhs and upto Rs. 2 lakhs	700	600	400
3	Above Rs. 2 lakhs and upto Rs. 3 lakhs	900	700	600
4	Above Rs. 3 lakhs and upto Rs. 4 lakhs	1100	1000	800
5	Above Rs. 4 lakhs and upto Rs. 5 lakhs	1300	1100	1000
6	Above Rs. 5 lakhs and upto Rs. 6 lakhs	1700	1500	1200
7	Above Rs. 6 lakhs and upto Rs. 7 lakhs	2000	1700	1400
8	Above Rs. 7 lakhs and upto Rs. 8 lakhs	2200	2000	1600
9	Above Rs. 8 lakhs and upto 9 lakhs	2400	2100	1800
10	Above Rs. 9 lakhs and upto Rs. 10 lakhs	2600	2400	2000
11	Above Rs. 10 lakhs and upto Rs. 15 lakhs	3700	3100	2500
12	Above Rs. 15 lakhs and upto Rs. 20 lakhs	4400	3600	3000
13	Above Rs. 20 lakhs and upto Rs. 25 lakhs	5000	4200	3500
14	Above Rs. 25 lakhs and upto Rs. 35 lakhs	6000	4900	4100
15	Above Rs. 35 lakhs and upto Rs. 45 lakhs	7400	5600	5100
16	Above Rs. 45 lakhs and upto Rs. 55 lakhs	8900	7400	6100
17	Above Rs. 55 lakhs and upto Rs. 65 lakhs	10400	8400	7100
18	Above Rs. 65 lakhs and upto Rs. 75 lakhs	13100	10500	8100
19	Above Rs. 75 lakhs and upto Rs. 1 crore	16300	12600	10100
20	Above Rs. 1 crore and upto Rs. 5 crores	21800	17900	14200
21	Above Rs. 5 crores and upto Rs. 10 crores	Rs.105/- per lakh	Rs. 65/- per lakh	Rs. 42/- per lakh

22	Above Rs. 10 crores and upto Rs. 50 crores	Rs. 105000/- + Rs. 40/- per lakh	Rs. 65000/- + Rs. 30/- per lakh	Rs. 42000/- + Rs. 12/- per lakh
23	Above Rs. 50 crores and upto Rs. 100 crores	Rs. 265000/- + Rs. 23/- per lakh	Rs. 185000/- + Rs. 15/- per lakh	Rs. 90000/- + Rs. 12/- per lakh
24	Above Rs. 100 crores and upto Rs. 1000 crores	Rs. 380000/- + Rs. 5/- per lakh	Rs. 260000/- + Rs. 4/- per lakh	Rs. 150000/- + Rs. 3.00 per lakh
25	Above Rs. 1000 crores	Rs. 830000/- + Rs. 3/- per lakh (Max Rs. 31 lakhs)	Rs. 620000/- + Rs. 2.00- per lakh (Max Rs. 23 lakhs)	Rs. 420000/- + Rs. 1.00- per lakh (Max Rs. 8 lakhs)

2.2 THE WATER (PREVENTION AND CONTROL OF POLLUTION) CESS ACT, 1977

2.2.1 Repeal of the Water (Prevention and Control of Pollution) Cess Act, 1977 *(Refer: MoEF&CC Letter No. Z-20011/01/2017-CPW, dated 28.12.2017)*

The Water (Prevention and Control of Pollution) Cess Act 1977 provided that the State Pollution Control Boards and Committees shall levy and collect a Cess on water consumed by persons carrying on any Industry and from all Local authorities. This enactment, earlier made with the objective of augmenting the resources of the Pollution Control Boards, has been totally repealed through the Taxation Laws (Amendment) Act 2017)No. 18 of 2017), notified by the Ministry of Law and Justice vide gazette dated 5.5.2017. Accordingly,

- No Fresh Cess returns have to be submitted for periods beyond 01-07-2017.
- No fresh assessments have to be made by the Pollution Control Boards/Committees for consumption beyond 01-07-2017.
- Cess not collected by the Pollution Control Board for periods prior to 01-07-2017 shall be collected and paid by the Pollution Control Boards/Committees (the designated collection Authorities) to the Consolidated Fund of India.
- All persons liable to pay cess before 1st July, 2017 shall continue to be assessed and cess collected from the date of acquisition of such liability.

2.3 THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981

2.3.1 The Air (Prevention and Control of Pollution) Act, 1981 (*as amended August* 2023 in the Jan Vishwas (Amendment of Provisions) Act, 2023)

Salient Features

Sections	
Section 4	**SPCBs constituted under section 4 of the Water Act:-**State Pollution Control Board constituted under Section 4 of the Water (P&CP) Act, 1974 shall be deemed to the State Board for prevention and control of air pollution of the State and to exercise the powers vested under the Air (P&CP) Act.
Section 17	**Functions of the State Boards:-** Empowers the Board to lay down emission, noise level and ambient air quality standards in consultation with Central Pollution Control Board.
Section 19	**Power to declare air pollution control areas:-**Entire State of Tamil Nadu has been declared as air pollution control area by the State Government under Section 19.
Section 20	**Power to give instructions for ensuring standards for emission from automobiles:-**Empowers the State Government give instructions to the concerned authority in charge of registration of motor vehicles to comply with the standards for emission of air pollutants from automobiles laid down by the State Board.
Section 21	**Restrictions on use of certain industrial plants:-**Requires the industries to obtain the consent from the Board to establish/ operate the unit in the air pollution control area.
Section 22	**Persons carrying on industry, etc. not to allow emission of air pollutants in excess of the standards laid down by State Board:-** Prohibits the emission of pollutants in excess of the standards laid down by the Board.
Section 22A	**Power of Board to make application to court for restraining persons from causing air pollution:-** Empowers the Board to seek intervention of Court to restrain emission of any air pollutant exceeding the standards.
Section 23	**Furnishing of information to State Board and other agencies in certain cases:-**Requires the industries to furnish information on the emissions in excess of the standards laid down by the Board, to the Board, the Collector of the District, the Revenue Divisional Officer, the Executive Authority of the Local body and the nearest Police Station.
Section 24	**Power to entry and inspection:-** Empowers the Board to enter any place at all reasonable time for the purpose of performing any of the functions of the Board.
Section 25	**Power to obtain information:-**Empowers the Board to call for any information (including information regarding the type of air pollutant emitted) from the occupier of the industry and have the right to inspect the premises where such industry, control equipment is

	being operated.
Section 26	**Power to take samples of air or emission and procedure to be followed in connection therewith:-**Empowers the Board for collection of samples of air or emissions from any chimney, stack, flue or duct or any other outlet.
Section 31	**Appeals:-** Provides for appeal against the orders of the Board under Section21. Appeal has to be made to the Appellate Authority, within thirty days from the date of communication of the order.
Section 31 A	**Power to give directions:-** Empowers the Board to issue direction for closure, prohibition or regulation of any industry, operation or process or the stoppage or regulation of supply of electricity, water or any other service.
Section 37	**Failure to comply with the provisions of section 22 or directions issued under section 31A :-** (*1*) Whoever contravenes or does not comply with the provisions of section 22 or directions issued under section 31A, shall, in respect of each such contravention , be liable to penalty which shall not be less than ten thousand rupees, but which may extend to fifteen lakh rupees. (*2*) Where any person continues contravention under sub-section (*1*), he shall be liable to additional penalty of ten thousand rupees for every day during which such contravention continues. (Amendment 2024).
Section 38	**Penalties for certain acts.** Whoever- (*a*) destroys, pulls down, removes, injures or defaces any pillar, post or stake fixed in the ground or any notice or other matter put up, inscribed or placed, by or under the authority of the Board; (*b*) obstructs any person acting under the orders or directions of the Board from exercising his powers and performing his functions under this Act; (*c*) damages any works or property belonging to the Board; (*d*) fails to furnish to the Board or any officer or other employee of the Board any information required by the Board or such officer or other employee for the purposes of this Act; (*e*) fails to intimate the occurrence of the emission of air pollutants into the atmosphere in excess of the standards laid down by the State Board or the apprehension of such occurrence, to the State Board and other prescribed authorities or agencies as required under sub-section (*1*) of section 23; (*f*) fails in giving any information which he is required to give under this Act, makes a statement which is false in any material particular, shall be liable to penalty which shall not be less than ten thousand rupees, but which may extend to fifteen lakh rupees. (*2*) Where any person continues contravention under sub-section (*1*), he shall be liable to additional penalty of ten thousand rupees for every day during which such contravention continues. (Amendment

	2024)
Section 54	**Power of State Government to make rules:-** Empowers the State Government to make rules to carry out the purpose of this Act in respect of matter not falling with the purview of section 53 (Power of Central Government to make rules).

2.3.2 The Tamil Nadu Air (Prevention and Control Of Pollution) Rules, 1983

The Government of Tamil Nadu vide G.O. Ms. No. 3, Environment Control, dated 27th September, 1983 has notified The Tamil Nadu Air (Prevention and Control of Pollution) Rules, 1983.

Saliant Features

Rules	
Rule 3	**Application of rules made under the Water Pollution Control Act:-** The Rules made under the Water Pollution Control Act shall apply as if they were made under the Act for the matters as mentioned.
Rule 6	**Manner of declaration of air pollution control area:-**Air Pollution control area declaring by the State Government shall specify the boundaries and the date on which such declaration shall come into force.
Rule 8	**Fees to accompany application:-** Every application for consent under the Section 21(2) of the Air (P&CP) Act, shall be accompanied by the fees as given in the Table. [Given in *Chapter 2.3.5*]
Rule 11	**Procedure for taking samples under Section 26(1):-** (1) The occupier of the premises shall provide port-holes, platforms conveniently located for easy access to port-holes and all other necessary facilities for taking samples of air or emission from any chimney, flue or duct, plant or vassal or any other sources and outlets, whether stationary or mobile.
Rule 14	**Functions of the State Air Laboratory and fee for report:-** The Board is entitled to collect fees for analysis of samples of air or emission
Rule 14-A	**Fees for analysis report by Government Analyst:-**Sample Analysis fee shall be paid at the rates mentioned.
Schedule and Forms	
Form-I	Application for consent for emission / continuation of emission under Section 21 of the Air (P&CP) Act, 1981
Form-II	Notice of Inspection
Form-III	Notice of inspection to have sample analysed
Form-IV	Report of Board Analyst
Form-V	Report of the Government Analyst
Form-VI	Form of the Register to be maintained in respect of consents issued under Section 21 of the Act.
Form-VII	Form of Appeal under Section 31 of the Air (P&CP) Act, 1981
Form-VIII	Form of Notice issue by the Appellate Authority to the Appellant

2.3.3 Notice of Inspection

FORM II

TAMIL NADU POLLUTION CONTROL BOARD
NOTICE OF INSPECTION

(See rule 9 of the Tamil Nadu Air (Prevention and Control of Pollution) Rules, 1983)

To
.....
.....

TAKE NOTICE that for the purpose of enquiry under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 (Central Act 14 of 1981), the following officers of the Tamil Nadu Pollution Control Board, Namely :-

(i) Thiru.....
(ii) Thiru.....
(iii) Thiru.....

and the persons authorized by the Board to assist them will inspect any systems of your industrial plant, any plant thereof pertaining thereto under your management / control on _____ (date) between _____ hours, when all facilities requested by them for such inspection should be made available to them on the site. Take notice that refusal or denial to the above stated demand shall be punishable under Section 37(1) of the said Act.

(By order of the Board)

Member – Secretary

Copy to :-
1.

2.

2.3.4 Notice of Intention to have Sample analysed

FORM III

TAMIL NADU POLLUTION CONTROL BOARD

NOTICE OF IINTENTION TO HAVE SAMPLE ANALYSED

[See rule 12 of the Tamil Nadu Air (Prevention and Control of Pollution) Rules, 1983]
To
.....
.....

Take notice in your capacity as occupier or agent of the premises from which sample of air / emission is taken that it is intended to have analysed the sample of air / emission which is being taken today the ___ day of 19 __ from _____ the said premises, namely * _____

Your attention is particularly invited to clause(d) of sub-section (3) of section 26 of the Air (Prevention and Control of Pollution) Act, 1981 (central Act 14 of 1981)

under which you have an option to request the person taking the sample to send the container or containers containing the sample to the state air laboratory for analysis at your cost.

Name and designation of the person who takes the sample

.....

.....

* Here specify the stack, chimney or any other outlets from which sample of air emission, etc. is being taken.

2.3.5 National Ambient Air Quality Standards

(CPCB Notification No. B-29016/20/90/PCI-I Dated 18.11.2009)

	Pollutant	**Time Weighted Average**	**Concentration in Ambient Air**		**Method of Measurements**
			Industrial, Residential, Rural and Other Area	**Ecologically Sensitive Area (notified by Central Government)**	
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
1	Sulphur Dioxide (SO_2), µg/m^3	Annual*	50	20	-Improved West and Geake - Ultraviolet fluorescence
		24 hours**	80	80	
2	Nitrogen Dioxide (NO_2), µg/m^3	Annual*	40	30	-Modified Jacob & Hochheiser (Na – Arsenic) - Chemiluminescnece
		24 hours**	80	80	
3	Particulate Matter (size less than 10 µm) or PM_{10} µg/m^3	Annual*	60	60	- Gravimetric -TOEM -Beta attenuation
		24 hours**	100	100	
4	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$ µg/m^3	Annual*	40	40	- Gravimetric - TOEM - Beta attenuation
		24 hours**	60	60	
5	Ozone (O_3), µg/m^3	8 hours**	100	100	- UV photometric Chemilminescence - Chemical Method
		1 hour**	180	180	
6	Lead (Pb), µg/m^3	Annual*	0.50	0.50	- AAS/ICP method after sampling on EPM 2000 or equivalent Filter paper - ED-XRF using Teflon filter
		24 hours**	1.0	1.0	
7	Carbon Monoxide (CO), mg/m^3	8 hours**	02	02	- Non Dispersive Infra Red (NDIR) - Spectroscopy
		1 hour**	04	04	
8	Ammonia (NH_3),	Annual*	100	100	- Chemiluminescence

	µg/m³				- Indophenol blue method
		24 hours**	400	400	
9	Benzene (C_6H_6), µg/m³	Annual*	05	05	- Gas chromatograph based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benzo (a) Pyrene (BaP) – particulate phase only, ng/m³	Annual*	01	01	- Solvent extraction followed by HPLC /OC analysis
11	Arsenic (As), ng/m³	Annual*	06	06	- AAS/ICP method afar sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m³	Annual*	20	20	- AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

***** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

****** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note: Whenever and wherever results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation

SANT PRASA GAUTAM, CHAIRMAN

[ADVT-III/4/184/09/Exty.]

Note: The notification on National Ambient Air Quality Standers were published by the Central Pollution Control Board in the Gazette of India, Extraordinary vide notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935 (E), dated 14th October, 1998.

2.3.6 Standards For Chlorine Emission

Copy of:- TNPCB : B.P.No.: 504 Date: 29.08.91

Ref: Board's resolution No.111 - 54 dated 9.8.91

ORDER:

As per section 17 (1) of the Air (P & CP) Act, 1981 the Board may lay down standards for emission of any air pollutant and ambient air quality in consultation with Central Pollution Control Board. The Central Pollution Control Board has not laid down standards for emission of chlorine. In the minutes of the XXVIII Conference of Chairmen and Member Secretaries of Central and State Pollution Control Boards held at Shimla, it has been indicated that the State Boards should adopt suitable standards for emission from industry to which Central Board has not so far evolved standards and in the event of Central Board coming out with

relevant standards, the stricter of the two shall prevail. Meanwhile problem due to leakage of chlorine gas from chloro-alkali industries in Tamil Nadu was brought to the notice of the Tamil Nadu Pollution Control Board. Government of Tamil Nadu requested the Board to evolve emission as well as ambient air quality standards for Chlorine gas. In this regard a meeting was convened on 10.7.91 at 11.00 A.M. Experts from industries and institutions attended the meeting.

In the meeting, the members reviewed in depth, the emission as well as Ambient Air Quality Standards adopted by various countries in respect of Chlorine gas and hydrochloric acid vapours and mist. The Committee has also examined the present status of air pollution control devices installed in chloro-alkali industries in Tamil Nadu.

Considering all the above aspects in detail, the following limits were suggested for the emission from the stacks and in the ambient air.

	Prescribed Limit
1. Chlorine Gas	
a. Emission from Hypo-tower of Chlor-Alkali industry	15mg/m^3
b. In the Ambient air	3 mg/m^3
2. Hydrochloric and Vapours and Mist	
a. Emission from all processes HCI Manufacturing unit	35 mg / m^3
b. In the Ambient Air	7 mg / m^3

The above decisions were placed before the Board at its meeting held on 9.8.91. The Board examined the above decision carefully and approved the above standards (Vide its resolution No.111-54 dated 9.8.91) for chlorine emission.

Sd/...
for Chairman

2.3.7 Consent Fee Applicable Under the Air (Prevention and Control of Pollution) Act, 1981

[G.O. Ms No.41, Environment and Forests (EC 1) Department, Dated09.04.2018]

Sl. No	**Gross Fixed Assets**	**Amount of Consent Fee (Rupees)**		
		Red Category	**Orange Category**	**Green Category**
1	Upto Rs. 1 lakhs	400	300	200
2	Above Rs. 1 lakhs and upto Rs. 2 lakhs	700	600	400
3	Above Rs. 2 lakhs and upto Rs. 3 lakhs	900	700	600
4	Above Rs. 3 lakhs and upto Rs. 4 lakhs	1100	1000	800
5	Above Rs. 4 lakhs and upto Rs. 5 lakhs	1300	1100	1000
6	Above Rs. 5 lakhs and upto Rs. 6 lakhs	1700	1500	1200
7	Above Rs. 6 lakhs and upto Rs. 7 lakhs	2000	1700	1400
8	Above Rs. 7 lakhs and upto Rs. 8 lakhs	2200	2000	1600
9	Above Rs. 8 lakhs and upto 9 lakhs	2400	2100	1800
10	Above Rs. 9 lakhs and upto Rs. 10 lakhs	2600	2400	2000
11	Above Rs. 10 lakhs and upto Rs. 15 lakhs	3700	3100	2500

12	Above Rs. 15 lakhs and upto Rs. 20 lakhs	4400	3600	3000
13	Above Rs. 20 lakhs and upto Rs. 25 lakhs	5000	4200	3500
14	Above Rs. 25 lakhs and upto Rs. 35 lakhs	6000	4900	4100
15	Above Rs. 35 lakhs and upto Rs. 45 lakhs	7400	5600	5100
16	Above Rs. 45 lakhs and upto Rs. 55 lakhs	8900	7400	6100
17	Above Rs. 55 lakhs and upto Rs. 65 lakhs	10400	8400	7100
18	Above Rs. 65 lakhs and upto Rs. 75 lakhs	13100	10500	8100
19	Above Rs. 75 lakhs and upto Rs. 1 crore	16300	12600	10100
20	Above Rs. 1 crore and upto Rs. 5 crores	21800	17900	14200
21	Above Rs. 5 crores and upto Rs. 10 crores	Rs.105/- per lakh	Rs. 65/- per lakh	Rs. 42/- per lakh
22	Above Rs. 10 crores and upto Rs. 50 crores	105000/- + Rs 40/- per lakh	65000 + Rs 30/- per lakh	42000/- + Rs. 12/- per lakh
23	Above Rs. 50 crores and upto Rs. 100 crores	265000/+ Rs. 23/- per lakh	185000/+ Rs. 15/- per lakh	90000/- + Rs. 12/- per lakh
24	Above Rs. 100 crores and upto Rs. 1000 crores	380000/+ Rs. 5/- per lakh	260000/+ Rs. 4/- per lakh	150000/- + Rs. 3.00 per lakh
25	Above Rs. 1000 crores	830000/+ Rs. 3/- per lakh (Max Rs. 31 lakhs)	620000/+ Rs. 2.00- per lakh (Max Rs. 23 lakhs)	. 420000/- + Rs. 1.00- per lakh (Max Rs. 8 lakhs)

CHAPTER 3

THE ENVIRONMENT (PROTECTION) ACT, 1986 – THE UMBRRLLA ACT

3.1 THE ENVIRONMENT (PROTECTION) ACT, 1986 (NO. 29 OF 1986) [*Source: CPCB PCLS/02/2021-2022 Seventh Edition* , The Jan Vishwas (Amendment of Provisions) Act, 2023]

Salient Features

Sections	
Section 2	**Definitions.-** In this Act, unless the context otherwise requires,-- (a) "environment" includes water, air and land and inter-relationship which exists among and between water, air, and land, and human beings, other living creatures, plants, micro-organism and property; (d) "handling", in relation to any substance, means the manufacture, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of such substance; (e) "hazardous substance" means any substance or preparation which, by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plant, micro-organism, property or the environment;
Section 3	**Power of Central Government to take measures to protect and improve environment.-** (1) Subject to the provisions of this Act, the Central Government shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing controlling and abating environmental pollution. (2) In particular, and without prejudice to the generality of the provisions of sub-section (1), such measures may include measures with respect to all or any of the following matters, namely:- (i) co-ordination of actions by the State Governments, Officers and other authorities -- (a) under this Act, or the rules made there under, or (b) under any other law for the time being in force which is relatable to the objects of this Act; (ii) planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution; (iii) laying down standards for the quality of environment in its various aspects; (iv) laying down standards for emission or discharge of environmental pollutants from various sources whatsoever; Provided that different standards for emission or discharge may be laid down under this clause from different sources having regard to

	the quality or composition of the emission or discharge of environmental pollutants from such sources; (v) restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards (vi) laying down procedures and safeguards for the prevention of accidents which may cause environmental pollution and remedial measures for such accidents; (vii) laying down procedures and safeguards for the handling of hazardous substances; (viii) examination of such manufacturing processes, materials and substances as are likely to cause environmental pollution; (ix) carrying out and sponsoring investigations and research relating to problems of environmental pollution; (x) inspection of any premises, plant, equipment, machinery, manufacturing or other processes, materials or substances and giving, by order, of such directions to such authorities, officers or persons as it may consider necessary to take steps for the prevention, control and abatement of environmental pollution ;
Section 4	**Appointment of officers and their powers and functions.-** Empowers the Central Government to appoint officers for the purposes of this Act and to entrust them such powers and functions.
Section 5	**Powers to give directions.-** Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions *Explanation* –For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct – (a) the closure, prohibition or regulation of any industry, operation or process; or (b) stoppage or regulation of the supply of electricity or water or any other service.
Section 6	**Rules to regulate environmental pollution.-** (1) The Central government may, by notification in the Official Gazette, make rules in respect of all or any of the matters referred to in section 3. (2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:- (a) the standards of quality of air, water or soil for various areas and

	purposes; (b) the maximum allowable limits of concentration of various environmental pollutants (including noise) for different areas; (c) the procedures and safeguards for the handling of hazardous substances; (d) the prohibition and restrictions on the handling of hazardous substances in different areas; (e) the prohibition and restriction on the location of industries and the carrying on process and operations in different areas; (f) the procedures and safeguards for the prevention of accidents which may cause environmental pollution and for providing for remedial measures for such accidents.
Section 7	**Persons carrying on industry operation, etc., not to allow emission or discharge of environmental pollutants in excess of the standards.-** No person carrying on any industry, operation or process shall discharge or emit or permit to be discharged or emitted any environmental pollutants in excess of such standards as may be prescribed.
Section 8	**Persons handling hazardous substances to comply with procedural safeguards.-** No person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed.
Section 9	**Furnishing of information to authorities and agencies in certain cases.- (1)** Where the discharge of any environmental pollutant in excess of the prescribed standards or other unforeseen act or event, the person responsible for such discharge and the person in charge of the place shall bound to prevent or mitigate the environmental pollutant and also intimate the fact to such authorities as prescribed.
Section 10	**Powers of entry and inspection.-** (1) Subject to the provisions of this section, any person empowered by the Central Government in this behalf shall have a right to enter, at all reasonable times with such assistance as he considers necessary, any place- (a) for the purpose of performing any of the functions of the Central Government entrusted to him; (b) for the purpose of determining whether and if so in what manner, any such functions are to be performed or whether any provisions of this Act or the rules made thereunder or any notice, order, direction or authorization served, made, given or granted under this Act is being or has been complied with; (c) for the purpose of examining and testing any equipment,

	industrial plant, record, register, document or any other material object or for conducting a search of any building in which he has reason to believe that an offence under this Act or the rules made thereunder has been or is being or is about to be committed and for seizing any such equipment, industrial plant, record, register, document or other material object if he has reason to believe that it may furnish evidence of the commission of an offence punishable under this Act or the rules made thereunder or that such seizure is necessary to prevent to mitigate environmental pollution. (2) Every person carrying on any industry, operation or process of handling any hazardous substance shall render assistance, as may be required, to the person empowered by the Central Government under sub-section (1) for carrying out the functions under that sub-section and if he fails to do so without any reasonable cause, he shall be liable to penalty provided under section 14B. (3) If any person wilfully delays or obstructs any person empowered by the Central Government under sub-section (1) in the performance of his functions under sub-sections (1) or (2), he shall be liable to penalty provided under section 14B.
Section 11	**Power to take sample and procedure to be followed in connection therewith.-** (1) The Central Government or any officer empowered by it in this behalf, shall have power to take, for the purpose of analysis, samples of air, water, soil or other substance from any factory, premises or other place in such manner as may be prescribed (Vide Rule 6 of the Environment (Protection) Rules, 1986.)
Section 12	**Environmental laboratories.-** (1) The Central Government may, by notification in the Official Gazette,-- (a) establish one or more environmental laboratories (b)recognize one or more laboratories or institutes as environmental laboratories to carry out the functions entrusted to an environmental laboratory under this Act.
Section 13	**Government analysts.-**Empowers the Central Government to appoint or recognise such persons as it thinks fit and having the prescribed qualifications to be Government analysts for the purpose of analysis of samples of air, water, soil or other substance.
Section 14	**Reports of Government analysts.-**Any document purporting to be a report signed by a Government analyst may be used as evidence of the facts stated therein in any proceeding under this Act.
Section 15	**Penalty for contravention of the provisions of the Act, rules, orders and directions.-** 1) Where any person contravenes or does not comply with any of the

	provisions of this Act or the rules made or orders or directions issued there under for which no penalty is provided, he shall be liable to penalty in respect of each such contravention which shall not be less than ten thousand rupees but which may extend to fifteen lakhs rupees. (2) Where any person continues contravention under sub-section (1), he shall be liable to additional penalty of ten thousand rupees for every day during which such contravention continues.
Section 15A	Penalty for contravention by companies.-
Section 15B	Penalty for contravention by Government Department.-
Section 15C	Adjudicating officer.-
Section 15D	Appeal.-
Section 15E	Penalty amount to be credited to Environmental Protection Fund.-
Section 16	Environmental Protection Fund.
Section 16A	Accounts and audit of Fund-
Section 16B	Annual report.-
Section 18	**Protection of action taken in good faith:-** No suit, prosecution or other legal proceeding shall lie against the Government or any officer or other employee of the Government or any authority constituted under this Act or any member, officer or other employee of such authority in respect of anything which is done or intended to be done in good faith in pursuance of this Act or the rules made or orders or directions issued thereunder.
Section 19	**Cognizance of offences:-** No court shall take cognizance of any offence under this Act except on a complaint made by-- (a) the Central Government or any authority or officer authorised in this behalf by that Government, …
Section 20	**Information, reports or returns:-** The Central Government may, in relation to its function under this Act, from time to time, require any person, officer, State Government or other authority to furnish to it or any prescribed authority or officer any reports, returns, statistics, accounts and other information and such person, officer, State Government or other authority shall be bound to do so.
Section 21	**Members, officers and employees of the authority constituted under section 3 to be public servants:-** All the members of the authority, constituted, if any, under section 3 and all officers and other employees of such authority when acting or purporting to act in pursuance of any provisions of this Act or the rules made or orders or directions issued thereunder shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code (45 of 1860)
Section 22	**Bar of jurisdiction:-** No civil court shall have jurisdiction to entertain any suit or proceeding in respect of anything done, action taken or order or direction issued by the Central Government or any other authority or officer in pursuance of any power conferred by or in relation to its or his functions under this Act.

Section 23	**Powers to delegate.-** Without prejudice to the provisions of sub-section (3) of section 3, the Central Government may, by notification in the Official gazette, delegate, subject to such conditions and limitations as may be specified in the notifications, such of its powers and functions under this Act [except the powers to constitute an authority under sub-section (3) of section (3) and to make rules under section 25] as it may deem necessary or expedient, to any officer, State Government or other authority.
Section 24	**Effect of other laws.-** The provisions of this Act and the rules or orders made there under shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force.
Section 25	**Power to make rules:-** The Central Government may, by notification in the Official Gazette, make rules for carrying out the purposes of this Act....
Section 26	**Rules made under this Act to be laid before parliament:-** Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament.

Note: For complete version of the Act, refer Environment (Protection) Act, 1986 as amended.

3.2 THE ENVIRONMENT (PROTECTION) RULES, 1986 *(MoEF Notification S.O. 844(E) dated 19.11.1986) (Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Salient Features

Rules	
Rule 3	**Standards for emission or discharge or environmental pollutants.-** (1) For the purpose of protecting and improving the quality of the environment and preventing and abating environmental pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes shall be as specified in Schedules I to IV (2) Notwithstanding anything contained in sub-rule (1), the Central Board or a State Board may specify more stringent standards from those provided in Schedules I to IV in respect of any specific industry, operation or process depending upon the quality of the recipient system and after recording reasons, there for in writing.
Rule 4	**Directions.-** (1) Any direction issued under section 5 of the Environment (Protection) Act, 1986 shall be in writing. (2). The direction shall specify the nature of action to be taken and the time within which it shall be complied with by the person, officer or the authority to whom such direction is given.
Rule 5	Prohibition and restriction on the location of industries and the carrying on processes and operations in different areas.-
Rule 6	Procedure for taking samples.-

Rule 7	Service of notice,-
Rule 8	Procedure for submission of samples for analysis, and the form of laboratory report thereon:
Rule 9	Functions of environmental laboratories:
Rule 10	Qualifications of Government Analyst:
Rule 11	Manner of giving notice:
Rule 12	Furnishing of information to authorities and agencies in certain cases.-
Rule 13	Prohibition and restriction on the handling of hazardous substances in different areas.-
Rule 14	**Submission of environmental Statement.-** Every person carrying on an industry, operation or process requiring consent under section 25 of the Water (P&CP) Act, 1974 (6 of 1974) or under section 21 of the Air (P&CP) Act, 1981 (14 of 1981) or both or authorization under the Hazardous Waste (Management & Handling) Rules, 1989 issued under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an environmental statement for the financial year ending the 31st March in **Form V** *[Given in Chapter 3.6]* to the concerned State Pollution Control Board on or before the thirtieth day of September every year, beginning 1993.
Schedules	
Schedule-I	Standards for emission or discharge or environmental pollutants
Schedule-II	Omitted by G.S.R. 801 (E) dated 31.12.1993
Schedule-III	Ambient Air Quality Standards in respect of noise
Schedule-IV	Standards for emission of smoke, vapour, etc., from motor vehicles
Schedule-V	Furnishing of information to authorities and agencies in certain cases
Schedule-VI	General standards for discharge of environmental pollutants
Schedule-VII	National Ambient Air Quality Standards
Forms	
Form-I	Notice of inspection to have sample analysed
Form-II	Memorandum to Government Analyst
Form-III	Report by Government Analyst
Form-IV	Form of Notice
Form-V	Submission of environmental Statement

3.3 EMISSION STANDARD PRESCRIBED UNDER ENVIRONMENT (PROTECTION) RULES, 1986

3.3.1 Emission Standards for Aluminium Plants *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Source	Standards
(a) Aluminium Plant (i). Raw Material Handling Primary and Secondary Crusher – Particulate	 150 mg/Nm^3

Matter	
(ii). Precipitation Area – Calcination – Particulate Matter Carbon Monoxide Stack Height	250 mg/Nm^3 1% max. $H=14Q^{0.3}$, where Q is emission rate of SO_2 in kg/hr and H-Stack height in metres.
(b) Smelter Plant (i). Green Anode Shop – Particulate Matter	 150 mg/Nm^3
(ii). Anode Bake Oven – Particulate Matter - Total Fluoride (F)	50 mg/Nm^3 0.3kg/MT of Aluminium
(iii). Pot room – Particulate Matter - Total Fluoride for Soderberg Technology - Total Fluoride for Pre-baked Technology	150 mg/Nm^3 2.8 kg/Ton by 31st Dec 2006 0.8 kg/t by 31st Dec 2006
(c) Standards for forage Fluoride (i). Twelve consecutive months average (ii). Two consecutive months average (iii) One month average	 40 ppm 60 ppm 80 ppm

3.3.2 Emission Standards for Asbestos Manufacturing Units (Including all process involving the use of Asbestos) *(Source: Environment & Pollution Laws, Justice M.R.Mallick, Professional Book Publishers 2017)*

Parameter	Standards
Pure Asbestos material	0.5 fibre/cc for one year from the date of notification 0.2 fibre/cc after one year from the date of notification
Total Dust	4 fibre/cc 2 mg/m^3 (normal)

3.3.3 Emission Standards for Bagasse-Fired Boilers *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Source	Standards
(a) Step Grade – Particulate Matter	250 mg/Nm^3
(b) Horse shoe/pulsating grate – Particulate Matter	500 mg/Nm^3 (12% CO_2)
(c) Spreader Stroker – Particulate Matter	800 mg/Nm^3(12% CO_2)

Note: In the case of horse shoe and spreader stroker boilers, if more than one boiler is attached to a single stack, the standard shall be fixed based on added capacity of all the boilers connected with the stack.

3.3.4 Emission Standards for Battery Manufacturing Industry (*Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

(i) Lead Acid Battery Manufacturing Industries

Source	Pollutant	Concentration based Standards (mg/Nm^3)
Grid casting	Lead	10
	Particulate matter	25
Oxide manufacturing	Lead	10
	Particulate matter	25
Past mixing	Lead	10
	Particulate matter	25

Assembling	Lead	10
	Particulate matter	25
PVC Section	Particulate matter	150

(ii) Dry Cell Manufacturing Industry

Pollutant	Concentration based Standards (mg/Nm^3)
Particulate matter	50
Manganese as Mn	5

Note:

(a) To comply with the respective standards, all the emissions from above mentioned sources shall be routed through stack connected with hood and fan. In addition to above, installation of control equipments viz. Bag filter / ventury scrubber, is also recommended

(b) The minimum stack height shall be 30 metres

(iii) Secondary Lead Smelters

Pollutant	Concentration based standards
Lead as Pb	10 mg/Nm^3
Particulate matter	50 mg/Nm^3
Minimum Stack height	30 m

3.3.5 Emission standards for Boiler (Small) - Particulate matters *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Steam generation capacity (ton/hour)	Particulate matters emission (mg/NM^3)
Less than 2	1200*
2 to less than 10	800*
10 to less than 15	600*
15 and above	150**

* to meet the respective standards, cyclone/multicyclone is recommended as control equipment with the boiler.

** to meet the standards, bag filter/ESP is recommended as control equipment with the boiler.

Note:

(i) 12% of CO_2 correction shall be the reference value for particulate matter emission standards for all categories of boilers.

(ii) Stack Height for small Boilers.

For the small boilers using coal or liquid fuels, the required stack height with the boiler shall be calculated by using the formula,

$H=14Q^{0.3}$, Where H – Total stack height in metres from the ground level, $Q=SO_2$ emission rate in kg/hr.

In no case the stack height shall be less than 11 metres. Where providing tall stacks are not feasible using above formula the limit of 400 mg/Nm^3 for SO_2 emission shall be met by providing necessary control equipment with a minimum stack height of 11 metres.

3.3.6 Emission Standards for Cement Plants (without coprocessing), Standalone clinker Grinding Plant or, Blending Plant (Source: CPCB PCLS/02/2021-2022 Seventh Edition)

A - Emission Standards			
(i) Rotary Kiln - without coprocessing			
	Date of Commissioning	**Location**	**concentration not to exceed, in mg/Nm^3**

	(a)	(b)	(c)
Particulate Matter	on or after the date of notification	anywhere in the country	30 (with effect from 01.01.2016)
	before the date of notification	critically polluted area of urban centres with population above 1.0 lakh or within its periphery of 5.0 kilometre radius	50 (with effect from 01.06.2015)
			30 (with effect from 01.06.2016)
		other than critically polluted area or urban centres	100 (with effect from 01.01.2015)
			30 (with effect from 01.01.2016)
[1]{Sulphur Dioxide (SO_2) in mg/Nm^3	Irrespective of date of commissioning	Anywhere in the country	100, 700, 1000 when pyritic sulphur in the limestone is less than 0.25%, 0.25 to 0.5% and more than 0.5% respectively.
Oxides of Nitrogen (NOx) in mg/Nm^3	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.
(i) The timeline for implementation of emission standards for all the parameters i.e. Sulphur Dioxide (SO_2), Oxides of Nitrogen (NOx) and Particulate Matter (PM), with respect to Rotary Kiln without coprocessing shall be up to the 31st March, 2017. (ii) The emission standards for Sulphur Dioxide (SO_2) shall be reviewed after a period of five years from the date of notification of these rules. (iii) The word 'NO_2' shall be substituted by 'NOx' wherever it occurs in the notification vide G.S.R. 612(E) dated 25th August, 2014.}.			
(ii) Vertical Shaft Kiln – (without coprocessing)			
Particulate matter (PM)	on or after the date of notification	anywhere in the country	50 (with effect from 01.01.2016)

	before the date ofnotification	critically polluted area or urban Centres with population above 1.0 lakh or within its periphery of 5 kilometre radius	100 (with effect from 01.06.2015) 75 (with effect from 01.06.2016)
		other than critically polluted area or urban centres	150 (with effect from 01.01.2015)
Sulphur Dioxide (SO2)	-	-	200 (with effect from 01.01.2016)
Nitrogen Dioxide (NO2)	-	-	500 (with effect from 01.01.2016)

Note: -

a. The height of each stack including Clinker Grinding Plant, Coal Mill, Raw Mill, Grinding, Packaging Section, etc. shall be of a minimum of 30 metres or, as per the formula H=14(Q)0.3 whichever is more, where "H" is the height of stack in metres and "Q" is the maximum quantity of SO2 expected to be emitted in kg/hr through the stack at 100 percent rated capacity of the plant and calculated as per the norms of gaseous emission.

b. Above norms shall be applicable even if pet-coke is mixed with coal or, used alone for clinker making in kiln provided, pet-coke has been notified as 'approved fuel' by the concerned State Pollution Control Board/ Pollution Control Committee under the Air (Prevention and Control of Pollution) Act, 1981.

c. All monitored values for SO2 and NO2 shall be corrected to 10% Oxygen, on dry basis. The norms for SO2 and NO2 shall be applicable to stacks attached to kiln.

d. Scrubber meant for scrubbing emissions shall not be used as quencher. Plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be atleast equal to the main stack.

B. - Service wastewater - (without coprocessing)

All efforts shall be made by the industry for 'zero discharge' of service wastewater. In case, the industry prefers to discharge service wastewater, the following norms shall be complied with:

	Concentration not to exceed, milligramme per litre (except pH and temperature)
pH	5.5 to 9.0
Suspended Solids	100
Oil and Grease	10
Temperature	not more than 5 °C higher than the intake water temperature

C. - Stormwater

	I. Stormwater shall not be allowed to mix with effluent, treated sewage, scrubber water and or floor washings. II. Stormwater within battery limits of industry shall be channelized through separate drain(s) as per natural gradient passing through high-density polyethylene lined pit(s) each having holding capacity of 10 minutes (hourly average) of rainfall for its catchment area.]

Cement Plant with co-processing (Source: CPCB PCLS/02/2021-2022 Seventh Edition)

A. Emission Standards			
Rotary Kiln - with co-processing of Wastes			
	Date of Commissioning	**Location**	**Concentrationn not to exceed, in mg/Nm³**
	(a)	**(b)**	**(c)**
Particulate Matter(PM)*	on or after the dateof notification (25.8.2014)	anywhere inthe country	30
	before the date ofnotification (25.8.2014)	critically polluted area or urban centres with population above 1.0 lakhor within its periphery of 5.0 kilometreradius	30
		other than critically polluted areaor urban centres	30
SO2*	irrespective of dateof commissioning	anywhere inthe 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 ofnotification (25.08.2014)	anywhere inthe country	(1) 600
	Before the date ofnotification (25.08.2014)	anywhere inthe country	(2) 800 for rotary kiln with InLine Calciner (ILC) technology .
			(3) 1000 for rotary kilnusing mixed stream of ILC, Separate Line Calciner (SLC) and suspensionpre-heater technology or SLCtechnology alone or without calciner.
HCl		10 mg/Nm³	
HF		1 mg/Nm³	
TOC		10 mg/Nm³**	
Hg and its compounds		0.05 mg/Nm³	
Cd+Tl and their compounds		0.05 mg/Nm³	
Sb+As+Pb+Co+Cr+Cu+Mn+Ni+V and their compounds		0.5 mg/Nm³	
Dioxins and Furans		0.1 ngTEQ/Nm³	

Note: The abbreviations used in the Table shall mean as under:

SO_2 - Sulphur Dioxide; NOx - Oxides of Nitrogen; HCI - Hydrogen Chloride; HF - Hydrogen Fluoride; TOC - Total Organic Carbon; Hg - Mercury; Cd - Cadmium; Tl - Thallium; Sb - Antimony; As - Arsenic; Pb - Lead, Co - Cobalt; Cr -Chromium; Cu - Copper; Mn - Manganese; Ni - Nickel; and V -Vanadium".

*The concentration values and timeline for implementation in respect of PM, SO_2 and NOx shall be governed in accordance with the provisions under notification published vide GSR No. 612(E), dated the 25th August, 2014 and amended from time to time.

**Permitting authority may prescribe separate standards on case to case basis, if Total Organic Carbon (TOC) does not result from the co-processing of waste.

(a) The height of each individual stack connected to Kiln, Clinker Cooler, Cement Mills, Coal Mill, Raw Mill, Packaging Section, etc. shall be of a minimum of 30 meters or, as per the formula $H=14(Q1)^{0.3}$ and $H=74(Q2)^{0.27}$ whichever is more, where "H" is the height of stack in metres and "Q1" is the maximum quantity of SO_2 expected to be emitted in kg/hr and "Q2" is the maximum quantity of PM expected to be emitted in tonnes/hr through the stack at 100 percent rated capacity of the plant;

(b) The monitored values of SO_2, NOx, HCl, HF, TOC, Metals and Dioxins and Furans at main kiln stack shall be corrected to 10% Oxygen, on dry basis and the norms for SO_2, NOx, HCl, HF, TOC, Metals and Dioxins and Furans shall be applicable to main kiln stack and the norms for Particulate Matter (PM) shall be applicable to all the stacks in the plant. PM, SO_2, NOx shall be monitored continuously, HCl, HF, TOC, Metals and Dioxins and Furans shall be monitored once in a year;

(c) Scrubber meant for scrubbing emissions shall not be used as quencher and plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be at least equal to the main stack.

B.- Service waste water (with co-processing of wastes)

All efforts shall be made by the industry for 'zero discharge' of service wastewater and in case, the industry prefers to discharge service wastewater, the following norms shall be complied with:

	Concentration not to exceed, milligram per litre (except pH and temperature)
pH	5.5 to 9.0
Suspended Solids	100
Oil and Grease	10
Temperature	not more than 5 °C higher than the intake water temperature

C – Storm water

(I) Storm-water shall not be allowed to mix with effluent, treated sewage, scrubber water and or floor washings.

(II) Storm-water within battery limits of industry shall be channelized through separate drain(s)].

3.3.7 Emission Standards for Common Hazardous Waste Incinerators *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Parameter	**Limiting concentration in mg/Nm³ unless stated**	**Sampling Duration in (minutes) unless stated**
Particulate matter	50	30
HCl	50	30

SO_2	200	30
CO	100	30
	50	24 hours
Total Organic Carbon	20	30
HF	4	30
NO_x (NO and NO_2, expressed as NO_2)	400	30
Total dioxins and furans	0.1 ngTEQ/Nm^3	8 hours
Cd + Th + their compounds	0.05	2 hours
Hg and its compounds	0.05	2 hours
Sb + As + Pb + Co + Cr + Cu + Mn + Ni + V + their compounds	0.50	2 hours

Note:

(i). All monitored values shall be corrected to 11 % oxygen on dry basis.

(ii). The CO_2 concentration in tail gas shall not be less than 7%.

(iii). In case, halogenated organic waste is less than 1% by weight in input waste, all the facilities in twin chamber incinerators shall be designed to achieve a minimum temperature of 950°C in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.

(iv). In case halogenated organic waste is more than 1% by weight in input waste, waste shall be incinerated only in twin chamber incinerators and all the facilities shall be designed to achieve a minimum temperature of 1100°C in secondary combustion chamber with a gas residence time in secondly combustion chamber not less than 2 (two seconds).

(v). Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, as to achieve Total Organic Carbon (TOC) content in the slag and bottom ashes less than 3%, or their loss on ignition is less than 5% of the dry weight.

3.3.8 Emission Standards for Copper, Lead and Zinc Smelting Units *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Parameter	**Source**	**Standards**	
		Existing unit	**New unit**
Particulate matter	Concentrator	100 mg/Nm^3	75 mg/Nm^3
Sulphur Dioxide	Sulphur dioxide recovery unit – Plant Capacity for 100% convertabel concentration of sulfuric acid (tones/day)		
	Upto 300	1370 mg/Nm^3	1250 mg/Nm^3
	Above 300	1250 mg/Nm^3	950 mg/Nm^3
Acid Mist /Sulphur Trioxide	Upto 300	90 mg/Nm^3	70 mg/Nm^3
	Above 300	70 mg/Nm^3	50 mg/Nm^3

3.3.9 Emission Standard for SO_2 from Cupola Furnace *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Parameter	Standards
Sulphur Dioxide (SO_2) emission	300 mg/Nm^3 at 12% CO_2 correction

Note: To achieve the standard, foundries may install scrubber followed by a stack six times the diameter of the Cupola beyond the charging door. In case due to some technical reasons, installation of scrubber is not possible, then value of SO_2 to the ambient air has to be effected through the stack height.

3.3.10 Emission Standards for Diesel Engines (Engine Rating more than 0.8 MW (800 KW) for Power Plant, Generator set applications and other requirements *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Parameter		Area Category	Total engine rating of the plant (includes existing as well as new generator sets)	Generator sets commissioning date		
				Before 1.7.2003	Between 1.7.2003 and 1.7.2005	On or after 1.7.2005
NO_x (as NO_2) (At 15% O_2), dry basis, in ppmv		A	Up to 75 MW	1100	970	710
		B	Up to 150 MW			
		A	More than 75 MW	1100	710	360
		B	More than 150 MW			
NMHC (as C) (at 15% O_2), mg/Nm^3		Both A and B		150	100	
PM (at 15% O_2), mg/Nm^3	Diesel Fuels- HSD & LDO	Both A and B		75	75	
	Furnace Oils- LSHS & FO	Both A and B		150	100	
CO (at 15% O_2), mg/Nm^3		Both A and B		150	150	
Sulphur content in fuel		A		< 2%		
		B		< 4%		
Fuel specification		For A only	Up to 5 MW	Only Diesel Fuels (HSD, LDO) shall be used		
Stack height (for generator sets commissioned after 1.7.2003)		Stack height shall be maximum of the following, in metre: (i). 14 $Q^{0.3}$, Q= Total SO_2 emission from the plant in kg/hr. (ii). Minimum 6m above the building where generator set is installed. (iii) 30 m.				

Note : NHMC : Non MethaneHydrocarbon.

Category A:	Areas within the municipal limits of towns/cities having population more than 10 lakhs and also up to 5 km beyond the municipal limits of such towns/cities.
Category B:	Areas not covered by Category A

Continuous monitoring of Oxides of Nitrogen shall be done by the plants whose total engine capacity is more than 50 MW. However, minimum once in six month

monitoring for other parameters shall be adopted by the plants.

3.3.11 Emission Standards for Foundries *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

(a) Cupola Capacity (Melting Rate)	Concentration
Less than 3 mt/hr – Particulate Matter	450 mg/Nm^3
3 mt/hr and above – Particulate Matter	150 mg/Nm^3
(b) Arc Furnaces All sizes – Particulate Matter	150 mg/Nm^3
(C) Induction Furnace All sizes – Particulate Matter	150 mg/Nm^3

Note:

(i). It is essential that stack is constructed over the cupola beyond the charging door and emissions are directed through the stack which should be at least six times the diameter of cupola.

(ii). In respect of Arc Furnaces and Induction Furnaces provision has to be made for collecting the fumes before discharging the emission through the stack.

Source: G.S.R. 263 (E) MoEF&CC Notification dated 22.3.2019

S. No.	**Type of Industrial Sector**	**Standards**	
		SO_2 (mg/Nm^3)	**No_x (mg/Nm^3)**
107	Ceramic*	400	600
108	Foundry Industries ** (Furnaces based on Fuel)	300	400
109	Glass***	500 for natural gas firing 1500 for other fuels	1000
110	Lime Kiln****	400	500
111	Reheating furnace*****	300	1000”

Note:

* It is required to meet stack height criteria publication vide notification number G.S.R 475 (E), dated the 5th May, 1992 published in Gazette No. 202 dated 5th May 1992.

** It is required to meet stack height criteria publication vide notification number G.S.R 742 (E), dated the 30th August, 1990 published in Gazette NO. 365 dated 30th August, 1990.

*** It is required to meet stack height criteria publication vide notification number G.S.R 93 (E), dated 21st February, 1991 published in the Gazette No. 79 dated the 27th February, 1991.

**** The lime kiln shall ensure that the minimum stack height is in accordance with Environment Protection Act, 1986 as amended from time to time and relevant direction of SPCBs / PCCs shall to adhere to. It shall be the concerned SPCB / PCC to increase the stake height, if required based on the scientific studies, keeping in view the habitations around such lime kilns.

***** It is required to meet stack height criteria publication as prescribed by SPCBs / PCCs.

3.3.12 Emission Standards for Gas / Naphtha Based Thermal Power Plants*(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

(i) Limit for emission of NO_x

(a) For existing units – 150 ppm (v/v) at 15% excess oxygen

(b) For new units with effect from 1.6.1999.

Total generation of gas turbine	Limit of Stack NO_x emission (v/v), at 15% excess oxygen
(a). 400 MW and above	(i). 50 ppm for the units burning natural gas (ii). 100 ppm for the units burning naphtha
(b). Less than 400 MW but upto 100 MW	(i). 75 ppm for the units burning natural gas (ii). 100 ppm for the units burning naphtha
(c) Less than 100 MW	100 ppm for units burning natural gas or naphtha as fuel
(d) For the plants burning gas in a conventional boiler	100 ppm

Note: Stack height in H metre should be calculated using the formula $H=14Q^{0.3}$, where Q is the emission rate of SO_2 in kg/hr, subject to minimum of 30 metres.

3.3.13 Emission Standards for Genset run on Diesel and Natural Gas (NG) or Diesel and Liquid Petroleum Gas (LPG) *(Source: CPCB/PCLS/02/2021-2022 Seventh Edition).*

A. Emission Limits – The emission limits for Diesel and NG or Diesel and LPG driven engine (upto 800 kW) for generator set (hereinafter referred to as Genet) application shall be effective from the 1st July, 2016 as specified in the Table below, subject to the general conditions specified therein, namely:-

Power Category	Emission Limits (g/kW-hr)			Smoke Limit (light absorption coefficient, m^{-1})
	NOx + THC or NOx+NMHC or RHC	CO	PM Limit	
Upto 19kW	≤7.5	≤3.5	≤0.3	≤0.7
More than 19kW upto 75kW	≤4.7	≤3.5	≤0.3	≤0.7
More than 75kW upto 800 kW	≤4.0	≤3.5	≤0.2	≤0.7

3.3.14 Emission Standards for Generator Sets on Petrol and Kerosene (Source: *CPCB/PCLS/02/2021-2022 Seventh Edition)*

Class	Displacement (CC)	CO(g/kw-hr)	$HC+NO_x$(g/kw-hr)
1.	Upto 99	≤250	≤12
2.	99 and upto 225	≤250	≤10
3.	>225	≤250	≤8

Noise Limits for new generator sets run with petrol and kerosene

	Noise Limits
Sound Pressure Level L_{wa}	86 dBA

3.3.15 Emission Standards for Glass Industry *(Source: CPCB/PCLS/02/2021-2022 Seventh Edition)*

A. Sodalime& Borosilicate and other special Glass (other than Lead)

Source	Standards
(a) Furnace : Capacity	

(i). Upto a product draw capacity of 60MT/Day – Particulate Matter	2.0 kg/hr.
(ii). Product draw capacity more than 6 MT/Day – Particulate Matter	0.8 kg/MT of product drawn
(iii). For all capacities – Stack Height	$H=14Q^{0.3}$, where Q is the emission rate of SO_2 in kg/hr& H is stack height in metres.
For all capacities - Total Fluorides	5 mg/Nm^3
For all capacities - NO_x	Use of low NO_x burners in new plants

(b) Implementation of the following measures for fugitive emission control from other sections:
(i). Raw materials should be transported in leak proof containers.
(ii). Cullet preparation should be dust free using water spraying.
(iii). Batch preparation should be covered.

B. Lead Glass

Source	Standards
(a) Furnaces: All capacities	
Particulate Matter	50 mg/Nm^3
Lead	20 mg/Nm^3

(b). Implementation of the following measures for fugitive emission control from other sections:
(i). Batch mixing, proportioning section and transfer points should be covered and it should be connected to control equipments to meet the following standards: Particulate Matter – 50 mg/Nm^3, Lead – 20 mg/Nm^3.
(ii). Minimum Stack height should be 30 metres in lead glass units.
(c) Pot Furnace at Firozabad : Furnace Particulate Matter – 1200 mg/Nm^3.
Note: Depending upon the local environmental conditions, State/Central Pollution Control Board can prescribe more stringent standards than those prescribed above.

3.3.16 Emission Standards for Lime Kiln *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Source	Standards
Capacity: Upto 5 T/day – Stack Height	A hood should be provided with a stack of 30 metre height from ground level (including kiln height).
Above 5 T/day – Stack Height	$H=14Q^{0.3}$, where Q is the emission rate of SO_2 in kg/hr& H is stack height in metres.
More than 5 T/day and upto 40T/day – Particulate Matter	500 mg/Nm^3
Above 40 T/day – Particulate Matter	150 mg/Nm^3

3.3.17 Emission Limits for New Diesel Engines (from 1.4.2014) up to 800 KW for generator Sets (Gensets) Applications*(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Power Category	Emission Limits (g/kw-hr)			Smoke Limit (light absorption coefficient, m^{-1})
	NO_x + HC	CO	PM	
Upto 19 KW	≤7.5	≤3.5	≤0.3	≤0.7
More than 19KW upto 75 kW	≤4.7	≤3.5	≤0.3	≤0.7

More than 75 KW upto 800 KW	≤4.0	≤3.5	≤0.2	≤0.7

3.3.18 Emission Standards for Nitric Acid Plant *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Emission of Oxides of Nitrogen	3 Kg of oxides of nitrogen per tonne of weak acid (before concentration) produced

3.3.19 Emission Standards for Paint Industry *(Source: CPCB PCLS/02/2022-2023 Seventh Edition)*

S. No.	Industry	Parameter	Standards
1	2	3	4
[2][42.	**Paint Industry**	**A. Emission Standards**	
			Concentration not to exceed
		Particulate Matter (all process vents attached to pre-mixers and mixers	50 mg/Nm^3
		Note: - (i) All dust generating equipment or processes shall be provided with dust extraction arrangement. (ii) The bag houses, etc. shall be connected to chimneys or stacks of at least twelve metres height or at least two metres above the top most point of the building, shed or plant in the industry, which so ever is higher. (iii) The unit shall channelize shop floor or fugitive emissions through a stack of twelve metres height or at least two metres above the top most point of the building or shed or plant in the industry, which so ever is higher.	

3.3.20 Emission & Effluent Standards for Pesticide Manufacturing and Formulation Industry *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Parameter		Standard
A. Emission Standards		
		Limiting Concentration mg/Nm^3
HCl		20
Cl_2		5
H_2S		5
P_2O_5 as H_3PO_4		10
NH_3		30
Pesticides compounds in the form of particulate matter		20
CH_3Cl		20
HBr		5
B. Effluent Standards		
		Limiting concentration in mg/l, except for pH and Bioassay test
(i) Compulsory Parameters		
pH		6.5-8.5
BOD, 3 days,	Formulation unit	30

27°C	Technical grade unit	100
Oil and Grease		10
Suspended Solids		100
Bioassay Test		90 percent survival of fish after 96 hours in 100% effluent*
(ii) Additional Parameters		
Arsenic (as As)		0.2
Copper		1.0
Manganese		1.0
Mercury		0.01
Antimony (as Sb)		0.1
Zinc		1.0
Nickel, etc (heavy metals individually)		Shall not exceed individually 5 times the drinking water standards as per Bureau of Indian Standards
Cyanide (as CN)		0.2
Nitrate (as NO_3)		50
Phosphate (as P)		5.0
Phenol & Phenolic Compounds as C_6H_5OH		1.0
Sulphur		0.03
Benzene Hexachloride (BHC)		0.01
Carbonyl		0.01
Copper Sulphate		0.05
Copper Oxychloride		9.6
DDT		0.01
Dimethoate		0.45
2,4D		0.4
Endosulfan		0.01
Fenitothrion		0.01
Malathion		0.01
Methyl Parathion		0.01
Paraquat		2.3
Phenathoate		0.01
Phorate		0.01
Proponil		7.3
Pyrethrums		0.01
Ziram		1.0
Other Pesticide (individually)		0.10

* Bioassay Test shall be carried out as per IS: 6582-1971.

Note:

1. The concerned State Pollution Control Board / Pollution Control Committee shall prescribe limits of Total Dissolved Solids (TDS), Sulphates and Chlorides depending on the usages of recipient water body in downstream, in which effluent shall be disposed off.

2. No limit for Chemical Oxygen Demand (COD) is prescribed but, COD in the treated effluent shall be monitored. If COD is persistently reported more than 250 mg/l, the industrial units discharging such an effluent shall be required to identify chemicals causing the same. In case, these are found to be toxic, as defined in Schedule I of the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, the concerned State Pollution Control Board / Pollution Control Committee in such cases shall direct the

industries to install tertiary treatment system by 31st March, 2012. 3. Parameters listed as "Additional Parameters" shall be prescribed depending upon the process and product, on a case to case basis.
E. Storm Water
Note: (i) Storm water shall not be allowed to mix with scrubber water and / or floor washings. (ii) Storm water shall be channelized through separate drains passing through a HDPE lined pit having holding capacity of 10 minutes (hourly average) of rainfall.

3.3.21 Emission Standards for Stone Crushing Unit *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Parameter	Standards
Suspended Particulate Matter	The suspended particulate matter measured between 3 metres and 10 metres from any process equipment of a stone crushing unit shall not exceed 600 micrograms per cubic metre.

3.3.22 Emission Standards for Sulphuric Acid Plant – (Source: CPCB PCLS/02/2021-2022 Seventh Edition)

Parameter	Plant Capacity for 100% concentration of acid produced (tones/day)	Existing unit	New Unit
Sulphur dioxide (SO_2)	Up to 300	1370 mg/Nm^3	1250 mg/Nm^3
	Above 300	1250 mg/Nm^3	950 mg/Nm^3
Acid Mist / Sulphur Trioxide	Up to 300	90 mg/Nm^3	70 mg/Nm^3
	Above 300	70 mg/Nm^3	50 mg/Nm^3

Note:

(i). Scrubbing units shall have on-line pH meters with auto recording facility

(ii). The height of the stack emitting sulphur-dioxide or acid mist shall be of minimum of 30 metre or as per the formula $H=14Q^{0.3}$ (whichever is more). Where 'H' is the height of the stack in metre; and 'Q' is the maximum quantity of SO_2 expected to be emitted through the stack at 110% rated capacity of the pants and calculated as per the norms of gaseous emission.

(iii). Plants having more than one stream or unit of sulfuric acid at one location, the combined capacity of all the streams and units shall be taken into consideration for determining the stack height and applicability of emission standards.

(iv). Plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be equal to main stack.

3.3.23 Emission Standards for Thermal Power Plants *(Source: MoEF&CC Notification S.O. 3305 (E) dated 7.12.2015)*

Sr. No.	Industry	Parameter	Standards
25	**Thermal Power Plant**	**TPPs (units) installed before 31st December, 2003***	
		Particulate Matter	100 mg/Nm^3
		Sulphur Dioxide (SO_2)	600 mg/Nm^3 (Units Smaller

			than 500MW capacity units) 200 mg/Nm^3 (for units having capacity of 500MW and above)
		Oxides of Nitrogen (NO_x)	600 mg/Nm^3
		Mercury (Hg)	0.03 mg/Nm^3(for units having capacity of 500MW and above)
		TPPs (units) installed after 1st January,2003, upto 31st December, 2016*	
		Particulate Matter	50 mg/Nm^3
		Sulphur Dioxide (SO_2)	600 mg/Nm3 (Units Smaller than 500MW capacity units) 200 mg/Nm^3 (for units having capacity of 500MW and above)
		Oxides of Nitrogen (NO_x)	300 mg/Nm^3
		Mercury (Hg)	0.03 mg/Nm^3
		TPPs (units) to be installed from 1st January, 2017**	
		Particulate Matter	30 mg/Nm^3
		Sulphur Dioxide (SO2)	100 mg/Nm^3
		Oxides of Nitrogen (NO_x)	100 mg/Nm^3
		Mercury (Hg)	0.03 mg/Nm^3

*TPPs (units) shall meet the limits within two years from date of publication of this notification.

**Includes all the TPPs (units) which have been accorded environmental clearance and are under construction"

3.3.24 Load/Mass Based Emission Standards *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

S. No.	Industry	Parameter	Standard		
1	Fertiliser (Urea)				
	Commissioned Prior to 1.1.82	Particulate Matter (PM)	2 kg/tonne of product		
	Commissioned after 1.1.82	Particulate Matter (PM)	0.5 kg/tonne of product		
2	Copper, Lead or Zinc Smelting Plant	Sulphur Dioxide (SO2)	Quantum Limit in kg/tonne		
			Plant capacity for 100% concentration of Sulphuric Acid (tonne/day)	Existing Unit	New Unit
			Upto 300	2.5	2.0
			Above 100	2.0	1.5].
3	Nitric Acid	Oxides of Nitrogen	3 kg/tonne of weak acid (before concentration) produced		

4	Sulphuric Acid Plant	Sulphur Dioxide(SO2)	Quantum Limit in kg/tonne		
			Plant capacity for 100% concentrationof Sulphuric Acid (tonne/day)	Existing Unit	New Unit
			Up to 300	2.5	2.0
			Above 100	2.0	1.5]
5	Integrated Iron and SteelPlant	Carbon Monoxide in coke oven	3 Kg/tonne of coke produced		
		Particulate matterduring coke pushing in coke oven	5 gramme/tonne of coke produced		
		Particulate matterfor quenching operation in CokeOven	50 gramme/tonne of coke produced.]		
6	Petroleum Oil Refinery (Sulphur Recovery)	Sulphur Dioxide	Installed Capacity of SRU* (tonne/day)	kg/tonne of Sulphur inthe feed to SRU	
				Existing SRU	New SRU
			Above 20	26	10
			5 to 20	80	40
			Upto 5	120	80
	* SRU – Sulphur Recovery Unit				
7	Aluminium Plants				
	(i) Anode Bake Oven	Total Fluoride	0.3 kg/MT of Aluminium		
	(ii) Pot room				
	(a) VSS	-do-	4.7 kg/MT of Aluminium		
	(b) HSS	-do-	6 kg/MT of Aluminium		
	(c) PBSW	-do-	2.5 kg/MT of Aluminium		
	(d) PBCW	-do-	1.0 kg/MT of Aluminium		
	Note: VSS - Vertical Stud Soderberg, HSS - Horizontal Stud Soderberg PBSW - Pre Backed Side Work, PBCW - Pre Backed Centre Work				
8	Glass Industry:				
	(a) Furnace Capacity				
	(i) Up in the product draw capacity of 60 MTD/Day	Particulate matter	2 kg/hr ca		
	(ii) Product draw capacity more than60 MT/Day	-do-	0.8 kg/MT of Product drawn		
9	Petrochemicals (Basic and Intermediates)		Source	Quantum limit ingm/hour for New /Expansion Plants(gm/hr)	

		Organic Particulate	Phthalic anhydride (PA), Maleic anhydride (MA), Toluene Di-isocyanate (TDI) plants - process emission	100
		VOC-HAPs (TDI +MDI)	(Toluene Di-isocyate) TDI, Methylenediphenyl Di-isocyante (MDI) Plants - Process emission	0.5
		VOC-HAPs (Benzene + Butadiene)	Benzene, Butadiene Plants - Process emission	25.0
		VOC-HAPs (EO, VCM, EDC, ACN + PO)	EO, VCM, EDC, ACN, PO Plants - Process emission	50.0
Abbreviations: EG - Ethylene Glycol, PG - Propylene Glycol, EO - Ethylene Oxide, VCM – Vinyl Chloride Monomer, EDC - Ethylene Di Chloride, ACN - Acrylonitrile, PO - Propylene Oxide, HCN Hydrogen Cyanide."				
10	Cement Plants (without coprocessing)	Rotary kiln based plants (Particulate Matter from raw mill, kiln and pre- calciner system put together).	0.125 kg/ tonne of clinker (with effect from 01.01.2017)	
		Vertical shaft kiln based plants (Particulate Matter from raw mill and kiln put together)	0.50 kg/ tonne of clinker (with effect from01.01.2017).]	
10 A	Cement Plants (with co-processing)	Rotary kiln based plants (Particulate Matter from raw mill, kiln and pre-calciner system put together).	0.125 kg/ tonne of clinker.]	
11	Manmade Fibre	A. Emission Standards		
	(a) Viscous Staple Fibre (VSF)	Carbon Disulphide	95 kg/tonne of VSF	
		Hydrogen Sulphide	30 kg/tonne of VSF	
	(b) Viscous Filament Yarn (VFY)	Carbon Disulphide	200 kg/tonne of VFY	
		Hydrogen Sulphide	30 kg/tonne of VFY	
	(c) Rayon, Polyester and Nylon fabric (Dipping process Plant only)	Ammonia	0.3 kg/tonne of dipped Fabric].	

3.4 OTHER STANDARDS PRESCRIBED UNDER THE ENVIRONMENT (PROTECTION) RULES, 1986

3.4.1 Effluent Standards for Thermal Power Plants *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Sl.No	Industry	Parameter	Standards
5.	Thermal power plants		
	Condensor cooling water (Once through cooling system)	pH	6.5 - 8.5
		Temperature	Not more than 5°C higher than the intake water temperature
		Free available chlorine	0.5 mg/L
	Boiler blow downs	Suspended solids	100 mg/L
		Oil and grease	20 mg/L
		Copper (total)	1.0 mg/L
		Iron (total)	1.0 mg/L
	Cooling-tower blow down	Free available chlorine	0.5 mg/L
		Zinc	1.0 mg/L
		Chromium (total)	0.2 mg/L
		Phosphate	5.0 mg/L
		Other corrosion inhibiting material	Limit to be established on case by case basis by Central Boardincase of Union territories and State Boards in case of States
	Ash-pond effluent	pH	6.5 - 8.5
		Suspended solids	100 mg/L
		Oil and grease	20 mg/L
5A.	Thermal Power Plant (Water consumption limit)	Water consumption	I. All plants with Once Through Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption upto maximum of 3.5m^3/MWh within a period of two years from the date of publication of this notification. II. All existing CT-based plants reduce specific water consumption upto maximum of 3.5m^3/MWh within a period of two years from the date of publication of this notification. III. Specific water consumption shall not exceed maximum of 3.0 m3/MWh for new plants installed after the 1st January, 2017 and these plants shall also achieve zero waste water discharged.

3.4.2 Noise Standards for Fire-Crackers (Source: CPCB PCLS/02/2012-2022 Seventh Edition)

A (i) The manufacture, sale of fire-crackers generating noise level exceeding 125 dB(A1) of 145 dB(C) at 4 metres distance from the point of bursting shall be prohibited.

(ii) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5\log_{10}$ (N) dB, where N = number of crackers joined together.

B The broad requirement for measurement of noise from fire-crackers shall be-

(i) The measurements shall be made on hard concrete surface of minimum 5 metre diameter or equivalent.

(ii) The measurements shall be made in free field conditions i.e., there shall not be any reflecting surface upto 15 metres distance from the point of bursting.

(iii) The measurement shall be made with an approved sound level metre.

C The Petroleum and Explosives Safety Organization shall ensure implementation of these standards.

D The fire-crackers for the purpose of export shall be exempted from the sub-paragraphs A, B and C above subject to the compliance of the following conditions, namely: -

paragraphs A, B and C above subject to the compliance of the following conditions, namely: -

(i). the manufacturer shall have an export order;

(ii). the fire crackers shall conform to the level prescribed in the country to which it is exported;

(iii). they shall have a different packing colour code, and

(iv). there shall be a declaration on the box "not for sale in India" or "only for export in other countries"

Note: dB(A1): A-weighted impulse sound pressure level in decibel.
$dB(C)_{pk}$: C – weighted peak sound pressure level in decibel.

3.4.3 Noise Limit for Generator Sets run with Diesel *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

1. Noise Limit for diesel generator sets (up to 1000 KVA) manufactured on or after the 1st January, 2005: 75 dB(A) at 1 metre from the enclosure surface.

3.4.4 Ambient Air Quality Standards with respect to Noise in Airport Noise Zone*(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Sl. No	Industry	Parameters	Standards	
1	2	3	4	
		Ambient Air Quality Standards with respect to Noise in Airport Noise Zone		
112	Airports	Type of Airports	Limits in dB (A) Leq*	
			Day Time	Night Time
		Busy Airports	70	65

		All other Airports excluding proposed airports	65	60

Definitions:

(a) *dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A day time from 6.00 a.m. to 10.00 p.m. and night time from 10.00 p.m. to 6.00 a.m. are considered for time weighted average.

3.4.5 Stack Height / Limit for Thermal Power Plants in metres *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Power Generation Capacity	Stack Height in metres
500 MW and above	275
200 MW / 210 MW and above to less than 500 MW	220
Less than 200 MW/210 MW	$H=14Q^{0.3}$ where Q is emission rate of SO_2 in kg/hr and H Stack height in metres.
Steam generation capacity	
Less than 2 ton/hr	$\frac{1}{2}$ times the neighbouring building height or 9 metres (whichever is more)
More than 2 ton/hr to 5 ton/hr	12
More than 5 ton/hr to 10 ton/hr	15
More than 10 ton/hr	18
More than 15 ton/hr to 20 ton/hr	21
More than 20 to/hr to 25 ton/hr	24
More than 25 ton/hr to 30 ton/hr	27
More than 30 ton/hr	30 or using formula $H=14Q^{0.3}$ (whichever is more) Q is emission rate of SO_2 in kg/hr and H is Stack height in metres.

3.4.6 Temperature Limit For Discharge Of Condenser Cooling Water From Thermal Power Plants *(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

A. New Thermal Power Plants commissioned after June 1, 1999.
New thermal power plants, which will be using water from river/ lakes/reservoirs shall install cooling towers-irrespective location and capacity. Thermal power plants which will use sea water for cooling purposes, the condition below will apply,

B. New projects in coastal areas using sea water.- The Thermal power plants using sea water should adopt suitable system to reduce water temperature at the final discharge point so that the resultant rise in the temperature of receiving water does not exceed $7^{o}C$ over and above the ambient temperature of the receiving water bodies.

C. Existing thermal power plants.- Rise in temperature of condenser cooling water from inlet to the outlet of condenser shall not be more than $10^{o}C$.

D. Guidelines for discharge point
   1. The discharge point shall preferably be located at the bottom of the water body at mid-stream for proper dispersion of thermal discharge.

2. In case of discharge of cooling water into sea, proper marine outfall shall be designed to achieve the prescribed standards. The point of discharge may be selected in consultation with concerned State Authorities / NOI.
3. No cooling water discharge shall be permitted in estuaries or near ecologically sensitive areas such as mangroves, coral reefs / spawning and breeding grounds of aquatic flora and fauna.

3.5 WASTE WATER GENERATION STANDARDS (Source: CPCB/PCLS /02/2021-2022 Seventh Edition)

Sl.No	Industry		Quantum
1.	Integrated Iron & Steel		16 m^3/tonne of finished steel
2.	Sugar		0.4 m^3/tonne of cane crushed
3.	Pulp & Paper Industries		
	(a)	Larger Pulp & Paper	
		(i) Pulp & Paper	175 m^3/tonne of paper produced
		(ii) Viscose Staple Fibre	150 m^3/tonne of product
		(iii) Viscose Filament Yarn	500 m^3/tonne of product
	(b)	Small Pulp & Paper	
		(i) Agro residue based	150 m^3/tonne of paper produced
		(ii) Waste paper based	50 m^3/tonne of paper produced
4.	Fermentation Industries		
	(a)	Maltry	3.5 m^3/tonne of grain produced
	(b)	Brewery	0.25 m^3/KL of beer produced
	(c)	Distillery	12 m^3/KL of alcohol produced
5.	Caustic Soda		
	(a)	Membrane Cell process	1 m^3/tonne of caustic soda produced excluding cooling tower blow down
	(b)	Mercury cell process	4 m^3/tonne of caustic soda produced (mercury bearing) 10% blow down permitted for cooling tower
6.	Man Made Fibre		
	(a)	Viscous Staple Fibre (VSF) Plant	75 m^3/tonne of fibre
	(b)	Viscous Filament Yarn (VFY) Plant	150 m^3/tonne of fibre
	(c)	Nylon Polyester	10 m^3/tonne of fibre
	(d)	Acrylic (i) Wet Process (ii) Dry Process	 25m^3/tonne of fibre 10m^3/tonne of fibre
7.	Tanneries		28 m^3/tonne of raw hide
8.	Starch, Glucose and related products		8 m^3/tonne of maize crushed
9.	Dairy		3 m^3/KL of milk
10.	Natural rubber processing industry		4 m^3/tonne of rubber

11.	Fertilizer		
	(a)	Naphtha, Natural Gas & Mixed Feedstock (Naphtha + Natural Gas) Based (Straight Nitrogenous Fertilizer)	3m^3/tonne of urea or equivalent produced
	(b)	Straight phosphatic fertilizer (Single Super Phosphate SSP & Triple Suer Phosphate TSP) excluding manufacture of any acid	0.4 m^3/tonne of SSP or TSP
	(c)	Complex fertilizer	Standards of nitrogenous and phosphoric fertilizers are applicable depending on the primary product

[Note: In the above sections only selected industrial sector standards are given. For complete details refer the Environment (Protection) Rules, 1986 as amended, CPCB PCLS/02/2021-2022 Seventh Edition]

3.6 ENVIRONMENTAL STATEMENT *(Substituted by G.S.R. 386 (E) dated 22.4.1993 with effect from 1993)*

FORM V

(See rule 14 of Environment (Protection) Rules, 1986)

Environmental statement for the financial year ending the 31st March ……..

PART - A

(i) Name and Address of the owner/occupier of the industry operation or process

(ii) Industry category Primary – (STC Code) Secondary – (SIC Code)

(iii) Production capacity – Units ……

(iv) Year of Establishment

(v) Date of last environmental statement submitted

PART – B

Water and Raw Material Consumption

(i) Water consumption m^3/day

Process ……

Cooling ……

Domestic …..

Name of Products	**Process water consumption per unit of product output**	
	During the previous financial year	**During the current financial year**
	(1)	(2)
(1)		
(2)		
(3)		

(ii) Raw material consumption

*Name of raw materials	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year

* Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART – C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

(1) Pollutants	Quality of Pollutants discharged (mass/day)	Concentrations of pollutants discharges (Mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water			
(b) Air			

PART – D

Hazardous Wastes

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

Hazardous Wastes	Total Quantity (Kg.)	
	During the previous financial year	During the current financial year
(a) From Process		
(b) From pollution control facilities		

PART – E

Solid Wastes

Solid Wastes	Total Quantity	
	During the previous financial year	During the current financial year
(a) From process		
(b) From pollution control facilities		
(c) (1) Quantity recycled or re-utilized within the unit (2) Sold (3) Disposed		

PART – F

Please specify the characteristics (in terms of consumption of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production

PART – H

Additional measures/investment proposal for environmental protection including abetment of pollution prevention of pollution

PART – I

Any other particulars for improving the quality of the environment

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3.7 DELEGATION OF POWERS TO THE STATE GOVERNMENTS/STATE POLLUTION CONTROL BOARDS UNDER SECTION 5 OF THE ENVIRONMENT (PROTECTION) ACT, 1986 *(Source: CPCB PCLS/02/2010 Sixth Edition)*

3.7.1 Delegation Powers to the State Government under Environment (Protection) Act, 1986. (Source: MoEF Notification S.O. 152 (E) Dated 10.2.1988)
In exercise of the powers conferred by Section 23 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government delegated the powers vested in it under Section 5 of the said Act to the State Governments (including Tamil Nadu State) subject to the conditions that the Central Government may revoke such delegation of powers in respect of all or any one or more of the State Governments or may itself invoke the provisions of Section 5 of the said Act, if in the opinion of the Central Government such a course of action is necessary in the public interests.

3.7.2 Delegation Powers to the Chairman, State Pollution Control Boards under Environment (Protection) Act, 1986. MoEF Notification S.O.23 (E) Dated 8.1.1997(Source: CPCB PCLS/02/2010 Sixth Edition)

In exercise of the powers conferred by Section 23 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government delegated the powers vested in it under Section 5 of the said Act to the Chairman, State Pollution Control Boards / Committees (including TNPCB) to issue directions to any industry or any local or other authority for the violations of the standards and rules relating to **Hazardous Wastes** notified under the Environment (Protection) Act, 1986, subject to the conditions that the Central Government may revoke such delegation of powers or may itself invoke the provisions of Section 5 of the said Act, if in the opinion of the Central Government such a course of action is necessary in the public interests.

MoEF Notification S.O. 327 (E) Dated 10.4.2001

In exercise of the powers conferred by Section 23 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government delegated the powers vested in it under Section 5 of the said Act to the Chairman, State Pollution Control Boards / Committees (including TNPCB) to issue directions to any industry or any local or other authority for the violations of the standards and rules relating to **Bio Medical Waste, Hazardous Chemicals, Industrial Solid Waste and Municipal Solid Waste including Plastic Waste** notified under the Environment (Protection) Act, 1986,

subject to the conditions that the Central Government may revoke such delegation of powers or may itself invoke the provisions of Section 5 of the said Act, if in the opinion of the Central Government such a course of action is necessary in the public interests.

CHAPTER 4

PROCESS RELATED NOTIFICATIONS

4.1 THE MANUFACTURE, STORAGE AND IMPORT OF HAZARDOUS CHEMICAL RULES, 1989 *MoEF Notification S.O. 966(E) Dated 27.11.1989 (Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Salient Features

Rules	
Rule 2	**Definitions.-** (e) "hazardous chemical" means- (i) any chemical which satisfies any of the criteria laid down in Part I of Schedule I or is listed in Column 2 of Part II of this Schedule; (ii)any chemical listed in Column 2 of Schedule 2; (iii) any chemical listed in Column 2 of Schedule 3; (h) "industrial activity" means- (i) an operation of process carried out in an industrial installation referred to in Schedule 4 involving or likely to involve one or more hazardous chemicals and includes on-site storage or on-site transport which is associated with that operation or process, as the case may be; or (ii) isolated storage; or (iii) pipeline; (i) "isolated storage" means storage of a hazardous chemical, other than storage associated with an installation on the same site specified in Schedule 4 where that storage involves atleast the quantities of that chemical set out in Schedule 2
Rule 3	**Duties of authorities**
Rule 4	**General responsibility of the occupier during industrial activity.-** (1) This rule shall apply to,- (a). an industrial activity in which a hazardous chemical, which satisfies any of the criteria laid down in Part I of Schedule or listed in Column 2 of Part II of this Schedule is or may be involved; and (b). isolated storage of a hazardous chemicals listed in Schedule 2 in a quantity equal to or more than the threshold quantity specified in Column 3, thereof (2) An occupier who has control of an industrial activity in term of sub-rule (1) shall provide evidence to show that he has,- (a) identified the major accident hazards; and (b) taken adequate steps to - (i) prevent such major accidents and to limit their consequences to persons and the environment; (ii) provide to the persons working on the site with the information,

	training and equipment including antidotes necessary to ensure their safely.
Rule 5	Notification of Major accident. (1) Where a major accident occurs on a site, the occupier shall within 48 hours notify the concerned authority as identified in Schedule 5 of that accident, and furnish thereafter to the concerned authority a report relating to the accidents in instalments, if necessary, in Schedule 6.
Rule 6	Industrial activity to which rules 7 to 15 apply.
Rule 7	Approval and Notification of sites.
Rule 8	Updating of the site notification following changes in the threshold quantity.
Rule 9	Transitional provisions.
Rule 10	Safety reports and Safety Audit Reports.
Rule 11	Updating of reports under rule 10.
Rule 12	Requirements for further information to be sent to the authority
Rule 13	Preparation of on-site emergency plan by the occupier.
Rule 14	Preparation of off-site emergency plan by the authority
Rule 15	Information to be given to persons liable to be affected by a major accident
Rule 16	Disclosures of information
Rule 17	Collection, Development and Dissemination of Information.
Rule 18	Import of hazardous chemicals
Rule 19	Improvement notices
Rule 20	Power of the Central Government to modify the Schedule.
Schedules	
Schedule 1	Part –I Toxic Chemicals: Part-II List of Hazardous chemicals
Schedule 2	Isolated storage at Installations other than those covered by schedule 4
Schedule 3	List of Hazardous Chemicals for Application of Rules 5 and 7 to 15 Part - I Named Chemicals Part – II Classes of Substances as defined in Part-I, Schedule-I and not specifically named in Part-I of this schedule
Schedule 4	List of Hazardous Chemicals Installation
Schedule 5	Authorities and their duties and corresponding Rules
Schedule 6	Information to be furnished regarding notification of a major accident
Schedule 7	Information to be furnished for the notification of sites
Schedule 8	Information to be furnished in a safety report
Schedule 9	Safety Data Sheet
Schedule 10	Format for maintaining records of hazardous chemicals imported
Schedule 11	Details to be furnished in the on-site emergency plan
Schedule 12	Details to be furnished in the off-site emergency plan

4.2 THE MANUFACTURE, USE, IMPORT, EXPORT AND STORAGE OF HAZARDOUS MICROORGANISMS GENETICALLY ENGINEERED ORGANISMS OR CELLS RULES, 1989, *MoEF, Notification No. G.S.R. 1037 (E) Dated 5.12.1989. (Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Salient Features

Rules	
Rule 7	**Approval and Prohibitions.-** 1) No person shall import, export, transport, manufacture, process, use or sell any hazardous microorganisms of genetically engineered organisms / substances or cells except with the approval of the Genetic Engineering Approval Committee. 2) Use of pathogenic microorganisms or any genetically engineered organisms or cells for the purpose of research shall only be allowed in laboratories or inside laboratory area notified by the Ministry of Environment and Forests for this purpose under the Environment (Protection) Act, 1986. 3) The Genetic Engineering Approval Committee shall give directions to the occupier to determine or take measures concerning the discharge of microorganisms / genetically engineered organisms or cells mentioned in the Schedule from the laboratories, hospitals and other areas including prohibition of such discharges and laying down measures to be prevent such discharges. 4) Any person operating or using genetically engineered organisms / microorganisms mentioned in the schedule for scale up or pilot operations shall have to obtain license issued by the Genetic Engineering Approval Committee for any such activity. The processor shall have to apply for license in prescribed *proforma*. 5) Certain experiments for the purpose of education within the field of gene technology or microorganisms may be carried out outside the laboratories and laboratory areas mentioned in sub-rule (2) and will be looked after by the Institutional Bio-safety Committee.
Rule 8	**Production** Production in which genetically engineered organisms or cells or microorganisms are generated or used shall not be commenced except with the consent of Genetic Engineering Approval Committee with respect of discharge of genetically engineered organisms or cells into the environment. This shall also apply to production taking plane in connection with development, testing and experiments where such production, etc., is not subject to rule 7.

4.3 BATTERY WASTE MANAGEMENT RULES, 2022

[MoEF&CC notification S.O. 3984(E) – dated: 22.08.2022 and amended vide S.O.4669 (E), dated: 25.10.2023– This notification has been brought out in supersession of the Batteries (Management & Handling) Rules, 2001 as amended]

Salient Features

Rules	
Rule 2	**Application:** (1) These rules shall apply to (i). Producer, dealer, consumer, entities involved in collection, segregation, transportation, re-furbishment and recycling of Waste Battery (ii). All types of batteries regardless of chemistry, shape, volume, weight, material composition and use. (2) These rules do not apply to Battery used in (i). Equipment connected with the protection of the essential security Interests including arms, ammunitions, war material and those intended specifically for military purposes. (ii). Equipment designed to be sent into space.
Rule 3	**Definitions** **(b)'Automotive battery'** means any Battery used only for automotive starter, lighting or ignition power; **(c)'Battery'** means new or refurbished cell or Battery including accumulator, which is any source of electrical energy generated by direct conversion of chemical energy and includes disposable primary or secondary battery; **(h)'consumer'** means end user of Battery; **(j)'Electric vehicle battery'** means any Battery specifically designed to provide traction to hybrid and electric vehicles for road transport; **(l)'Environmentally sound management'** means management of Waste Battery in a manner to protect human health and environment against any adverse effects, which may result from any substance contained in Waste Battery. These may include refurbishment, and/or recycling; **(m)'Extended Producer Responsibility'** means responsibility of any Producer of Battery for Environmentally sound management of Waste Battery; **(r)'Industrial battery'** means any Battery designed for industrial uses, excluding Portable battery, Electric vehicle battery and Automotive battery. These may include sealed Battery (excluding potable battery); unsealed Battery (excluding automotive Battery) and energy storage system Battery; **(s)'Manufacturer'** means a person or an entity or a company as defined in the Companies Act, 2013 (18 of 2013) or a factory as in the Factories Act, 1948 (63 of 1948) which has facilities for manufacturing of Battery and/or its components; **(t)'Portable battery'** means Battery that is sealed, less than five kilograms, not made for industrial purposes, electric vehicle or to be used as an Automotive Battery;

	(u)'Producer' means an entity who engages in: (i) Manufacture and sale of Battery including refurbished Battery, including in equipment, under its own brand; or (ii) Sale of Battery including refurbished Battery, including in equipment, under its own brand produced by other manufacturers or suppliers; or (iii) Import of Battery or equipment containing Battery; or (iv) Manufacture or assembling of Battery or refurbished Battery including in equipment for sale to the Producer mentioned in sub-clause (ii) without its own brand name;" **(v) 'Public Waste Management Authorities** 'for the purpose of these rules means Village Panchayat, Municipal Corporation, Municipality and agencies engaged on their behalf. **(w)'Recycler'** means entity engaged in recycling of Waste Battery; **(x)'Refurbishment'** means repairing, re-conditioning, re-purposing of used Battery for its second life; **(y)'Refurbisher'** means entity engaged in refurbishment; **(zd)'Used battery'** means Battery and/or its components which have been used and have residual life and suitable for refurbishment; **(ze)Waste Battery'** includes: • Used and/or End of Life Battery and/or its components or spares or parts or consumables which may or may not be hazardous in nature; • Pre-consumer Off-Spec Battery and its components or spares or parts or consumables; • Battery whose date for appropriate use has expired; • Battery which have been discarded by the user.
Rule 4	**Functions of Producer. –** (1) Producer shall have the obligation of Extended Producer Responsibility for the Battery that they introduce in the market to ensure the attainment of the recycling or refurbishing obligations. (2) Producer shall meet the collection and recycling and/or refurbishment targets as mentioned in Schedule II for Battery made available in the market. (3) Waste Battery collected by the Producer shall be sent for recycling or refurbishing and shall not be sent for landfilling or incineration. (4) The person or an entity involved in manufacturing of Battery shall have to register through the online centralised portal as Producer in Form 1(A). The certificate of registration shall be issued in Form 1(B). (5) Producer shall file for renewal of registration in Form 1(A) before sixty days of its expiry. (6) Producer shall inform the Central Pollution Control Board of any changes to the information contained in the Extended Producer Responsibility Registration and of any permanent cessation as

	regards to the making available on the market of the Battery referred to in the Extended Producer Responsibility Registration. (7) Producer shall provide Extended Producer Responsibility plan in the Form 1(C) to Central Pollution Control Board by 30th June of every year for the Battery manufactured in the preceding financial year. It shall contain information on the quantity, weight of Battery along with the dry weight of Battery materials through the centralised portal. (8) Producer shall submit an Extended Producer Responsibility Plan in Form 1(C) to Central Pollution Control Board for the Battery manufactured in FY 2022-23 within three months of the publication of these rules. (9) In order to develop a separate waste stream for collection of Waste Battery for fulfilling Extended Producer Responsibility obligations, the Producer, may operate schemes such as deposit refund system or buy back or any other model. (10) In order to meet the obligations of Extended Producer Responsibility, the Producer may engage itself or authorise any other entity for collection, recycling or refurbishment of Waste Battery. However, the obligations of meeting the Extended Producer Responsibility targets shall remain with the Producer. (11) Producer shall file annual returns in Form 3 regarding the Waste Battery collected and recycled or refurbished towards fulfilling obligations under Extended Producer Responsibility with the Central Pollution Control Board and concerned State Pollution Control Board in Form 3 by 30th June of the next financial year. The details of the registered recyclers from whom the Extended Producer Responsibility certificates have been procured shall also be provided. (12) It shall be the responsibility of a Producer to, – (i) adhere to prohibitions and labelling requirements as prescribed in Schedule I; (ii) ensure safe handling of Battery or Waste Battery such that no damage to human health and environment occurs. (13) Producer shall bring to the notice of the Central Pollution Control Board or State Pollution Control Board of violations of these rules by any entity involved in handling and management of Waste Battery. (14) Producer shall have the obligation with respect to the minimum use of domestically recycled materials in new Battery as per the Table below. The assessment of the minimum use of the recycled materials in Battery shall be in respect of the total dry weight of Battery. In case of imported Battery, the Producer shall have to meet the obligation of the minimum use by way of getting such quantity of recycled materials utilised by other businesses or by way of exporting such quantity of recycled materials. (Contd..
Rule 5	**Functions of Consumer.** (1) It will be the responsibility of consumer, - (i) to discard Waste Battery separately from other waste streams

	especially from mixed waste, domestic waste streams; (ii) to ensure that Waste Battery are disposed off in an environment friendly manner by giving it to an entity engaged in collection or refurbishment or recycling;
Rule 6	**Functions of Public Waste Management Authorities.** (1) Public Waste Management Authorities will hand over collected Waste Battery to the producers or agencies acting on their behalf or the entity engaged in refurbishment or recycling with a view to refurbishment or recycling of those Waste Battery or carry out their recycling or refurbishment themselves.
Rule 7	**Functions of entity involved in collection, segregation and treatment.** (1) It shall be the responsibility of entities involved in collection, segregation and treatment to hand over Waste Battery to registered refurbisher or recycler; (2) It shall be the responsibility of the entity to, – (i) ensure that a facility is in accordance with the standards or guidelines prescribed by the Central Pollution Control Board; (ii) carry out any activity in accordance with the guidelines prescribed by Central Pollution Control Board.
Rule 8	**Functions of Refurbisher.** – (1) All refurbishers shall register with State Pollution Control Board on the centralised portal. The certificate of registration shall be issued using the portal in Form 2(B). (2) It shall be the responsibility of the Refurbisher to, - (i) make an application in Form 2(A) to the State Pollution Control Board for grant of one-time registration; (ii) ensure that it carries out any activity in accordance with the guidelines prescribed by Central Pollution Control Board; (iii) ensure that hazardous waste generated from any activity of the entity is managed as per the provisions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016; (iv) ensure that other waste generated during handling and refurbishing activities be managed as per the extant regulations such as Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016; (v) ensure that refurbishment processes and facilities comply with the standards or guidelines prescribed by the Central Pollution Control Board; (vi) ensure that the Waste Battery is removed from collected appliance if Battery is incorporated in an equipment. (Contd…)
Rule 9	**Functions of Recycler**. (1) All recyclers shall register with the State Pollution Control Board through the online portal. The certificate of registration shall be issued in Form 2(B). (2) It shall be the responsibility of the recycler to, – (i) make an application in Form 2(A) to the State Pollution Control

	Board for grant of one-time registration; (ii) ensure that it carries out any activity in accordance with the guidelines prescribed by Central Pollution Control Board; (iii) ensure that hazardous waste generated from any activity of the entity is managed as per the provisions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016; (iv) ensure that other waste generated during handling and recycling activities be managed as per the extant regulations such as Solid Waste Management Rules, 2016, Plastic Waste Management Rules, 2016 and E- waste (Management) Rules, 2016; (v) ensure that recycling processes and facilities for Waste Battery comply with the standards or guidelines prescribed by Central Pollution Control Board; (vi) ensure that the Waste Battery is removed from collected appliance if Battery is incorporated in an equipment. Extended Producer Responsibility certificates purchased by the Producer will be automatically adjusted against their liability. (Contd…)
Rule 10	Provision of Certificate for Waste Battery
Rule 11	Functions of Central Pollution Control Board
Rule 12	Functions of State Pollution Control Board
Rule 13	Action on violations and imposition of Environmental Compensation
Rule 14	Centralised Online Portal
Rule 15	Committee for Implementation

Schedules and Forms	
Schedule I	Prohibitions and Labelling Requirements
Schedule II	Targets for Extended Producer Responsibility
Form 1(A)	Application to be submitted for grant of registration as a Producer
Form 1(B)	Format for grant of registration to Producers
Form 1(C)	Format for submission of retrun regarding battery placed in market by the Producer
Form 2(A)	Application to be submitted by recycler or refurbisher for grant of one time registration
Form 2(B)	Format for grant of registration to recycler or refurbisher by State Pollution Control Boards
Form 3	Annual returns to be submitted by Producer by 30th day of June of the following financial year
Form 4	Quarterly return to be submitted by recycler or refurbisher to State Pollution Control Boards by end of the month succeeding the end of the quarter

CHAPTER 5

WASTE MANAGEMENT NOTIFICATIONS

5.1 THE BIO-MEDICAL WASTE MANAGEMENT RULES, 2016 (as amended upto May 2019)

[MoEF Notification G.S.R.343(E)- Dated 28.3.2016, G.S.R 234 (E) dated 16.03.2018, G.S.R 129 (E) dated 19.2.2019 & G.S.R. 360 (E) dated 10.05.2019– This notification has been brought out in supersession of the Biomedical Waste (Management and Handling) Rules, 1998]

Salient Features

Rules	
Rule 2	**Application:** (a) These rules, of handle bio persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, ayush hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs
Rule 3	**Definitions:** (c) “authorisation" means permission granted by the prescribed authority for the generation, collection, reception, storage, transportation, treatment, processing, disposal or any other form of handling of bio-medical waste in accordance with these rules and guidelines issued by the Central Government or Central Pollution Control Board as the case may be; (f) "bio-medical waste" means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in Schedule I appended to these rules; (g) "bio-medical waste treatment and disposal facility" means any facility wherein treatment, disposal of bio-medical waste or processes incidental to such treatment and disposal is carried out, and includes common bio-medical waste treatment facilities; (j) “health care facility” means a place where diagnosis, treatment or immunization of human beings or animals is provided irrespective of type and size of health treatment system, and research activity pertaining thereto; (m) "occupier" means a person having administrative control over the institution and the premises veterinary institution, animal house, pathological laboratory, blood bank, health care facility and clinical establishment, irrespective of their system of medicine and by whatever

	name they are called;
Rule 4	**Duties of the Occupier:** **(1)** Make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I, to ensure that there shall be no secondary handling. pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in **Schedule 1:** (2) Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilisation on-site in the manner as prescribed by the World Health Organisation (WHO)guidelines on Safe management of wastes from health care activities and WHO Blue Book, 2014 and then sent to the Common bio-medical waste treatment facility for final disposal. (d) Phase out use of chlorinated plastic bags (excluding blood bags, urine bags, effluent bags, abdominal bags and chest drainage bags) and gloves by the 27th March, 2019; (j) Ensure segregation of liquid chemical waste at source and ensure pre- treatment or neutralisation prior to mixing with other effluent generated from health care facilities (n) In case of all bedded Health Care units, maintain and update on day to day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and colour coding as specified in **Schedule 1:** (p) All bedded health care facilities (any number of beds) shall make available the annual report on its web-site within a period of two years from the date of publication of the Bio-Medical Waste Management (Amendment) Rules, 2018;
Rule 5	**Duties of the operator of a common bio-medical waste treatment and disposal facility:** (a) Take all necessary steps to ensure that the bio-medical waste collected from occupier is transported, handled, stored, treated and disposed of, without any to the human health and the environment, in accordance with these guidelines issued by the Central Government or, as the case may be the effect pollution control board from time to time; (b) Ensure timely collection of bio-medical waste from the occupier as prescribed c these rules, (c) Establish bar coding and global positioning system for handling of

	bio-medic under waste within one year; (j) Maintain a log book for each of its treatment equipment according to weight batch; categories of waste treated: time, date and duration of treatment cycle and total hours of operation; (o) Common bio-medical waste treatment facility shall ensure collection of biomedical waste on holidays also;
Rule 6	**Duties of authorities**
Rule 7	**Treatment and disposal**
Rule 8	**Segregation, packaging, transportation and storage**
Rule 9	**Prescribed authority**
Rule 10	**Procedure for authorization:** Every occupier or operator handling bio-medical waste, irrespective of the quantity shall make an application in **Form II** to the prescribed authority i.e. State Pollution Control Board for grant of authorization and the prescribed authority shall grant the provisional authorization in **Form III** and the validity of such authorization for bedded health ca facility and operator of a common facility shall be synchronized with the validity of the consents and the authorization shall be one time for non-bedded HCFs.
Rule 11	Advisory Committee
Rule 12	Monitoring of implementation of the rules in health care facilities
Rule 13	Annual Report
Rule 14	Maintenance of records
Rule 15	Accident Reporting
Rule 16	Appeal
Rule 17	Site for common bio-medical waste treatment and disposal facility
Rule 18	Liability of the occupier, operator of a facility

Schedules	
Schedule I	Biomedical wastes categories and their segregation, collection, treatment, processing and disposal options
Schedule II	Standards for Treatment and Disposal of Bio-Medical Wastes
Schedule III	List of Prescribed Authorities and the Corresponding Duties
Schedule IV	Label for Bio-Medical Waste Containers or Bags

Forms	
Form I	Accident Reporting
Form II	Application for Authorisation or Renewal of Authorisation
Form III	Authorisation
Form IV	Annual Report by the occupier of HCF or CBWTF
Form IVA	Annual Report by SPCB to CPCB
Form V	Application for filing appeal against order passed by the prescribed authority

SCHEDULE I

[See rules 3 (e), 4(b), 7(1), 7(2), 7(5), 7(6) and 8 (2)]

PART 1

Biomedical wastes categories and their segregation, collection, treatment, processing and disposal options

Category	Type of Waste	Type of Bag or Container to be used	Treatment and Disposal options
(1)	(2)	(3)	(4)
Yellow	**(a) Human Anatomical Waste:** Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time).	Yellow coloured non-chlorinated plastic bags	Incineration or Plasma Pyrolysis or deep burial*
	(b)Animal Anatomical Waste : Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospitals or colleges or animal houses.		
	(c) Soiled Waste: Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components		Incineration or Plasma Pyrolysis or deep burial* In absence of above facilities, autoclaving or micro-waving /hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery
	(d) Expired or Discarded Medicines: Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.	Yellow coloured non-chlorinated plastic bags or containers	Expired `cytotoxic drugs and items contaminated with cytotoxic drugs to be returned back to the manufacturer or supplier for incineration at temperature >1200 ^{0}C or to common bio-medical waste treatment facility or hazardous waste treatment, storage and disposal facility for incineration at >1200^{0}C Or Encapsulation or

			Plasma Pyrolysis at >1200^{0}C. All other discarded medicines shall be either sent back to manufacturer or disposed by incineration.
	(e) Chemical Waste: Chemicals used in production of biological and used or discarded disinfectants.	Yellow coloured containers or non-chlorinated plastic bags	Disposed of by incineration or Plasma Pyrolysis or Encapsulation in hazardous waste treatment, storage and disposal facility.
	(f) Chemical Liquid Waste : Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids**,** liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.	Separate collection system leading to effluent treatment system	After resource recovery, the chemical liquid waste shall be pre-treated before mixing with other wastewater. The combined discharge shall conform to the discharge norms given in Schedule- III.
	(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid, routine mask and gown.	Non-chlorinated yellow plastic bags or suitable packing material	Non- chlorinated chemical disinfection followed by incineration or Plazma Pyrolysis or for energy recovery. In absence of above facilities, shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery or incineration or Plazma Pyrolysis.
	(h) Microbiology, Biotechnology and other clinical laboratory waste: Blood bags, Laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell cultures used in	Autoclave or Microwave or Hydroclave safe plastic bags or containers.	Pre-treat to sterilize with non-chlorinated chemicals on site as per World Health Organisation guidelines on Safe management of wastes from health care activities and WHO Blue Book, 2014 and thereafter sent for incineration.

	research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures.		
Red	**Contaminated Waste (Recyclable)** (a) Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and *fixed needle syringes*) and vaccutainers with their needles cut) and gloves.	Red coloured non-chlorinated plastic bags or containers	Autoclaving or micro-waving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent to registered or authorized recyclers or for energy recovery or plastics to diesel or fuel oil or for road making, whichever is possible. Plastic waste should not be sent to landfill sites.
White (Translucent)	**Waste sharps including Metals:** Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps	Puncture proof, Leak proof, tamper proof containers	Autoclaving or Dry Heat Sterilization followed by shredding or mutilation or encapsulation in metal container or cement concrete; combination of shredding cum autoclaving; and sent for final disposal to iron foundries (having consent to operate from the State Pollution Control Boards or Pollution Control Committees) or sanitary landfill or designated concrete waste sharp pit.
Blue	**(a) Glassware:** Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Puncture proof and leak proof boxes or containers with blue colored marking.	Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydroclaving and then sent for recycling.
	(b) Metallic Body Implants	Puncture proof and leak proof boxes or containers with blue colored marking.	

*Disposal by deep burial is permitted only in rural or remote areas where there is no access to common bio- medical waste treatment facility. This will be carried out with prior approval from the prescribed authority and as per the Standards specified in 3[Schedule-II]. The deep burial facility shall be located as per the provisions and guidelines issued by Central Pollution Control Board from time to time.

Part-2

(1) All plastic bags shall be as per BIS standards as and when published, till then the prevailing Plastic Waste Management Rules shall be applicable.

(2) Chemical treatment using at least 1[1% to 2%] Sodium Hypochlorite having 30% residual chlorine for twenty minutes or any other equivalent chemical reagent that should demonstrate Log104 reduction efficiency for microorganisms as given in Schedule-III.

(3) Mutilation or shredding must be to an extent to prevent unauthorized reuse.

(4) There will be no chemical pretreatment before incineration, except for microbiological, lab and highly infectious waste.

(5) Incineration ash (ash from incineration of any bio-medical waste) shall be disposed through hazardous waste treatment, storage and disposal facility, if toxic or hazardous constituents are present beyond the prescribed limits as given in the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 or as revised from time to time.

(6) Dead Fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time) can be considered as human anatomical waste. Such waste should be handed over to the operator of common bio-medical waste treatment and disposal facility in yellow bag with a copy of the official Medical Termination of Pregnancy certificate from the Obstetrician or the Medical Superintendent of hospital or healthcare establishment.

(7) Cytotoxic drug vials shall not be handed over to unauthorised person under any circumstances. These shall be sent back to the manufactures for necessary disposal at a single point. As a second option, these may be sent for incineration at common bio-medical waste treatment and disposal facility or TSDFs or plasma pyrolysis is at temperature >1200 oC.

(8) Residual or discarded chemical wastes, used or discarded disinfectants and chemical sludge can be disposed at hazardous waste treatment, storage and disposal facility. In such case, the waste should be sent to hazardous waste treatment, storage and disposal facility through operator of common bio-medical waste treatment and disposal facility only.

(9) On-site pre-treatment of laboratory waste, microbiological waste, blood samples, blood bags should be disinfected or sterilized as per the Guidelines of World Health Organisation or National AIDS Control Organisation and then given to the common bio-medical waste treatment and disposal facility.

(10) Installation of in-house incinerator is not allowed. However, in case there is no common biomedical facility nearby, the same may be installed by the occupier after taking authorisation from the State Pollution Control Board.

(11) Syringes should be either mutilated or needles should be cut and or stored in tamper proof, leak proof and puncture proof containers for sharps storage. Wherever the occupier is not linked to a disposal facility it shall be the responsibility of the occupier to sterilize and dispose in the manner prescribed.

(12) Bio-medical waste generated in households during healthcare activities shall be segregated as per these rules and handed over in separate bags or containers to municipal waste collectors. Urban Local Bodies shall have tie up with the common bio-medical waste treatment and disposal facility to pickup this waste from the Material Recovery Facility (MRF) or from the house hold directly, for final disposal in the manner as prescribed in this Schedule.

Common bio-medical waste treatment and disposal facilities (CBMWTFs) in Tamil Nadu:

S.No.	Name & Address of the CBMWTFs	Areas covered
1	M/s. G. J. Multiclave (India) Pvt Ltd, Thenmelpakkam, Chengalpattu Taluk, Chengalpattu District.	Part of Chennai & Kancheepuram Districts
2	M/s. Re Sustainability IWM Solutions Limited., Kinnar village, Maduranthakam Taluk, Chengalpattu District.	Cuddalore, Chennai (North), Part of Kancheepuram, Tiruvallur Districts
3	M/s. Medicare Enviro Systems, Sengipatti, Thanjavur Taluk, Thanjavur District.	Thanjavur, Thiruvarur, Trichy, Nagapattinam, Pudukottai, &Sivagangai, Perambalur, Ariyalur Districts
4	M/s. Ken Bio Links Private Ltd., Kandipedu, Katpadi Taluk, Vellore District.	Vellore & Tiruvannamalai Districts
5	M/s. Re-sustainability Healthcare Solutions Limited, Salem District.	Salem, Namakkal, Erode & Karur Districts
6	M/s.Teknotherm Industries, Orattukuppai, Coimbatore District.	Coimbatore, Nilgiris &Tiruppur Districts
7	M/s. Aseptic System Bio Medical Waste Management Co., Pappankulam, Tirunelveli District.	Tirunelveli, Thoothukudi& Kanyakumari Districts
8	M/s. Re-sustainability Health Care Solutions Limited., Virudhunagar District. *(Temporarily Under Closure)*	Madurai, Virudhunagar, Dindigul, Theni & Ramanathapuram Districts
9	M/s. Kovai Biowaste Management (P) Ltd, No.402,4TH Floor, Ramani's Fraser Square, Goods Shed Road, Coimbatore -1	Coimbatore, Tiruppur& Nilgiris Districts
10	M/s. Pondicherry Solid Waste Management Company Private Limited, S.F.No.275/2, T. Pudaiyur village, Virudhachalam Taluk, Cuddalore District	Cuddalore, Villupuram, Perambalur, Ariyalur, Kallakurichi
11	M/s. Re Sustainability IWM Solutions Limited, Unit - 3, Krishnagiri District	Dharmapuri &Krishnagiri districts
12	M/s. Re Sustainability IWM Solutions Limited, BMW Division, Tiruvallur District	Part of Chennai and Tiruvallur districts

5.2 CONSTRUCTION & DEMOLITION WASTE MANAGEMENT RULES, 2016

(Source: MoEF&CC Notification G.S.R No. 317 (E) dated 29.03.2016, CPCB PCLS/02/2021-2022 Seventh Edition0

Salient Features

Rules	
Rule 2	**Application.-** The rules shall apply to every waste resulting from construction, re-modeling, repair and demolition of any civil structure of individual or organisation or authority who generates construction and demolition waste such as building materials, debris, rubble.
Rule 3	**Definitions:-** (c) "construction and demolition waste" means the waste comprising of building materials, debris and rubble resulting from construction, re-modeling, repair and demolition of any civil structure; (g) "Local authority" means an urban local authority with different nomenclature such as municipal corporation, municipality, nagarpalika, nagarnigam, nagarpanchayat, municipal council including notified area committee and not limited to or any other local authority constituted under the relevant statutes such as gram panchayat, where the management of construction and demolition waste is entrusted to such agency (i) "**Service provider**" means authorities who provide services like water, sewerage, electricity, telephone, roads, drainage etc. often generate construction and demolition waste during their activities, which includes excavation, demolition and civil work; (j) **"waste generator" means any person or association of persons** or institution, residential and commercial establishments including Indian Railways, Airport, Port and Harbour and Defence establishments who undertakes construction of or demolition of any civil structure which generate construction and demolition waste.
Rule 4	**Duties of the waste generator:-** (1) Every waste generator shall prima-facie be responsible for collection, segregation of concrete, soil and others and storage of construction and demolition waste generated, as directed or notified by the concerned local authority in consonance with these rules. (2) The generator shall ensure that other waste (such as solid waste) does not get mixed with this waste and is stored and disposed separately. (3) Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall segregate the waste into four streams such as concrete, soil, steel, wood and plastics, bricks and mortar and shall submit waste management plan and get appropriate approvals from the local authority before starting construction or demolition or remodeling work and keep the

	concerned authorities informed regarding the relevant activities from the planning stage to the implementation stage and this should be on project to project basis. (4) Every waste generator shall keep the construction and demolition waste within the premise or get the waste deposited at collection centre so made by the local body or handover it to the authorised processing facilities of construction and demolition waste; and ensure that there is no littering or deposition of construction and demolition waste so as to prevent obstruction to the traffic or the public or drains. (5) Every waste generator shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities; Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall have to pay for the processing and disposal of construction and demolition waste generated by them, apart from the payment for storage, collection and transportation. The rate shall be fixed by the concerned local authority or any other authority designated by the State Government.
Rule 5	**Duties of service provider and their contractors**
Rule 6	Duties of local authority The local authority shall, - (1) issue detailed directions with regard to proper management of construction and demolition waste within its jurisdiction in accordance with the provisions of these rules and the local authority shall seek detailed plan or undertaking as applicable, from generator of construction and demolition waste; (2) chalk out stages, methodology and equipment, material involved in the overall activity and final clean up after completion of the construction and demolition; (3) seek assistance from concerned authorities for safe disposal of construction and demolition waste contaminated with industrial hazardous or toxic material or nuclear waste if any; (4) shall make arrangements and place appropriate containers for collection of waste and shall remove at regular intervals or when they are filled, either through own resources or by appointing private operators; (5) shall get the collected waste transported to appropriate sites for processing and disposal either through own resources or by appointing private operators; (6) shall give appropriate incentives to generator for salvaging, processing and or recycling preferably in-situ; (7) shall examine and sanction the waste management plan of the generators within a period of one month or from the date of approval of building plan, whichever is earlier from the date of its

	submission; (8) shall keep track of the generation of construction and demolition waste within its jurisdiction and establish a data base and update once in a year; (9) shall device appropriate measures in consultation with expert institutions for management of construction and demolition waste generated including processing facility and for using the recycled products in the best possible manner; (10) shall create a sustained system of information, education and communication for construction and demolition waste through collaboration with expert institutions and civil societies and also disseminate through their own website; (11) shall make provision for giving incentives for use of material made out of construction and demolition waste in the construction activity including in non-structural concrete, paving blocks, lower layers of road pavements, colony and rural roads.
Rule 7	Criteria for storage, processing or recycling facilities for construction and demolition waste and application of construction and demolition waste and its products.
Rule 8	Duties of State Pollution Control Board or Pollution Control Committee
Rule 9	Duties of State Government or Union Territory Administration
Rule 10	Duties of the Central Pollution Control Board
Rule 11	Duties of Bureau of Indian Standards and Indian Roads Congress
Rule 12	Duties of the Central Government
Rule 13	Timeframe for implementation of the provisions of these rules
Rule 14	Accident reporting by the construction and demolition waste processing facilities
Schedules	
Schedule I	Criteria for site Selection for Storage and Processing or Recycling Facilities for construction and demolition Waste
Schedule II	Application of materials made from construction and demolition waste and its products.
Schedule III	Timeframe for Planning and Implementation
Forms	
Form-I	Application for obtaining authorization
Form-II	Format for issue of Authorisation to the Operator
Form-III	Format of Annual Report to be submitted by Local Authority to the State Pollution Control Board
Form-IV	Format of Annual Report to be submitted by the State Pollution Control Board / Committees to the Central Pollution Control Board
Form-V	Accident reporting

Note: Any violation of the provision of the construction and demolition Waste Management Rules, 2016 shall attract the penal provision of the Environment (Protection) Act, 1986.

MOEF&CC has published the draft Construction and Demolition Waste Management Rules,2024 vide G.S.R 458(E) dated 29/7/2024 incorporating specific measures for waste management, waste utilisation and non-compliance, along with alignment with circular economy and resource efficiency approaches by introducing extended producer responsibility, environmental compensation, centralised interface based online monitoring and compliance assessment and inviting suggestions or comments. This Rules 2024 will supersede the Construction and Demolition Waste Management Rules, 2016 and shall come into force with effect from 1st April, 2025.

5.3 E-WASTE (MANAGEMENT) RULES, 2022 *(as amended upto March 2024)*

[MoEF&CC notification G.S.R. 801(E) – dated: 02.11.2022, G.S.R. 61(E) dated: 30.01.2023, G.S.R.534 (E) – dated: 24.07.2023 & G.S.R. 164(E) dated: 08.03.2024 – This notification has been brought out in supersession of the E-Waste Management Rules, 2016 as amended in 2018]

Salient Features

Rules	
Rule 2	**Application:** These rules shall apply to every manufacturer, producer refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, refurbishing, dismantling, recycling and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts and spares which make the product operational but shall not apply to a. waste batteries as covered under the Battery Waste Management Rules, 2022 b. packaging plastics as covered under the Plastic Waste Management Rules, 2016 c. micro enterprise as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006) and d. (d) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made there under.
Rule 4	**Registration:** (1) The entities shall register on the portal in any of the following category, namely: a. manufacturer b. producer c. refurbisher d. recycler. (2) In case any entity falls in more than one categories under sub-rule (1), then the entity shall register under those categories separately. (3) No entity referred in sub-rule (1) shall carry out any business without registration. (4) The entities registered under sub-rule (1) shall not deal with any

	unregistered manufacturer, producer, recycler and refurbisher. (5) Where any registered entity furnishes false information or wilfully conceals information for getting registration or return or report or information required to be provided or furnished under these rules 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 to be heard and in addition, environmental compensation charges may also be levied as per rule 22 in such cases. (6) The Central Pollution Control Board may charge such registration fee and annual maintenance charges from the entities seeking registration under these rules based on capacity of e-waste generated or recycled or handled by them as laid down by the Central Pollution Control Board with the approval of the Steering Committee.
Rule 5	Responsibilities of the manufacturer
Rule 6	Responsibilities of the producer
Rule 7	Responsibilities of the refurbisher
Rule 8	Responsibilities of bulk consumer
Rule 9	Responsibilities of the recycler
Rule 10	Responsibilities of State Government or Union territories.
Rule 11	Procedure for storage of e-waste.
Rule 12	Management of solar photo-voltaic modules or panels or cells
Rule 13	Modalities of the extended producer responsibility Regime.
Rule 14	Extended producer responsibility Certificate Generation 1. Recycling 2. Refurbishing
Rule 15	Transaction of extended producer responsibility certificates.
Rule 16	Reduction in the use of hazardous substances in the manufacture of electrical and electronic equipment and their components or consumables or parts or spares
Rule 17	Duties of Authorities
Rule 18	Annual Report
Rule 19	Transportation of e-waste
Rule 20	Accident reporting
Rule 21	Appeal
Rule 22	**Environmental Compensation** (1) The Central Pollution Control Board shall lay down guidelines for imposition and collection of environmental compensation on any entity in case of violation of any of the provision of these rules and guidelines issued hereunder and the said guidelines shall be in accordance with these rules and shall be approved by the Ministry of Environment,

	Forest and Climate Change. (2) The Central Pollution Control Board shall also lay down guidelines for imposition and collection of environmental compensation on the producer in case of non-fulfilment of obligations set out in these rules and transaction or use of false extended producer responsibility certificate and the said guidelines shall be in accordance with these rules and shall be approved by the Ministry of Environment, Forest and Climate Change. (3) The environmental compensation shall also be levied on unregistered producers, manufacturer, refurbisher, recyclers and any entity which aids or abets the violation of these rules. (4) (i) Payment of environmental compensation shall not absolve the producer from the extended producer responsibility as specified in these rules 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, 85 per cent of the environmental compensation levied shall be returned to the producer. (iii) In case, the shortfall of extended producer responsibility obligation is addressed after two year, 60 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, 30 per cent of the environmental compensation levied shall be returned to the producer, thereafter no environmental compensation shall be returned to the producer. (5) False information resulting in over generation of extended producer responsibility certificates by recycler shall result in revocation of registration and imposition of environmental Compensation which shall not be returnable and repeat offence, violation of these rules 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, historical, orphaned e-waste and non-recycled or non-end of life disposal of e-waste on which the environment compensation is levied, research and development, incentivising recyclers, financial assistance to local bodies for managing waste management projects and on other heads as decided by the committee. (ii) The modalities and heads for utilisation of the funds shall be decided by the Steering Committee with the approval of the Ministry of

	Environment, Forest and Climate Change.
Rule 23	Prosecution
Rule 24	Verification and Audit
Rule 25	Steering Committee
Schedules	
Schedule-I	Categories of electrical and electronic equipment including their components, consumables, parts and spares covered under the rules
Schedule-II	Applications, which are exempted from the requirements of sub-rule (1) of rule 16
Schedule-III	Year wise E-waste Recycling Target (by weight)
Schedule-IV	Extended Producer Responsibility targets for producers, who have started sales operations recently, i.e. number of years of sales operations is less than average life of their products mentioned in the guidelines issued by the Central Pollution Control Board from time to time.
Schedule-V	Listofauthoritiesand corresponding duties

5.4 HAZARDOUS AND OTHER WASTES (MANAGEMENT AND TRANSBOUNDARY MOVEMENT) RULES, 2016 *(as amended upto January 2021) [Source: CPCB PCLS/02/2021-2022 Seventh Edition]*

Salient Features

Rules	
Rule 2	**Application:-** These rules apply to the management of hazardous and other wastes and shall not apply to • Waste water and exhaust gases • Wastes arising out of the operation from ships beyond 5 kms of the relevant baseline • Radio-active waste • Bio-medical waste • Wastes covered under Municipal Solid Wastes (Management and Handling), Rules, 2000
Rule 4	**Responsibilities of the occupier for management of hazardous and other wastes:-** • Occupier is responsible for safe and environmentally sound management of hazardous & other waste. • Occupier shall follow Prevention, Minimization, Reuse, Recycling, Recovery, Utilisation including Co-processing, safe disposal. • Occupier shall send/sell the hazardous or other waste to an Authorised actual user/shall disposed in authorized disposal facility.
Rule 5	**Responsibilities of State Government** • Department of Industry in the State authorised shall ensure earmarking or allocation of industrial space/shed for re-cycling/pre-processing and other utilization in the existing and upcoming industrial park, estate and industrial clusters.

<table>
<tr><td>Rule 6</td><td>Grant of authorisation for managing hazardous and other wastes.-
The occupier of the facility who is engaged in handling generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, preprocessing, Coprocessing, utilisation, offering for sale, transfer or disposal of the hazardous and other wastes shall apply in Form 1 to SPCB and obtain an authorization.
Shall submit annual return in Form 4 on or before 30th of June.</td></tr>
<tr><td>Rule 8</td><td>Storage of hazardous and other wastes:
Occupiers of facilities may store the hazardous and other waste for not exceeding 90 days and maintain record of sale, transfer, storage, recycling, recovery, utilization pre-processing, co-processing.
SPCB may extend the period of 90 days in the following cases,<table><tr><th>Small generators (up to ten tonnes per annum</th><th>Up to 180 days of their annual capacity</th></tr><tr><td>Actual users & Disposal facility operators</td><td>Up to 180 days of their annual capacity</td></tr><tr><td>Recyclers/Utilizers/Pre-processors/ Co-processors</td><td>Up to 180 days of their annual capacity</td></tr></table></td></tr>
<tr><td>Rule 9</td><td>Utilisation of hazardous and other wastes:
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 shall be carried out only after obtaining authorisation from the SPCB on the basis of standard Operating procedures (SOP) or guidelines of CPCB.</td></tr>
<tr><td>Rule 12</td><td>Strategy for Import and export of hazardous and other wastes:<table><tr><th>Permitted</th><th>Not permitted</th></tr><tr><td>Imported of hazardous & other wastes from other countries for recycling / recovery / reuse / utilization / co-processing.</td><td>Import of hazardous & other wastes from other countries for disposal.</td></tr><tr><td>Import of hazardous waste in Part A & Part B of Schedule III shall require permission of the MoEF& CC.</td><td>Import of hazardous and & other wastes specified in Schedule VI.</td></tr><tr><td>Import of other wastes in Part D of Schedule III will be allowed as per Rule 13.</td><td>Import and export of hazardous & other waste outlined in Part C of Schedule III (shall require prior written permission from MoEF& CC).</td></tr><tr><td>Export of hazardous & other wastes from India listed in Part A and Part B of Schedule III & VI with permission from MoEF.</td><td></td></tr></table></td></tr>
</table>

<table>
<tr><td></td><td></td></tr>
<tr><td>Rule 13</td><td>Procedure for import of hazardous and other wastes:
<table>
<tr><th>S.No</th><th>Schedule</th><th>Form</th><th>Procedure</th></tr>
<tr><td>1.</td><td>Part A and Part B of Schedule III</td><td>Form 5</td><td>Shall obtain Authorization form SPCB
Shall apply in Form 5 to MoEF& CC with documents listed therein
Prior informed consent of the exporting country in respect of Part A of Sc.III</td></tr>
<tr><td>2.</td><td>Part D of Schedule III</td><td>Form 6</td><td>Shall obtain Authorization from SPCB
Furnish the required documents to Customs authorities</td></tr>
<tr><td>3.</td><td>Part D of Schedule III</td><td>Form 7</td><td>Traders on behalf of the actual user, shall obtain One Time Authorization in Form 7 and copy shall be appended to Form 6</td></tr>
</table></td></tr>
<tr><td>Rule 16</td><td>Treatment, storage and disposal facility for hazardous and other wastes
• TSDF shall design and set up the treatment, storage and disposal facility as per CPCB guidelines.
• TSDF shall be responsible for safe and environmentally sound operation of the facility and its closure and post closure phase as per the standard operating procedure issued by CPCB.</td></tr>
<tr><td>Rule 18</td><td>Transportation of hazardous and other wastes:
• Transport shall be in accordance with rules under Motor Vehicles Act, 1988
• Transporter shall carry TERM card Form -9.
• Shall label the containers as per Form – 8.
Interstate movement
<table>
<tr><td>For final disposal – ‘No Objection Certificate’ from SPCB shall be obtained.</td><td>For recycling or utilization including co-processing Intimation to SPCB.</td></tr>
</table></td></tr>
<tr><td>Rule 19</td><td>Manifest system (Movement Document) for hazardous and other waste to be used within the country – Sender of the waste shall prepare seven copies of Manifest in Form -10:
<table>
<tr><td>Copy 1</td><td>To be forwarded by the sender to the State Pollution Control Board after signing all the seven copies</td></tr>
<tr><td>Copy 2</td><td>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</td></tr>
<tr><td>Copy 3</td><td>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</td></tr>
</table></td></tr>
</table>

		signed by the receiver
	Copy 4	To be handed over to the transporter by the receiver after accepting the waste
	Copy 5	To be sent by the receiver to the State Pollution Control Board
	Copy 6	To be sent by the receiver to the sender
	Copy 7	To be sent by the receiver to the State Pollution Control board of the sender in case the sender is in another State

Schedules	
Schedule-I	List of processes generating hazardous waste
Schedule-II	List of waste constituents with concentration limits
Schedule-III	Part A – List of hazardous waste applicable for import and export with prior informed consent Part B – List of other wastes applicable for import and export and not requiring prior informed consent Part C – List of hazardous characteristics Part D – List of other wastes applicable for import and export without permission from Ministry of Environment, Forest and Climate Change
Schedule-IV	List of commonly recyclable hazardous wastes
Schedule-V	Part A – Specification of uses oil suitable of recycling Part B – Specifications of fuel derived from waste oil
Schedule-VI	Hazardous and Other Wastes prohibited for import
Schedule-VII	List of authorities and corresponding duties
Schedule-VIII	List of documents for verification by Customs for import of other wastes specified in Part D of Schedule III
Schedule-XI	Extended producer responsibility for waste tyre

Forms	
Form 1	Application for Authorization under HOWM Rules, 2016
Form 2	Form for grant or renewal of Authorisation by State Pollution Control Board
Form 3	Format for maintain records of Hazardous and other wastes
Form 4	Form for filling Annual Returns to SPCB
Form 5	Application for import/Export of Hazardous & Other Waste for reuse recycling/recovery/co-processing / utilization
Form 6	Transboundary Movement – Movement Document
Form 7	Application form for ONE TIME Authorisation of Traders for Part-D of Schedule III Waste
Form 8	Labelling of Containers of Hazardous and Other Waste
Form 9	Transport Emergency (TREM) Card
Form 10	Manifest for Hazardous and Other Waste
Form 11	Format for Reporting Accident
Form 12	Application for filling APPEAL against the Order passed by State Pollution Control Board

SCHEDULE I

[See rule 3 (1) (17) (i)]

List of processes generating hazardous wastes

S. No.	Processes	Hazardous Waste*
(1)	(2)	(3)
1.	Petrochemical processes and pyrolytic operations	• Furnace or reactor residue and debris • Tarry residues and still bottoms form distillation • Oily sludge emulsion • Organic residues • Residues from alkali wash of fuels • Spent catalyst and molecular sieves • Oil from wastewater treatment
2.	Crude oil and natural gas production	• Drill cuttings excluding those from water based mud • Sludge containing oil • Drilling mud containing oil
3.	Cleaning, emptying and maintenance of petroleum oil storage tanks including ships	• cargo residue, washing water and sludge containing oil • cargo residue and sludge containing chemicals • Sludge and filters contaminated with oil • Ballast water containing oil from ships
4.	Petroleum refining or re-processing of used oil or recycling of waste oil	• Oil sludge or emulsion • Spent catalyst • Slop oil • Organic residue from processes • Spent clay containing oil
5.	Industrial operations using mineral or synthetic oil as lubricant in hydraulic systems or other applications	• Used or spent oil • Wastes or residues containing oil • Waste cutting oils
6.	Secondary production and / or industrial use of zinc	• Sludge and filter press cake arising out of production of Zinc Sulphate and other Zinc Compounds. • Zinc fines or dust or ash or skimmings in dispersible form • Other residues from processing of zinc ash or skimmings • Flue gas dust and other particulates
7.	Primary production of zinc or lead or copper and other non-ferrous metals except aluminium	• Flue gas dust from roasting • Process residues • Arsenic-bearing sludge • Non-ferrous metal bearing sludge and residue. • 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 aluminum	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.	i.1 Acidic and alkaline residues i.2 Spent acid and alkali i.3 Spent bath and sludge containing sulphide, cyanide and toxic metals i.4 Sludge from bath containing organic solvents i.5 Phosphate sludge i.6 Sludge from staining bath i.7 Copper etching residues i.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 naphthenic solvents may or may not be fit for reuse. 20.2 Spent solvents 20.3 Distillation residues 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 absorbable organic halides(AOX)
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 wastewater arising out of cleaning / disposal of barrels / containers
35.	Purification and treatment of exhaust air/gases, water and waste water from the processes in this schedule and common industrial effluent treatment plants (CETP's)	35.1 Exhaust Air or Gas cleaning residue 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 H2S)	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)	5,000

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- A 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 C5: 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 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)	
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
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
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**
[1][B3010	post-industrial or pre-consumer polyethylene waste Polymethyl Methacrylate]
B3027	Self-adhesive label laminate waste containing raw materials used in label material production
[2][B3030	
B3035 ***]	
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.**

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) upto 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

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 test 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. [1][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.]
	- Used electrical and electronic assemblies imported for repair and to be re- exported back after repair within one year of import * * * - 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.
	[1][-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***]
B3	**Wastes containing principally organic constituents, which may contain metals and inorganic materials**
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 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
2[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 garneted 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 textilis 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 orcables 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.

* * Import permitted in the country to the actual user or to the trader on behalf of the actual users authorised by SPCB 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.

[1][****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

S. 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

S. 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

S. 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**
B 1110	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**
B3010	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, polyethylene terephthalate, Acrylonitrile, Butadiene, Polyacetals, Polyamides, polybutylene tere-phthalate, Polycarbonates, Polyethers, polyphenylene sulphides, acrylic polymers, alkanes C10-C13 (plasticiser), polyurethane (not containing CFC's), Polysiloxanes,[1][***], 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 fluoromethylvinyl ether (MFA), polyvinylfluoride , polyvinylidenefluoride [1]**[Note.*****]**
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

S. 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/	(i) Identification of site (s) for common Hazardous and Other Waste Treatment

	Administration	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 under the Water (Prevention and Control of Pollution) Act, 1974	(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.
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

S. 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 - Rhenium scrap - Gallium scrap - Magnesium scrap - Copper scrap - Chromium 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; 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.
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 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 one time 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.
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; (e) The chemical analysis report of the waste being imported; (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)		Used electrical and electronic assemblies imported for repair and to be re-exported after repair 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; (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.
(b)		Used electrical and electronic assemblies imported for rental purpose and re-exported back 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
(c)		Used electrical and electronic assemblies exported for repair and to be re-imported after repair	(a) Duly filled up Form 6 –Movement document; (b) 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) 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) 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
[1][d(i)		Used electrical and electronic assemblies imported for testing,	(a) Duly filled up Form 6 – Movement document; (b) Details of previous import, if any.

		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.	(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) 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)		Spares imported for warranty replacements provided equal number of defective/ non-functional parts are exported back within one year of the import.	(a) Duly filled up Form 6 – Movement document; (b) if refurbished components being imported as replacement to defective component then undertaking for export of equivalent numbers of defective components; (c) Details of previous import, if there has been any and confirmation regarding their re-export; (d) 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.	----
(j)		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 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	(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; (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.
[1][5 (A)	B3030	Textile wastes	(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 certificationagency 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. (e) an acknowledged copy of the
		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 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	annual return filed with concerned State Pollution Control Board for import in the last financialyear.
		- 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 sativaL.)*	
		- 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 textilis 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 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 exportingcountry 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 andauthorisation under these rules, for actual users. For traders, only valid one-time authorisation from concerned State Pollution Control Board is required. (f) an acknowledged copy of the annual return filed with concerned State Pollution Control Board for import in the last financial year. (g)
6.	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	As per existing guidelines of Custom Authority

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

5.4.1 Procedure for obtaining Authorization by Industries Generating Hazardous Waste

Industries Generating Hazardous Waste

- Generator of hazardous waste shall identify the type & characteristics of hazardous wastes as per the Schedule I.
- Generator shall provide secured storage of hazardous waste as per CPCB guidelines.
- Generator shall be responsible for sending the hazardous waste to recycler/utilizer / TSDF as per the characteristics of hazardous waste and guidelines of CPCB.
- Generator shall provide display board at the entrance as per CPCB guidelines.
- Generator shall maintain Form-3 and submit Form-4 with the following required documents.
- Generator shall file application under Form I through OCMMS portal to TNPCB and obtain Authorization.

Enclose the following documents

1. Copy of valid consent to operate order issued to the industry.
2. Process flow sheet along with the details of input and output (raw material, chemicals, products, by products, wastes emissions, wastewater etc)
3. Details of on-site storage facility for hazardous waste generated during the process
4. Details of environmental safeguards regarding safety & fire
5. Emergency Response Plan for dealing with emergency situations as per CPCB guidelines.
6. 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 & other waste
7. Compliance of previous authorization issued (not applicable for new user)
8. Annual returns in Form-IV for the last 5 years (not applicable for new user)
9. Photograph showing the display boards
10. Valid Agreement made with the recycler/utilizer/pre-processor/co-processor/disposal facility for all the Hazardous waste generated due to its activity
11. Copy of Valid Consent and Hazardous Waste Authorization + Passbook issued to recycler/utilizer / pre-processor/co-processor/disposal facility with whom agreement is made.
12. In case of captive utilisation, Generator shall follow the Standard Operating Procedure of issued by CPCB

5.4.2 Procedure for obtaining authorization with passbook by actual users / recyclers / utilizers /pre – processors / coprocessors:

Recyclers/Utilizers/Pre-Processor/Coprocessor

- The actual user / recycler/utilizer/pre-processor/co-processor shall have adequate facilities for collection, storage, handling, transportation, recycling, utilization, pre-processing/co-processing, of Hazardous & other waste as per

the SOP/Guidelines/Minimal requisite facilities issued by CPCB from time to time.

- The actual user/recycler/utilizer/pre-processor/co-processor for reception of hazardous and other waste shall apply for passbook along with authorization (Authorization for Hazardous waste generated from their process and Passbook for Hazardous & other waste procurement /reception).
- The hazardous waste listed in Schedule IV can only be recycled and the Processes to be adopted for reuse/recycle/recovery of hazardous waste shall be as per the Environmentally Sound Technologies issued by CPCB only.
- Utilization of hazardous and other wastes, as a resource after pre-processing either for co-processing or any other use including within the premises shall be carried out as per the Standard Operating Procedure (SOP) or guidelines of CPCB. (CPCB has issued 81 SOPs for utilization of hazardous waste as on date)
- The Pre-processing facility for hazardous waste shall comply with the guidelines of Guidelines for Pre-Processing and Co-Processing of Hazardous and Other Wastes in Cement Plant as per H&OW(M & TBM) Rules, 2016.
- File application under Form I of HOWM rules, 2016 online through in OCMMS portal.

Enclose the following documents:

1. Copy of valid consent to operate order issued to the actual user/facility.
2. Certificate of registration issued by District Industry or any other Government agencies authorized in this regard.
3. Proof of installed capacity of plant and machinery as per the registration issued by District Industry or any other Government agencies authorized in this regard.
4. Provide details of secured storage of wastes including storage capacity.
5. Process flow sheet along with the details of input and output, equipment installed.
6. Provide details of end users of products or by products.
7. Details of Air Pollution Control System (APCS) installed in the unit along with the diagram.
8. Details of Effluent Treatment Plant (ETP) with diagram including mode of disposal of waste.
9. Details of on-site storage facility of hazardous waste generated during the process.
10. Details of environmental safeguards regarding safety & fire.
11. Compliance of CPCB guidelines/SOP/Minimal requisite facility guidelines issued by CPCB.
12. Compliance of previous authorization issued (not applicable for new user)
13. Annual returns in Form-4 for the last 5 years (not applicable for new user).
14. Passbook for the last 5 years (not applicable for new user).
15. Photograph showing the display boards.
16. Agreement with disposal facility for Hazardous waste generated due to recycling/utilization/ Co processing.
17. Details of occupational health and safety measures.

5.4.3 Procedure for obtaining one time authorization by traders to import other wastes listed on part-d of schedule iii:

Traders

Traders shall file application for import of other wastes listed in part d of sc iii in form 7 enclosing the following required documents

1. Copy of Importer - Exporter (IEC) code
2. Copy of GST Certificate
3. An Undertaking in Rs. 20 non-judicial stamp paper made with actual user
4. Valid Consent order and Valid HWA of the actual user issued by TNPCB
5. Annual return as per FORM 4 shall be filed by June 30th for the period ensuring 31st March of the year (not applicable for new trader)
6. Undertaking in Rs.100 Non-Judicial stamp paper for compliance of all the provisions of HOWM Rules, 2016.

Mode of storage of imported waste
If stored in Trader's premises

- Land area available in acres with the particulars of Infrastructure facility.
- Land ownership document/ rental agreement indicating the period of lease.
- Land use classification certificate obtained from competent authority for the godown site.

Directly transported to user

Under taking from trader mentioning that the registered office will not be used for storing imported waste for any industry.

5.5 THE PLASTIC WASTE MANAGEMENT RULES, 2016 *(as amended upto march 2024)*

Salient Features

Rules	
Rule 3	**Definitions** (aa) **"alternate use"** means use of a material for a purpose other than for which it was conceived, which is beneficial because it promotes resource efficiency]; (aab) **"Waste to Energy"** means using plastic waste for generation of energy and includes coprocessing (e.g. in cement, steel or any other such industry); (ac) **"Biodegradable plastics",** means plastics, other than compostable plastics, which undergoes degradation by biological processes in specific environment such as soil, landfill, sewage sludge, fresh water, marine, without leaving any micro plastics or visible or distinguishable or toxic residue, which has adverse environment impact; (b) **"brand owner"** means a person or company who sells any commodity under a registered brand label; or trade mark; (c) **"carry bags"** (covered under Category II of plastic packaging - Clause (5.1) (II) given in Schedule -II) mean bags made from plastic material or compostable plastic material, used for the purpose of carrying or dispensing commodities which have a self-carrying

	feature but do not include bags that constitute or form an integral part of the packaging in which goods are sealed prior to use; (d) "**commodity**" means tangible item that may be bought or sold and includes all marketable goods or wares; (e) "**compostable plastics**" mean plastic that undergoes degradation by biological processes during composting to yield CO2, water, inorganic compounds and biomass at a rate consistent with other known compostable materials, excluding conventional petro-based plastics, and does not leave visible, distinguishable or toxic residue; (f) **"consent"** means the consent to establish and operate from the concerned State Pollution Control Board or Pollution Control Committee granted under 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); (g) "**disintegration**" means the physical breakdown of a material into very small fragments; (ga)**"End of Life disposal"** means using plastic waste for generation of energy subject to relevant guidelines in force, which includes co-processing (e.g. in cement, steel or any other such industry) or waste to oil, except in cases where feedstock chemicals are produced for further use in the production of plastic which may then be considered under recycling or for road construction as per Indian Road Congress guidelines etc. (gb) **"energy recovery"** means energy recovery from waste that is conversion of waste material into usable heat, electricity or fuel through a variety of processes including combustion, gasification, pyrolisation, anaerobic digestion & landfill gas recovery; (h) **"extended producer's responsibility"** means the responsibility of a producer for the environmentally sound management of the product until the end of its life; (i) **"food-stuffs"** mean ready to eat food products, fast food, processed or cooked food in liquid, powder, solid or semi-solid form; (j) **"facility"** means the premises used for collection, Storage, recycling, processing and disposal of plastic waste; (k) **"Importer"** means a person who imports for commercial use, any plastic packaging or any commodity with plastic packaging or carry bags or plastic sheets or like material, or plastic raw material including in the form of resin or pellets, or intermediate material to be used for manufacturing plastic packaging such as films or preforms. (l) **"institutional waste generator"** means and includes occupier of the institutional buildings such as building occupied by Central Government Departments, State Government Departments, public

	or private sector companies, hospitals, schools, colleges, universities or other places of education, organisation, academy, hotels, restaurants, malls and shopping complexes; (m) "**manufacturer"** means and include a person engaged in production of plastic raw material, including compostable plastics and biodegradable plastics; (n) **"multi-layered packaging"** means any material used or to be used for packaging and having at least one layer of plastic as the main ingredients in combination with one or more layers of materials such as paper, paper board, polymeric materials, or aluminium foil, either in the form of a laminate or co-extruded structure; (na) "**Non-woven plastic bag**" means Non-woven plastic bag made up of plastic sheet or web structured fabric of entangled plastic fibers or filaments (and by perforating films) bonded together by mechanical or thermal or chemical means, and the "non-woven fabric" means a flat or tufted porous sheet that is made directly from plastic fibres, molten plastic or plastic films;" (o) **"plastic"** means material which contains as an essential ingredient a high polymer such as polyethylene terephthalate, high density polyethylene, Vinyl, low density polyethylene, polypropylene, polystyrene resins, multi-materials like acrylonitrile butadiene styrene, polyphenylene oxide, polycarbonate, Polybutylene terephthalate; (oa) "**Plastic Packaging**" means packaging material made by using plastics for protecting, preserving, storing, and transporting of products in a variety of ways;' ; (p) **"plastic sheet"** means Plastic sheet is the sheet made of plastic; (q) **"plastic waste"** means any plastic discarded after use or after their intended use is over; (qa) "**Plastic waste processing**" means any process by which plastic waste is handled for the purpose of reuse, recycling, co-processing or transformation into new products;" (qb) **"Plastic Waste Processors**" means recyclers of plastic waste as well as entities engaged in using plastic waste for energy (waste to energy) including in coprocessing or converting plastic waste to oil (waste to oil) except in cases where feedstock chemicals are produced for further use in the production of plastic which may then be considered under recycling , industrial composting; (qc) "**Post-consumer plastic packaging waste"** means plastic packaging waste generated by the endues consumer after the intended use of packaging is completed and is no longer being used for its intended purpose; (r) **"prescribed** authority**"** means the authorities specified in rule 12; (ra) **"Pre-consumer plastic packaging waste**" means plastic

	packaging waste generated in the form of reject or discard at the stage of manufacturing of plastic packaging and plastic packaging waste generated during the packaging of product including reject, discard, before the plastic packaging reaches the end-use consumer of the product;'; (s) **"producer"** means persons engaged in manufacture plastic packaging; and, include a person engaged in manufacture of intermediate material to be used for manufacturing plastic packaging, and also the person engaged in contract manufacturing of products using plastic packaging or through other similar arrangements for a brand owners; (sa) **"Recyclers"** are entities who are engaged in the process of recycling of plastic waste; (t) **"recycling"** means the process of transforming segregated plastic waste into a new product or raw material for producing new products; (u) **"registration" means** registration with the State Pollution Control Board or Pollution Control Committee concerned, as the case may be; (ua) **"Reuse"** means using an object or resource material again for either the same purpose or another purpose without changing the object's structure;'; (ua)"**seller**" means a person who sells plastic raw material such as resins or pellets or intermediate material used for producing plastic packaging;'. (v) **"street vendor"** shall have the same meaning as assigned to it in clause (l) of sub-section (1) of Section 2 of the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014 (7 of 2014); (va) **"Single-use plastic commodity**" mean a plastic item intended to be used once for the same purpose before being disposed of or recycled;" „ (vb) "**Thermoset plastic**" means a plastic which becomes irreversibly rigid when heated and hence cannot be remoulded into desired shape; (vc) "**Thermoplastic**" means a plastic which softens on heating and can be moulded into desired shape; (w) **"local body"** means urban local body with different nomenclature such as municipal corporation, municipality, nagar palika, nagar nigam, nagar panchayat, municipal council including notified area committee (NAC) and not limited to or any other local body constituted under the relevant statutes such as gram panchayat, where the management of plastic waste is entrusted to such agency;

	(wa) "**Use of recycled plastic"** means recycled plastic used as raw material, instead of virgin plastic, in the manufacturing process; (x) **"virgin plastic"** means plastic material which has not been subjected to use earlier and has also not been blended with scrap or waste; (y) **"waste generator"** means and includes every person or group of persons or institution, residential and commercial establishments including Indian Railways, Airport, Port and Harbour and Defence establishments which generate plastic waste; (z) **"waste management"** means the collection, storage, transportation reduction, re-use, recovery, recycling, composting or disposal of plastic waste in an environmentally safe manner; (aa) **"waste pickers"** mean individuals or agencies, groups of individuals voluntarily engaged or authorised for picking of recyclable plastic waste.
Rule 4	**Conditions** • Carry bag made of virgin or recycled plastic, shall not be less than seventy five microns in thickness with effect from the 30th September, 2021 and one hundred and twenty (120) microns in thickness with effect from the 31st December, 2022; [As per G.O. Ms No. 84 of Environment & Forest Department dated 26.05.2018 plastic carry bag irrespective of thickness is banned by the Government of Tamil Nadu] • Plastic sheet or like, which is not an integral part of multi-layered packaging and cover made of plastic sheet used for packaging, wrapping the commodity shall not be less than fifty microns in thickness except as specified by the Central Government where the thickness of such plastic sheets impair the functionality of the product; • The manufacturer shall not sell or provide or arrange plastic to be used as raw material to a producer or to a seller not registered under these rules; • Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala; • Provision of thickness shall not be applicable to carry bags and commodities made up of compostable plastic and biodegradable plastics. The manufacturers or seller of compostable plastic and biodegradable plastics carry bags or commodities or both shall obtain a certificate from the Central Pollution Control Board before marketing or selling • The manufacture, import, stocking, distribution, sale and use of following single-use plastic (except compostable plastic), including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022:-

	• ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration; • plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers. • Any notification prohibiting the manufacture, import, stocking, distribution, sale and use of carry bags, plastic sheets or like, or cover made of plastic sheets and multi-layered packaging and single-use plastic, including polystyrene and expanded polystyrene, commodities, issued after this notification, shall come into force after the expiry of ten years, from the date of its publication
Rule 5	**Plastic Waste Management.-** • Plastic waste, which can be recycled, shall be channelized to registered plastic waste recycler. • Local bodies shall encourage the use of plastic waste (preferably the plastic waste which cannot be further recycled) for road construction as per Indian Road Congress guidelines or energy recovery or waste to oil etc • Thermo set plastic waste shall be processed and disposed off as per the guidelines issued from time to time by the Central Pollution Control Board. • The inert from recycling or processing facilities of plastic waste shall be disposed off in compliance with the Solid Waste Management Rules, 2016 or as amended from time to time
Rule 6, 7 & 7A	**Responsibility of local body, Cram Panchayat & Panchayat at District Level.-** • Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing and disposal of the plastic waste either on its own or by engaging agencies or producers. • The local body shall be responsible for setting up, operationalisation and co-ordination of the waste management system and for performing the associated functions. • The local body to frame bye-laws incorporating the provisions of these rules. • The local body shall undertake assessment of plastic waste generated, including plastic waste existing in dump sites • The local body shall assess the plastic waste management infrastructure available for collection, segregation and processing and send a report to the State Pollution Control Board by 30th June of each year • The local body shall take necessary measures to prevent stocking,

	distribution, sale and usage of prohibited single use plastic items in their jurisdiction • The local body and Panchayat at District Level shall include in the annual report the following details on plastic waste management, namely**:-** (i). plastic waste generated, including plastic waste existing at dump sites, in a year; (ii). plastic waste management infrastructure available for collection, segregation, processing; (iii). projection of plastic waste to be generated; (iv). status on framing and implementation on byelaws; (v). actions taken action to prevent stocking, distribution, sale and usage of banned Single Use Plastic items.
Rule 8	**Responsibility of waste generator.-** • The waste generator shall not litter the plastic waste and ensure segregated storage of waste at source and handover segregated waste to urban local body or gram panchayat or agencies appointed by them or registered waste pickers', registered recyclers or waste collection agencies • All institutional generators of plastic waste, shall segregate and store the waste generated by them and handover segregated wastes to authorized waste processing or disposal facilities. • All waste generators shall pay such user fee or charge as may be specified in the bye-laws of the local bodies for plastic waste management**.**
Rule 9	**Responsibility of producers, Importers and Brand Owners.-** • The Producers, Importers and Brand Owners who introduce any plastic packaging in the market shall be responsible for collection of such plastic packaging shall fulfil Extended Producer Responsibility as per guidelines specified in Schedule- II of the Rules
Rule 10	**Protocols for compostable and biodegradable plastic materials.-** • Determination of the degree of degradability and degree of disintegration of plastic material shall be as per the protocols of the Indian Standards listed in Schedule I • The compostable plastic materials shall conform to the IS / ISO 17088:2021, as amended from time to time • The biodegradable plastics shall conform to the standard notified by the Bureau of Indian Standards IS 17899 :2022and certified by the Central Pollution Control Board • BIS shall specify separate colour or marking for plastic packaging and commodities made from compostable plastics or biodegradable plastics

Rule 11	**Marking or labeling.-** • Each plastic packaging (rigid plastic packaging, flexible plastic packaging, multilayer plastic packaging) shall contain the following information, printed in English, namely,- a.name and registration certificate number for producer or importer or brand owner generated through centralized online portal specified in Schedule II for plastic packaging **b.** name and certificate number issued under clause (h) of sub-rule 4 in case of plastic sheet or like used for packaging and plastic packaging as well as carry bags and commodities made of biodegradable plastic • Each recycled plastic packaging or commodity shall bear a label ―recycled having [-----specify percentage-----] of recycled plastic‖ and a mark as shown below and shall conform to the Indian Standard: IS 14534: 2023 • Each plastic packaging or commodity made from compostable plastics shall bear a label ―compostable only under industrial composting‖ and shall conform to the Indian Standard: IS/ISO 17088:2021 titled as Specifications for Compostable Plastics • Each plastic packaging or commodity made from biodegradable plastic shall bear the label ―Biodegradable in [--- specify number of days ---] only in the [---specify recipient environment such as soil, landfill, water etc.---]
Rule 12	**Prescribed authority.-** • The Central Pollution Control Board, State Pollution Control Board and Pollution Control Committee in respect of a Union territory shall be the authority for enforcement of the provisions of these rules • The concerned Additional Chief Secretary or Principal Secretary or Secretary in charge of the Department of the State Government responsible for municipal administration for urban areas and Panchayat Raj Institutions for rural areas shall be the authority for enforcement of the provisions of these rules relating to waste management by waste generator, restriction or prohibition on use of plastic carry bags, plastic sheets or like, covers made of plastic sheets and plastic packaging and items prohibited under rule 4 of these rules
Rule 13	**Registration of producer, recyclers and manufacturer.-** • Every producer or importer or brand-owner shall for the purpose of one –time registration makes an application in Form I through the centralized online portal specified in Schedule II , to – • (i) the State Pollution Control Board if operating in one or two States; or • (ii) the Central Pollution Control Board, if operating in more than two States or Union territories. • Every person recycling or processing waste or proposing to recycle

	or process plastic waste shall for the purpose of one-time registration make an application to the concerned State Pollution Control Board or the Pollution Control Committee in Form II through Centralized online portal specified in Schedule –II • Every manufacturer and importer of plastic raw material shall make an application to the State Pollution Control Board or the Pollution Control Committee concerned, for registration, in the Form III • Every person engaged in sale of plastic raw material or an intermediate material used for manufacture of plastic packaging to producer shall make an application to the State Pollution Control Board for registration
Rule 14	**Responsibility of retailers and street vendors.-** • Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules • Violators of the rules shall be liable to pay such fines as specified under the bye-laws of the local bodies
Rule 16	**State Level Monitoring Committee.-** • The State Government shall constitute a State Level Monitoring Committee, for the purpose of effective monitoring of implementation of these rules
Schedules	
Schedule I	Protocols for compostable and biodegradable plastic materials [See rule 10]
Schedule II	Guidelines on Extended Producer Responsibility for Plastic Packaging [See Rule 9 (1)]
Forms	
Form I	Application for Registration for Producers, Brand Owners and Importers
Form II	Application Form for Registration of Units Engaged in Processing or Recycling of Plastic Waste
Form III	Application for Registration for Manufacturers of Plastic raw materials
Form IV	Format of Annual Report by operator of plastic waste processing or recycling facility to the local body
Form V A	Format of Annual Report on plastic waste management to be submitted by the local body
Form V B	Format of Annual Report on plastic waste management to be submitted by the Panchayat at the District level
Form VI	Format of Annual Report on plastic waste management to be submitted by the SPCB / PCC
Form VII	Format for Quarterly report of Plastic Raw Material Manufacturer / Importer of plastic raw material

5.5.1 Banned Single Use Plastic (SUPs) by Govt of Tamil Nadu and MoEF&CC

S.No	Banned SUPs by Govt of Tamil Nadu and MoEF& CC	S.No	Banned SUPs by Govt of Tamil Nadu and MoEF& CC
1	Plastic sheet / cling film used for food wrapping	15	Ear buds with plastic sticks
2	Plastic sheet used for spreading on dining table	16	Plastic sticks for balloons
3	Plastic Thermocol plates	17	Candy with plastic sticks
4	Plastic coated paper plates	18	Ice-cream with plastic sticks
5	Plastic coated paper cups	19	Polystyrene [Thermocol] for decoration
6	Plastic tea cups	20	Cutlery such as plastic forks
7	Plastic tumbler	21	Plastic spoons
8	Thermocol cups	22	Plastic knives
9	Plastic carry bags of all size & thickness	23	Wrapping or packing films around sweet boxes
10	Plastic coated carry bags	24	Wrapping or packing films around invitation cards
11	Non-woven Carry Bags of all size & thickness	25	Wrapping or packing films around cigarette packets
12	Water pouches / packets	26	Plastic or PVC banners less than 100 micron
13	Plastic straw	27	Plastic stirrers
14	Plastic flags	28	Plastic trays

5.5.2 List of Government Orders issued related to Plastic Waste Management

S. No	Date	Department	Abstract
G.O. related to Single Use Plastic ban			
1	15.06.2018	G.O. (Ms) No. 82 Environment and Forests (EC.2) Department	110 Announcement of the Hon'ble CM on the floor of Assembly on 05.06.2018 regarding ban on one-time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 under the provisions of Environment (Protection) Act, 1986 – Appointment of three Regional Coordinators
2	25.06.2018	G.O. (Ms) No. 84 Environment and Forests (EC.2) Department	'Ban on one time use and throwaway plastics' irrespective of thickness from 1st January, 2019 under the Environment (Protection) Act, 1986
3	05.07.2018	G.O. (Ms) No. 92 Environment and Forests (EC.2) Department	Constitution of Steering Committee under the Chairmanship of Chief Secretary to Government for the Monitoring the implementation of ban on SUPs

4	05.07.2018	G.O.(2D) No.30 Environment and Forests (EC.2) Department	Sanction of 54 lakhs for holding regional workshops in all the Districts of Tamil Nadu to achieving the Goal of "Plastic Free Tamil Nadu"
5	20.09.2018	G.O.(D) No.265 Environment and Forests (EC.2) Department	Monitoring the implementation of ban on one time use and throwaway plastics irrespective of thickness – Ban on use of plastics in Gov. Dept/ Institutions/ Public Sector Undertakings
6	10.11.2018	G.O.(D) No.319 Environment and Forests (EC.2) Department	Ban on one-time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 – revising the nominated Senior Officials from TNPCB for co-ordination with the Regional Coordinators for effective implementation
7	14.10.2019	G.O.(Rt.) No.688 Environment and Forests (EC.2) Department	Announcement for the year 2019-2020 – Awareness campaign on the ill-effects of plastics through "Message on Wheels" at a cost of Rs.2.00 lakh per district for 32 districts
8	03.12.2019	G.O.(D) No.313 Environment and Forests (EC.2) Department	Assessment of Microplastics in Coastal Areas, estuaries and lakes in Tamil Nadu – Administrative sanction of Rs.81.20 lakhs and to release an amount of Rs.25.40 lakhs for the year 2019-2020
9	05.06.2020	G.O. (Ms). No. 37 Environment and Forests (EC.2) Department	Ban on 'One time use and throwaway plastics' – Notification issued – Deleting the item no.1(b) (b) 'plastic bags which constitute or form an integral part of packaging in which goods are sealed prior to use at manufacturing / processing units' – Amendment – Notification
G.O. related to Meendum Manjappai Campaign and Special Task Force:			
10	27.11.2021	G.O.(Ms) No.116 Environment, Climate Change and Forests (EC.2) Department	Announcement for the year 2021-2022 – Implementation of the "People's Campaign against throwaway plastics- Meendum Manjappai Campaign"
11	07.02.2022	G.O.(Ms) No.25 Environment, Climate Change and Forests (EC.2) Department	Ban on Single-use Plastics Items – Constitution of Special Task Force for monitoring the implementation of ban
12	18.12.2023	G.O Ms. No. 180	Formation of committee in accordance with

		Environment, Climate Change and Forests (EC.2) Department	Hon'ble Supreme Court of India order dated 20.10.2023 with respect to non-woven bags
13	24.02.2024	G.O Ms. No. 35 Environment, Climate Change and Forests (EC.2) Department	Implementation of ban on use of Single Use Plastics in Government Departments / Institutions/ Public Sector Undertakings in Tamil Nadu
14	09.07.2024	G.O.(Ms).No.108 Environment, Climate Change and Forests (EC.2) Department	Ban on Single Use Plastic Items – Constitution of Special Task Force for monitoring the implementation of ban – Amendment
15	10.10.2024	G.O.(Ms).No.172 Environment, Climate Change and Forests (EC.2) Department	Announcement for the year 2023-2024 Distribution of 100 Nos. of e-Autos of Climate Warriors (SHG Women) for creation of awareness on Single Use Plastics (SUP) ban and use of eco-alternatives, climate change and sustainable lifestyle - Sanction accorded
16	01.11.2024	G.O.Ms.No.189 Environment, Climate Change and Forests (EC.2) Department	Massive Plastic Collection Drive across Districts and Greater Chennai Corporation at a cost of Rs.10 Crore from the Tamil Nadu Pollution Control Board funds

5.6 SOLID WASTE MANAGEMENT RULES, 2016 *(as amended upto March 2020)*

The Ministry of Environment Forest and Climate Change, Govt. of India, on 8th April 2016 has notified the Solid Waste Management Rules, 2016. Under section 3, 6 and 25 of Environment (Protection) Act, 1986 in supersession of the Municipal Solid Waste (Management and Handling) Rules, 2000.*(Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Salient Features

Rules	
Rule 2	**Application:** These rules shall apply to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbours, defence establishments,

	special economic zones, State and Central government organisations, places of pilgrims, religious and historical importance as may be notified by respective State government from time to time and to every domestic, institutional, commercial and any other non residential solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio medical wastes, e-waste, lead acid batteries and radio-active waste, that are covered under separate rules framed under the Environment (Protection) Act, 1986.
Rule 3	**Definitions:** (3) "**authorization**" means the permission given by the State Pollution Control Board or Pollution Control Committee, as the case may be, to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste; (7) "**buffer zone**" means zone of no development to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total Land area allotted for the solid waste processing and disposal facility. (8) "**bulk waste generator"** means and includes buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100kg per day; (14) **"co-processing"** means use of non-biodegradable and non recyclable solid waste having calorific value exceeding 1500 kcal as raw material or as a source of energy or both to replace or supplement the natural mineral resources and fossil fuels in industrial processes; (15) **"decentralised processing"** means establishment of dispersed facilities for maximizing the processing of bio-degradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal; (17) **"domestic hazardous waste**" means discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc., generated at the household level; (20) **"dump sites"** means a land utilised by local body for disposal of solid waste without following the principles of sanitary land filling; (21) **"extended producer responsibility" (EPR)** means responsibility

	of any producer of packaging products such as plastic, tin, glass and corrugated boxes, etc., for environmentally sound management, till end-of-life of the packaging products; (28) **"informal waste collector"** includes individuals, associations or waste traders who are involved in sorting, sale and purchase of recyclable materials; (30) "**local body"** for the purpose of these rules means and includes the municipal corporation, nagar nigam, municipal council, nagar palika, nagar Palika parishad, municipal board, nagar panchayat and town panchayat, census towns, notified areas and notified industrial townships with whatever name they are called in different States and union territories in India. (33) "**operator of a facility"** means a person who owns or operates a facility for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes and also includes any other agency appointed as such by the municipal authority for management and handling of municipal solid wastes in the respective areas. (40) "**sanitary land filling** " means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, windblown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion; (41) **"sanitary waste"** means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste; (44) "**segregation**" means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture **and** dairy waste, non-biodegradable wastes including recyclable waste, non-recyclable combustible waste, sanitary waste and non-recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes; (46) **solid waste**" means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities mentioned in rule 2; (49) **"street vendor"** means any person engaged in vending of articles, goods, wares, food items or merchandise of everyday use

	or offering services to the general public, in a street, lane, side walk, footpath, pavement, public park or any other public place or private area, from a temporary built up structure or by moving from place to place and includes hawker, peddler, squatter and all other synonymous terms which may be local or region specific; and the words "street vending" with their grammatical variations and cognate expressions, shall be construed accordingly; (58) **"waste picker"** means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood.
Rule 4	**Duties of waste generators:** • Segregate bio-degradable, non-biodegradable and domestic hazardous wastes handing over to waste collectors • Securely wrap sanitary waste like diapers, sanitary pads, etc. and place in the bin meant for dry/non-biodegradable waste. • Horticulture & Garden waste-store separately and dispose accordingly. • Burning & littering of solid waste not to be undertaken • Payment of user fee for solid waste management as per bye-laws • All Resident Welfare and Market Associations, Gated communities and institution with an area >5,000 sq m and all hotels & restaurant shall ensure segregation of waste at source by the generators, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorized waste pickers or the authorized recyclers. • Bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises. • Residual waste shall be given to the waste collectors or agency • Every street vendor shall keep suitable containers for storage of waste generated during the course of his activity
Rules 5	**Duties of Ministry of Environment, Forest and Climate Change:** • MOEF &CC shall be responsible for overall monitoring the implementation of these rules in the country. • MOEF &CC shall constitute a Central Monitoring Committee under the Chairmanship of Secretary, Ministry of Environment, Forest, & Climate Change
Rules 6	Duties of Ministry of Urban Development
Rules 7	Duties of Department of Fertilisers, Ministry of Chemicals and Fertilisers.
Rules 8	Duties of Ministry of Agriculture, Government of India
Rules 9	Duties of the Ministry of Power
Rules 10	Duties of Ministry of New and Renewable Energy Sources

Rules 11	Duties of the Secretary-in-charge, Urban Development in the States and Union territories The developers of Special Economic Zone, Industrial Estate, Industrial park to earmark at least 5% of the total area of the plot or minimum 5 plots/sheds for recovery and recycling facility
Rules 12	Duties of District Magistrate or District Collector or Deputy Commissioner. The District Magistrate or District Collector or as the case may be, the Deputy Commissioner shall. a. Facilitate identification and allocation of suitable land as per clause (f) of rules 11 for setting up solid waste processing and disposal facilities to local authorities in his district in close coordination with the Secretary-in-charge of State Urban Development Department within one year from the date of notification of these rules, b. Review the performance of local bodies, at least once in a quarter on waste segregation, processing, treatment and disposal and take corrective measures in consultation with the Commissioner or Director of Municipal Administration or Director of local bodies and secretary-in-charge of the State Urban Development.
Rules 13	Duties of the Secretary-in-charge of Village Panchayats or Rural Development Department in the State and Union territory
Rules 14	Duties of Central Pollution Control Board • Shall co-ordinate with the SPCBs for implementation of these rules • Formulate the standards for ground water, ambient air, noise pollution, leachate in respect of all solid waste processing and disposal facilities. • Review the proposals of state pollution control boards or Pollution Control Committee on use of any new technologies for processing, recycling and treatment of solid waste and prescribe performance standards, emission norms for the same within 6 months. • Monitor through State Pollution Control Boards or Pollution Control Committees the implementation of these rules by local bodies; • Prepare an Annual Report on implementation of these rules on the basis of reports received from SPCBs and submit to MoEF&CC. • Publish guidelines for maintaining buffer zone restricting any residential, commercial or any other construction activity from the outer boundary of the waste processing and disposal facilities for different sizes of facilities handling more than five tons per day of solid waste. • Publish guidelines, from time to time, on environmental aspects of processing and disposal of solid waste to enable local bodies to comply with the provisions of these rules, and

	• Provide guidance to States and Union Territories on inter-state movement of waste
Rule 15	Duties and responsibilities of local authorities and village Panchayats of census towns and urban agglomerations. • Shall prepare a solid waste management plan as per State Policy within six months from the date of notification of these rules. • Arrange for door to door collection of segregated solid waste; • Integrate rag pickers/informal waste collectors in solid waste management • Frame bye-laws incorporating the provisions of these rules within one year from the date of notification of these rules; • Prescribe from time to time user fee. • Direct waste generators not to litter and to segregate the waste at source and hand over the segregated waste to authorized waste pickers or waste collector authorized by the local body. • Setup material recovery facilities or secondary storage facilities and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste. • Establish waste deposition centre/s for domestic hazardous waste and ensure safe storage and transportation of the domestic hazardous waste to the hazardous waste disposal facility or as may be directed by the state Pollution control Board
	• Direct street sweepers not to burn tree leaves collected from street sweeping and store them separately and handover to the waste collectors or agency; • provide training on solid waste management to waste-pickers and waste collectors • promote setting up of decentralized compost plant or bio-methanation plant at suitable locations in the markets or in the vicinity of markets ensuring hygienic conditions; • collect separately waste from sweeping of streets, lanes and by-lanes daily, or on alternate days or twice a week depending on the density of population. • Transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference should be given for onsite processing of such waste • Transport non-bio-degradable waste to the respective processing facility or material recovery facilities (MRF) or secondary storage facility, • Transport construction and demolition waste as per the provisions of Construction and Demolition Waste management

	Rules, 2016. • Involve communities in waste management and promotion of home composting, bio-gas generation, decentralized processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facility; • Phase out the use of chemical fertilizer in two years and use compost in all parks, gardens maintained by local authority. • Incentives may be provided to recycling initiatives by informal waste recycling sector. • Facilitate construction, operation and maintenance of solid waste processing facilities such as i. Bio-methanation, ii. Microbial composting, iii. Vermi-composting. iv. Anaerobic digestion or any other appropriate processing for bio-stabilization of biodegradable wastes v. Facilitate waste to energy processes including refused derived fuel for combustible fraction of waste or supply as feedstock to solid waste based power plants or cement kilns • Make an application in form I for grant of authorization for setting up waste processing, treatment or disposal facility if the volume of waste is exceeding five metric tones per day • Prepare and submit annual report in form IV on or before the 30th April to the Commissioner, Municipal Administration and to the respective SPCB by 31st May Every Year. • Educate workers including contract workers and supervisors for door to door collection of segregated waste and transporting the unmixed waste during primary and secondary transportation to processing or disposal facility • Ensure that the operator of a facility provides personal protection equipment including uniform, fluorescent jacket, hand gloves, raincoats, appropriate foot wear and masks to all workers handling solid waste and the same are used by the workforce • Ensure that provisions for setting up of centres for collection, segregation and storage of segregated wastes, are incorporated in building plan while granting approval of building plan of a group housing society or market complex • Frame bye-laws and prescribe criteria for levying of spot fine for persons who litters or fails to comply with the provisions of these rules and delegate powers to officers or local bodies to levy spot fines as per the bye laws framed • Create public awareness on Solid Waste Management through Information Education and Communication(IEC) campaign.

	• Stop land filling or dumping of mixed waste soon after the timeline; • Allow only the non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and pre-processing rejects & residues from waste processing facilities to go to sanitary landfill • Investigate and analyse all old open dumpsites and existing operational dumpsites for their potential of bio-mining and bio-remediation and Wheresoever feasible, take necessary actions to bio-mine or bio-remediate the sites • In absence of the potential of bio-mining and bio-remediation, it shall be scientifically capped as per landfill capping norms to prevent further damage to the environment.
Rules 16	Duties of State Pollution Control Board or Pollution Control Committee • Enforcement of the Rules in the State through Local Bodies; • Monitoring of the environmental Standards regarding groundwater, ambient air, leachate quality and compost quality for waste processing and disposal sites; • Issue of Authorisation to Local Bodies who are generating more than 5 MT/day under the SWM Rules, 2016 & Consent under Water (P&CP) Act, 1974 and Air (P&CP) Act, 1981; • Regulate Inter-State movement of waste • Submission of Annual Report in Prescribed Form V to CPCB • Shall facilitate identification and allocation of suitable land for setting up solid waste processing and disposal facilities and • Review the performance of local bodies, at least once in a quarter.
Rules 17	Duty of manufacturers or brand owners of disposable products and sanitary napkins and diapers • All manufacturers of disposable products such as tin, glass, plastics packaging etc. or brand owners who introduce such products in the market • Shall provide necessary financial assistance to local authorities for establishment of waste management system • All such brand owners who sell or market their products in such packaging material which are Non-biodegradable shall be put in place a system to collect back the same. • Manufacturers or Brand Owners of sanitary napkins and diapers Shall explore possibility of using all recyclable materials in their products or Shall provide a pouch or wrapper for disposal of each napkin or diapers along with the packet of their sanitary products • Shall educate the masses for wrapping and disposal of their

	products
Rules 18	Duties of the industrial units located within one hundred km from the refused derived fuel and waste to energy plants based on solid waste All industrial units using fuel and located within 100 km from a solid waste based RDF plant shall make arrangements to replace at least 5% of their fuel requirement by RDF so produced.
Rules 19	Criteria for Duties regarding setting-up solid waste processing and treatment facility Operator of the facility • Shall obtain necessary approvals from the SPCB or PCC. • Shall be Responsible for safe and environmentally sound operations of the facility • Shall submit annual report by 30th April to the SPCB in Form III.
Rules 20	Criteria and actions to be taken for solid waste management in hilly areas • Construction of landfill on the hill shall be avoided • A transfer station at a suitable enclosed location shall be setup to collect residual waste • A suitable land shall be identified in the plain areas down the hill within 25 kilometers for setting up sanitary landfill • The residual waste from the transfer station shall be disposed of at this sanitary landfill.
Rules 21	Criteria for waste to energy process • Non-recyclable waste having calorific value of 1500 K/cal/kg or more shall not be disposed of on land fill. • Shall only be utilized for generating energy either or through refuse derived fuel or by giving away as feed stock for preparing refuse derived fuel
Rules 22	Time frame for implementation
Rules 23	State Level Advisory Body
Rules 24	Annual Reports
Rules 25	Accident Reporting In case of an accident at any solid waste processing or treatment or disposal facility or landfill site, the Officer- in-charge of the facility shall report to the local body in Form-VI and the local body shall review and issue instructions if any, to the in-charge of the facility.
Schedules	
Schedule – I	Specifications for sanitary landfills A) Criteria for site selection B) Criteria for development of facilities at the sanitary landfills C) Criteria for specifications for land filling operations and closure on completion of land filling D) Criteria for pollution prevention E) Criteria for water quality monitoring F) Criteria for ambient air quality monitoring G) Criteria for plantation at landfill Site

	H) Criteria for post-care of landfill site I) Criteria for special provisions for hilly areas J) Closure and Rehabilitation of Old Dumps
Schedule - II	Standards of processing & treatment of solid waste A) Standards for composting B) Standards for treated leachates C) Standards for incineration
Forms	
Form 1	Application for obtaining authorisation under solid waste management rules for processing/ recycling/ treatment and disposal of solid waste
Form 2	Format for issue of authorization
Form 3	Format for annual report to be submitted by the operator of facility to the local body
Form 4	Format for annual report on solid waste management to be submitted by the local body
Form 5	Format of annual report to be submitted by the state pollution control board or pollution control committee committees to central pollution control board
Form 6	Accident reporting

CHAPTER 6

OTHER NOTIFICATIONS

6.1 ENVIRONMENT IMPACT ASSESSMENT (EIA) NOTIFICATION, 2006 *(As amended upto march 2021)* [*Source:CPCB PCLS/02/2021-2022 Seventh Edition]*

6.1.1 Environmental Clearance Procedures

Salient Features

Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

(i) All new projects or activities listed in the Schedule to this notification;

(ii) Expansion and modernization or any change in the product mix or raw material mix in existing projects or activities, listed in the Schedule to this notification, resulting in capacity beyond the threshold limits specified for the concerned sector in the said Schedule, subject to conditions and procedure provided in the sub-paragraph (ii) of paragraph 7.

Public Consultation: "Public Consultation" refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impacts of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate. All Category 'A' and Category B1 projects or activities shall undertake Public Consultation, except the following:-

(a) modernization of irrigation projects (item 1(c) (ii)of the Schedule).

(b) all projects or activities located within industrial estates or parks (item 7(c) of the Schedule) approved by the concerned authorities, and which are not disallowed in such approvals.

(c) expansion of Roads and Highways (item 7 (f) of the Schedule) which do not involve any further acquisition of land.

"(cc) maintenance dredging provided the dredging material shall be disposed within port limits

(d) All Building or Construction projects or Area Development projects (which do not contain any category 'A' projects and activities) and Townships (item 8(a) and 8(b) in the schedule to the notification)."

(e) all Category 'B2' projects and activities,

(f) all projects or activities concerning national defence and security or involving other strategic considerations as determined by the Central Government

Prior Environmental Clearance (EC) process for Expansion or Modernization or Change of product mix in existing projects:

(a) All applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or with increase in either lease area or production capacity in the case of mining projects or for the modernization of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule to this notification through change in process and or technology or involving a change in the product –mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of EIA and public consultations and the application shall be appraised accordingly for grant of environmental clearance in respect of projects or activities other than falling in clause (b) and (c).

[(b) **Existing projects (having Prior Environmental Clearance) with no increase in pollution load:** Any increase in production capacity in respect of processing or production or manufacturing sectors (listed against item numbers 2,3, 4 and 5 in the Schedule to this notification) with or without any change in (i) raw material-mix or (ii) product-mix or (ii) quantities within products or (ii) number of products including new products falling in the same category or (iv) configuration of the plant or process or operations in existing area or in areas contiguous to the existing area (for which prior environmental clearance has been granted) shall be exempt from the requirement of Prior Environmental Clearance provided that there is no increase in pollution load (derived on the basis of such Prior Environmental Clearance):

Provided that such exemption shall be applicable only consequent to –

1. the project proponent furnishing information regarding such changes along with no increase in pollution load certificate, from the environmental auditor or reputed institutions empanelled by the State Pollution Control Board or Union Territory Pollution Control Committee or Central Pollution Control Board or Ministry of Environment, Forest and Climate Change, as per the procedure laid down in Appendix- XIII, on PARIVESH portal as well as to the concerned State Pollution Control Board or Union Territory Pollution Control Committee.

   Note: If on verification, the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, after giving the project proponent the opportunity of being heard, holds that such change or expansion or modernisation results in increase in pollution load, the exemption claimed under this clause shall not be valid and it shall be deemed that the project proponent was always liable to obtain prior environmental clearance, in respect of such change or expansion or modernisation, as per the clause (a) and the provisions of Environment (Protection) Act, 1986 shall apply accordingly;

2. installation and implementation of Online Continuous Monitoring System (OCMS) with at least 95% uptime, connected to the servers of the Central Pollution Control Board and State Pollution Control Board or Union Territory

Pollution Control Committee concerned to report the quantity and quality, of emission and discharges:

Provided further that the provisions of this clause shall not be applicable if such change or increase results in change in category of project or activity from Category- 'B2' to either Category- 'A' or Category 'B1'.

(c) Any change in configuration of the plant or activity from the environmental clearance conditions during execution of the project after detailed engineering, in respect of projects or activities, falling in any item of the Schedule to this notification, shall not require prior environmental clearance, if there is no change in production capacity and there is no increase in pollution load subject to furnishing particulars of such changes on PARIVESH portal in the format as may be provided by the Government from time to time, before implementing such changes whereupon a system generated acknowledgement will be issued by the concerned Regulatory Authority.

Explanation:- For the purpose of this sub-paragraph, "Pollution load" shall be determined on the basis of multiplication of quantity and concentration of different components and parameters (as provided or referred in the Prior Environment Clearance or the Environment Impact Assessment Report (EIA) and Environment Management Plan based on which such Prior Environment Clearance has been granted), in respect of emissions, effluents or discharge, solid, industrial hazardous waste and such other parameters notified under the Environment (Protection) Rules, 1986 as amended from time to time.]

SCHEDULE
(See paragraph 2 and 7)

List of Projects or Activities requiring prior Environmental Clearance

Project or Activity		Category with threshold limit		Conditions if any
		A	B	
(1)	(2)	(3)	(4)	(5)
1	**Mining, extraction of natural resources and power generation (for a specified production capacity)**			
1(a)	Mining of minerals	> 100 ha. of mining lease area in respect of non-coal mine lease. > 150 ha of mining lease area in respect of coal mine lease Asbestos mining irrespective of mining area.	≤ 100 ha of mining lease area in respect of non-coal mine lease. ≤ 150 ha of mining lease area in respect of coal mine lease.	General Conditions shall apply except: (i) for project or activity of mining of minor minerals of Category 'B2' (up to 25 ha of mining lease area); (ii) for project or activity of mining of minor minerals of Category 'B1' in case of cluster of mining lease area; and (iii) River bed mining projects on account of inter-state boundary Note: (1) Mineral prospecting is exempted; (2) The prescribed procedure for environmental clearance for mining of minor minerals including cluster situation is given in Appendix XI; (3) The evacuation or removal and transportation of already mined out material lying within the mining leases expiring under the provisions of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957), by the previous lessee, after the expiry of the said lease, shall not form the part of the mining capacity so permitted to the successful bidder, selected through auction as per the procedure provided under that Act and the rules made thereunder.
	(ii)Slurry pipelines (coal, lignite and other ores) passing through national parks / sanctuaries / coral reefs, ecologically sensitive areas	All projects.		
1(b)	Off-shore and onshore oil and gas exploration, development and production	All projects in respect of off-shore and onshore oil and gas development and production except exploration		Note1: Seismic surveys which are part of Exploration Surveys are exempted provided the concession areas have got previous clearance for physical survey. Note 2: All project in respect

<table>
<tr><td></td><td></td><td></td><td></td><td>of off-shore and onshore oil and gas exploration are categorized as 'B2' projects".</td></tr>
<tr><td>1(c)</td><td>River Valley projects

(ii). Irrigation projects</td><td>≥ 50 MW hydroelectric power generation;

≥ 10,000 ha. of culturable command area</td><td>≥ 25 MW and < 50 MW hydroelectric power generation;

(ii) > 2000 ha. and < 10,000 ha. of culturable command area</td><td>General Condition shall apply.
Note:- (i) Category 'B' river valley projects falling in more than one state shall be appraised at the central Government Level.

(ii) Change in irrigation technology having environmental benefits (eg. From flood irrigation to Drip irrigation etc.) by an existing project, leading to increase in Culturable Command Area but without increase in dam height and submergence, will not require amendment/ revision of EC.</td></tr>
<tr><td colspan="4"><table>
<tr><td>Irrigation system</td><td>Requirement of EC</td></tr>
<tr><td>(a) Minor Irrigation system (≤ 2000 Ha)</td><td>Exempted</td></tr>
<tr><td>(b) Medium irrigation system (> 2000 and < 10,000 ha.)</td><td>Required to prepare EMP and to be dealt at State Level (B2 category).</td></tr>
<tr><td>(c) Major irrigation system (≥ 10,000 to < 50,000 ha)</td><td>Required to prepare EIA/EMP and to be dealt at State Level (B1 category).</td></tr>
</table></td></tr>
<tr><td>1(d)</td><td>Thermal Power Plants</td><td>>500MW (coal/lignite/ naphtha and gas based);

>50MW (all other fuels except biomass)

>20MW (using municipal solid non hazardous waste, as fuel)</td><td>>5 MW to <500 MW (coal/ lignite /naphtha and gas based);

< 50MW≥5MW(all other fuels except biomass and municipal solid non-hazardous waste)

<20 MW > 15 MW (using municipal solid non-hazardous waste as fuel)

>15MW plants based on biomass fuel</td><td>General condition shall apply

Note:
a. Thermal Power plants upto 15 MW, based on biomass or non-hazardous municipal solid waste using auxiliary fuel such as coal, lignite/ petroleum products up to 15% are exempt.

b. Thermal Power plants using waste heat boilers without any auxiliary fuel are exempt.</td></tr>
<tr><td>1(e)</td><td>Nuclear power Projects and processing of nuclear fuel</td><td>All projects</td><td>-</td><td></td></tr>
<tr><td>2</td><td colspan="4">Primary Processing</td></tr>
<tr><td>2(a)</td><td>Coal washeries</td><td>>1million ton/annum through put of coal</td><td><1million ton/annum Through put of coal</td><td>General Condition shall apply
(If located within mining area the proposal shall be appraised together with the</td></tr>
</table>

				mining proposal)
2(b)	Mineral Beneficiation	>0.5 million TPA through put	<0.5 million TPA through put	General Condition shall apply (Mining proposal with Mineral beneficiation shall be appraised together for grant of clearance)
3	**Materials Production**			
3(a)	Metallurgical Industries (ferrous & non-ferrous**)**	a)Primary metallurgical industry All projects b)Sponge iron manufacturing >200TPD c)Secondary metallurgical processing industry All toxic and heavy metal producing units ≥20,000 tonnes /annum	Sponge iron manufacturing <200TP Secondary metallurgical processing industry i.)All toxic and heavy metal producing units <20,000tonnes/ annum ii.) All other non–toxic secondary metallurgical processing industries >5000tonnes/annum	General condition shall apply. Note: i) The recycling industrial units registered under HSM Rules, are exempted. ii) In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electric arc furnace, submerged arc furnace, and cupola with capacity more than 30000 tonnes per annum (TPA) would require environmental clearance. (iii) Plants/units other than power plants (given against entry no.1(d) of Schedule), based on municipal solid waste (non- hazardous) are exempted.
3(b)	Cement plants	≥1.0 million tonnes/ annum production capacity	<1.0 million tonnes/ annum production capacity. All Standalone grinding units	General Condition shall apply Note:- 1. Fuel for cement industry may be coal, pet coke, mixture of coal and pet coke and co-processing of waste provided it meets the emission standards. 2. The manufacturing of composite cement by plants having environmental clearance for manufacturing Ordinary Portland Cement (OPC), Port-land Pozzolana Cement (PPC) and Portland Slag Cement (PSC) shall be exempt provided the production is within sanctioned capacity.
4	**Materials Processing**			
4(a)	Petroleum refining Industry	All projects	-	-

4(b)	(i) Coke oven plants (ii) Coal tar processing units	>2,50,000 tonnes/ annum -	<2,50,000and ≥25,000tonnes/ annum All projects	General conditions shall apply.
4(c)	Asbestos milling and asbestos based products	All projects	-	-
4(d)	Chlor-alkali Industry	≥300TPD production capacity if a unit is located outside the notified industrial area / estate.	(i) All projects irrespective of the size, if it is located in a Notified Industrial Area/Estate. (ii) <300 TPD and located outside a Notified Industrial Area/Estate	General as well as specific conditions shall apply. No new Mercury Cell based plants will be permitted and existing units converting to membrane cell technology are exempted from this Notification.
4(e)	Soda ash Industry	All projects	-	-
4(f)	Skin/hide processing including tanning industry	New projects outside the industrial area or expansion of existing units outside the industrial area	All new or expansion of Projects located within a notified industrial area/ estate.	General as well as specific conditions shall apply.
5	**Manufacturing/Fabrication**			
5(a)	Chemical Fertilizers	All projects including all Single Super Phosphate with H_2SO_4 production except granulation of chemical fertilizers	All Single Super Phosphate without H_2SO_4 production and granulation of chemical fertilizers	General conditions shall apply. •Granulation of single super phosphate powder is exempt. •Neem coating of fertilizers is exempt provided that the total production does not exceed the sanctioned capacity in EC plus the weight of the coating material used. •Fortification of fertilizers is exempt provided that the total production does not exceed the sanctioned capacity in EC plus the weight of the fortification material used.
5(b)	Pesticides industry and pesticide specific intermediates (excluding formulations)	All units producing Technical grade pesticides	-	-
5(c)	Petro-chemical Complexes	All projects	-	-

	(industries based on processing of petroleum fractions and natural gas and/or reforming to aromatics)			
5(d)	Manmade fibres manufacturing	Rayon	Others	General Condition shall apply
5(e)	Petroleum products and Petrochemical based processing such as production of carbon black and electrode grade graphite (processes other than cracking & reformation and not covered under the complexes)	Located outside the notified industrial area/ estate	Located in a notified industrial area/ estate	General as well as Specific conditions shall apply. **Note:** Manufacturing of products from polymer granules is exempt.
5(f)	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	Located outside the notified industrial area/ estate except small units as defined in column (5)	(i) Located in a notified industrial area/ estate (ii) Small units as defined in column(5)	General as well as Specific conditions shall apply. Small units with water consumption <25m^3/day, fuel consumption <25TPD and not covered in the category of MAH units as per the Management, Storage and Import of Hazardous Chemical Rules, 1989. All proposals for projects or activities in respect of Active Pharmaceutical Ingredients (API), received up to the 30th March, 2021, shall be appraised, as Category 'B2' projects, provided that any subsequent amendment or expansion or change in product mix, after the 30th March, 2021, shall be considered as per the provisions in force at
5(g)	Distilleries	Molasses based distilleries >100KLD Non-molasses based distilleries >200KLD	Molasses based distilleries ≤100KLD Non-molasses based distilleries	General Condition shall apply. ***Note:*** *Expansion of sugar manufacturing units or distilleries, having Prior Environment clearance and*

			≤200KLD	*for production of ethanol, to be used as fuel for blending only as certified by the competent authority, shall be appraised as Category 'B2' projects.;*
5(h)	Integrated paint Industry	-	All projects	General Condition shall apply
5(i)	Pulp and paper industry	Pulp manufacturing and Pulp & Paper manufacturing industry except from waste paper	Paper manufacturing from waste paper and paper manufacturing from waste paper pulp and other ready pulp	General Condition shall apply *Note:-* Paper manufacturing from waste paper pulp and ready pulp without deinking, bleaching and colouring is exempt.
5(j)	Sugar Industry	-	≥ 5000 tcd cane crushing capacity	General Condition shall apply
6	**Service Sectors**			
6(a)	Oil & gas transportation pipeline (crude and refinery /petrochemical products)**,** passing through national parks/ sanctuaries/coral reefs/ecologically sensitive areas including LNG Terminal	All projects		-
7	**Physical Infrastructure including Environmental services**			
7 (a)	Air Ports	All projects including airstrips, which are for commercial use.		Note: Airstrips, which do not involve bunkering/ refueling facility and or Air Traffic Control, are exempted.
7 (b)	All Ship breaking yards including ship breaking units	All projects	-	-
7 (c)	Industrial estates/ Parks/ Complexes /areas, export processing zones (EPZs), Special Economic Zones (SEZs), Biotech parks, leather Complexes	If at least one industry in the proposed industrial estate falls under the category A, entire industrial area shall be treated as category A, irrespective of the area. Industrial estates with area greater than 500 ha. and housing at least one	Industrial estate housing at least one category B industry and area <500 ha Industrial estates of area > 500 ha and not housing any industry belonging to Category A or B	General as well as specific Conditions shall apply. Note: 1) Industrial Estate of area below 500 ha and not housing any industry of Category A or B does not require clearance. 2) If the area is less than 500 ha. but contains building and construction projects less than 20,000 sq. mtr. and or development area more than 50 ha it will

		category B industry		be treated as activity listed at Serial No. 8(a) or 8(b) in the Schedule, as the case may be.
7 (d)	Common hazardous waste treatment storage and disposal facilities (TSDFs)	All integrated facilities having incineration and landfill or incineration alone	All facilities having land fill only	General Condition shall apply
7 (da)	Bio-medical Waste Treatment Facilities	-	All Projects	
7 (e)	Ports, Harbours, break waters, dredging.	>5 million TPA of cargo handling capacity (excluding fishing harbors)	< 5 million TPA of cargo handling capacity and/or ports/ harbors <10,000 TPA of fish handling capacity	General Condition shall apply Note: 1. Capital dredging inside and outside the ports or harbors and channels are included. 2. Maintenance dredging is exempt provided it formed part of the original proposal for which environmental management plan (EMP) was prepared and environmental clearance obtained.
7 (f)	Highways	i) New national highways and ii) Expansion of National Highways greater than 100km involving additional right of way or land acquisition greater than 40m on existing alignments and 60m on re-alignments or by-passes.	(i) All New State Highway Projects (ii)State Highways expansion projects in hilly terrain (above 1000 m AMSL) and or in ecologically sensitive areas	"General condition shall apply. Note: Highways include expressways".
7 (g)	Aerial ropeways	(i) All projects located at altitude of 1000 mtr and above. (ii) All projects located in notified ecologically sensitive areas.	All projects except those covered in Column (3)	General Condition shall apply
7 (h)	Common Effluent Treatment Plants (CETPs)		All projects	General Condition shall apply Note: Environmental clearance for CETPs setup for or within projects or activities which do not require environmental clearance are exempted, and if any of the existing or proposed member units of the said CETP produces or proposes to produce any product requiring environmental clearance, then the CETP shall need

				environmental clearance
7 (i)	Common Municipal solid waste Management Facility (CMSWMF)		All projects	General Condition shall apply
8	**Building/Construction projects/Area Development projects and Townships as well as for industrial sheds, educational institutions, hospitals and hostels for educational institutions**			
8(a)	Building and Construction projects		> 20000 sq. meters and< 1, 50,000 sq. meters. of built up area	The term "built up area" for the purpose of this notification the built up or covered area on all floors put together including its basement and other service areas, which are proposed in the building or construction projects. **Note1**- The projects or activities shall not include industrial shed, school, college, hostel for educational institution, but such buildings shall ensure sustainable environmental management, solid and liquid waste management, rain water harvesting and may use recycled materials such as fly ash bricks. **Note 2** – "General conditions" shall not apply.
8(b)	Townships and Area Development projects.		Covering an area of >50 ha and or built up area > 1,50,000 sq. mtrs	A project of Township and Area Development Projects covered under this item shall require an Environment Assessment report and be appraised as Category 'B1' Project. Note: "General Conditions" shall not apply.

Note:-

General Condition (GC):

Any project or activity specified in Category 'B' will be appraised at the Central level as Category A, if located in whole or in part with in 5km from the boundary of: (i) protected are as notified under the Wildlife (Protection) Act,1972; (53 of 1972),(ii)Critically polluted are as a side notified by the Central Pollution Control Board constituted under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974)from time to time; (iii) Eco-sensitive areas as notified under sub-section (2) of section 3 of the Environment (Protection) Act, 1986, and (iv) inter-State boundaries and international boundaries, provided that for River Valley Projects specified in item 1(c), Thermal Power Plants specified in item 1(d), Industrial estates/parks/complexes/ areas, export processing zones (EPZs), Special Economic Zones (SEZs), biotech parks, leather complexes specified in item 7(c) and common hazardous waste treatment, storage and disposal facilities (TSDFs)

specified in item 7(d), the appraisal shall be made at Central level even if located within 10km.

Provided further that the requirement regarding distance of 5km or 10 km, as the case may be, of the inter-State boundaries can be reduced or completely done away with by an agreement between the respective States or Union Territories sharing the common boundary in case the activity does not fall within 5 km or 10 km, as the case may be of the area mentioned at item (i), (ii) and (iii) above.

Appendixes to EIA Notification, 2006

Appendix – I	Form-I – Application for Prior Environmental Clearance
Appendix – I	Form 1-A : Application only for Construction projects listed under Item 8 of Schedule
Appendix – III	Generic structure of environmental impact assessment document
Appendix - IIIA	Contents of summary environmental impact assessment
Appendix – IV	Procedure for conduct of public hearing
Appendix – V	Procedure prescribed for appraisal
Appendix - VI	Composition of the sector/ project specific expert appraisal committee (EAC) for category a projects and the State/UT level expert appraisal committees (SEACs) for category B projects to be constituted by the central government
Appendix - VII	Qualifications and terms for the experts in DEIAA and DEAC
Appendix - VIII	Application for mining of minor minerals under category 'B-2' for less than and equal to five hectare
Appendix – IX	Exemption of certain cases from requirement of environment clearance

Note: *Visit the website https://parivesh.nic.in/ for the updated guidelines issued by the Ministry of Environment , Forest and Climate Change from time to time.*

6.1.2 Modalities for making CTE and EC a one step process

Copy of:-

F.No. 3-3/2019-IA.III
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division
Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj, New Delhi – 110003
sharath.kr@gov.in
Date: 5th February, 2020

OFFICE MEMORANDUM

Subject: Modalities for making CTE and EC a one step process – regarding

In order to expedite the process of CTE, CPCB vide letter dated 02.02.2017 issued an advisory to all the SPCBs/PCCs to follow the modified mechanism for granting consent to various categories of industries as:-

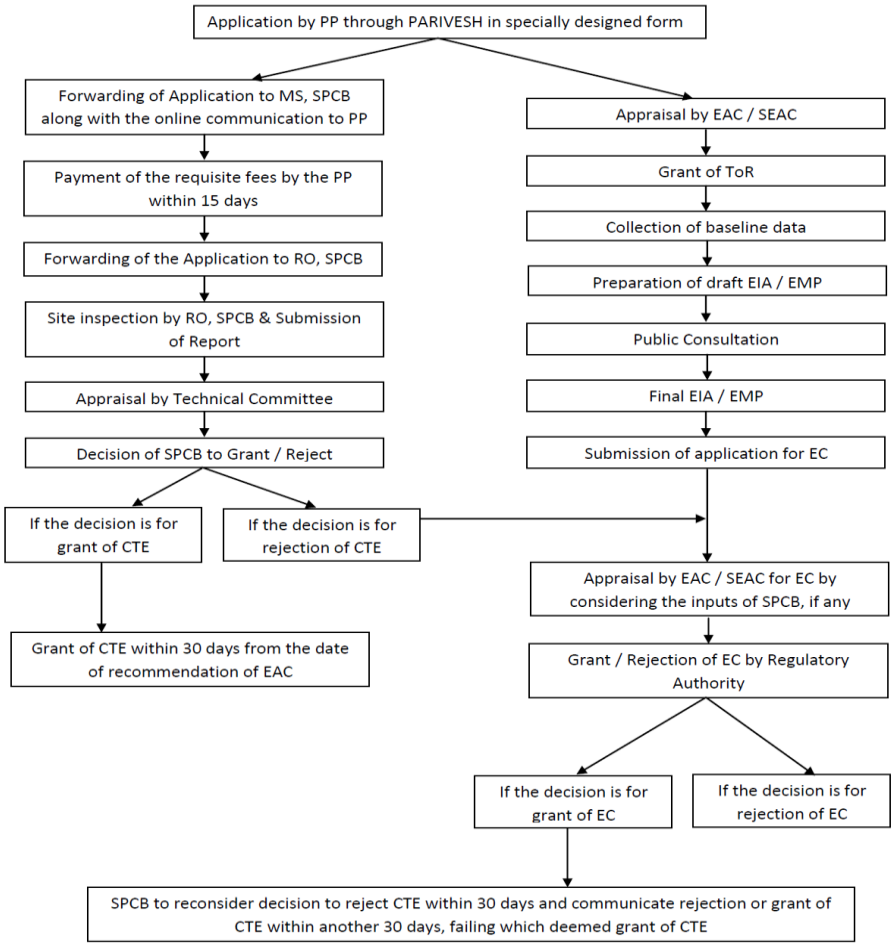
"All the projects requiring Environmental Clearance may be exempted from obtaining the Consent to Establish (CTE). Such projects may be directly granted Consent to Operate subject to EC and installation of pollution control devices".

2. Further, CPCB issued the directions under Section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981 regarding streamlining of consent mechanism vide

Letter No. B-29012/MSMEs/IPC-VI/2017-18/12189-12230 dated 2nd November, 2018.

3. The Hon'ble High Court of Delhi has stayed the directions of the CPCB vide order dated 2nd November 2018 in W.P. (CIVIL) 13521 of 2018 in the matter of Social Action for Forest and Environment vs. Union of India and Ors. The CPCB has further informed that a similar case has also been filed before Hon'ble High Court of Madras (WP No.3046 of 2019 and WMP No. 3316 & 3320 of 2019).

4. A meeting was convened under chairmanship of Secretary, Environment, Forest and Climate Change with CPCB and after detailed deliberations, the following mechanism of one step process of CTE and EC has been decided.



Provided:-

i. If the PP fails to pay the requisite fee, grant of CTE will be at the discretion of the SPCB/UTPCC concerned;

ii. If the decision for rejection of CTE is not communicated by SPCB/UTPCC to the Ministry or SEIAA, as the case may be, before the meeting of EAC, it will be deemed that there are no specific comments / objections to the SPCB/UTPCC.

iii. In case of deemed grant of CTE, the conditions of the EC will also be applicable for the deemed CTE.

iv. The deemed clause may not be applicable for cases, where public consultation is exempted for grant of EC.

5. The above mechanism may be followed while granting EC and CTE.
6. This issues with the approval of the competent authority.

Sd/-**(Sharath Kumar Pallerla)**
Scientist 'F', IA (Policy) Division

6.1.3 Dust Mitigation Measures for Construction and Demolition Activities

106). Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance: *(Source: G.S.R. 94(E) dated 25th January, 2018)*

(i) No building or infrastructure project requiring Environmental Clearance shall be implemented without approved Environmental Management Plan inclusive of dust mitigation measures.

(ii) Roads leading to or at construction sites must be paved and blacktopped (i.e. metallic roads).

(iii) No excavation of soil shall be carried out without adequate dust mitigation measures in place.

(iv) No loose soil or sand or Construction & Demolition Waste or any other construction material that causes dust shall be left uncovered.

(v) Wind-breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided.

(vi) Water sprinkling system shall be put in place.

(vii) Dust mitigation measures shall be displayed prominently at the construction site for easy public viewing.

107). Mandatory Implementation of Dust Mitigation Measures for all Construction and Demolition Activities:

(i) Grinding and cutting of building materials in open area shall be prohibited.

(ii) Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.

(iii) No uncovered vehicles carrying construction material and waste shall be permitted.

(iv) Construction and Demolition Waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site.

Note : The serial numbers 106 and 107 above shall apply to cities and towns where value of particulate matter 10/ particulate matter 2.5 exceeds the prescribed limits in National Ambient Air Quality Standards.

6.2 COSTAL REGULATION ZONE NOTIFICATION, 2019 *(as amended upto November 2021) [Source: MoEF, GoI Notification G.S.R. 37(E) dated 18th January, 2019, S.O. 4886 (E) dated 26.11.2021]*

Salient Features

As per the notification, the Central Government declares the coastal stretches as under:-

(i) The land area from High Tide Line (hereinafter referred to as the HTL) to 500 meters on the landward side along the sea front.

(ii) CRZ shall apply to the land area between HTL to 50 meters or width of the creek, whichever is less on the landward side along the tidal influenced water bodies that are connected to the sea and the distance upto which development along such tidal influenced water bodies is to be regulated shall be governed by the distance upto which the tidal effects are experienced which shall be determined based on salinity concentration of five parts per thousand (ppt) measured during the driest period of the year and distance up to which tidal effects are experienced shall be clearly identified and demarcated accordingly in the Coastal Zone Management Plan (hereinafter referred to as the CZMP): Provided that the CRZ limit of 50 meters or width of the creek whichever is less, shall be subject to revision and final approval of the respective CZMPs as per this notification, framed with due consultative process, public hearing etc. and environmental safeguards enlisted therein, and till such time the CZMP to this notification is approved, the limit of 100 meters or width of the creek whichever is less, shall continue to apply. Explanation.- For the purposes of this sub-paragraph the expression "tidal influenced water bodies" means the water bodies influenced by tidal effects from sea in the bays, estuaries, rivers, creeks, backwaters, lagoons, ponds that are connected to the sea.

(iii) The "intertidal zone" means land area between the HTL and the Low Tide Line (hereinafter referred to as the LTL).

(iv) The water and the bed area between the LTL to the territorial water limit (12 Nm) in case of sea and the water and the bed area between LTL at the bank to the LTL on the opposite side of the bank, of tidal influenced water bodies.

2.0 Classification of CRZ. – For the purpose of conserving and protecting the coastal areas and marine waters, the CRZ area shall be classified as follows, namely: -

2.1 CRZ-I areas are environmentally most critical and are further classified as under: **2.1.1 CRZ-I A:**

(a) CRZ-I A shall constitute the following ecologically sensitive areas (ESAs) and the geomorphological features which play a role in maintaining the integrity of the coast viz.:

(i) Mangroves (in case mangrove area is more than 1000 square meters, a buffer of 50 meters along the mangroves shall be provided and such area shall also constitute CRZ–I A);

(ii) Corals and coral reefs;

(iii) Sand dunes;

(iv) Biologically active mudflats;

(v) National parks, marine parks, sanctuaries, reserve forests, wildlife habitats and other protected areas under the provisions of Wild Life (Protection) Act, 1972 (53 of 1972), Forest (Conservation) Act, 1980 (69 of 1980) or Environment (Protection) Act, 1986 (29 0f 1986), including Biosphere Reserves, except in the case of the Sundarbans Biosphere Reserve, wherein, the categorization of CRZ and delineation of the HTL and CRZ boundaries shall be done in consonance with the provisions of this Notification".

(vi) Salt marshes;

(vii) Turtle nesting grounds;

(viii) Horse shoe crabs' habitats;

(ix) Sea grass beds;

(x) Nesting grounds of birds;

(xi) Areas or structures of archaeological importance and heritage sites.

(b) A detailed environment management plan shall be formulated by the states and Union territories for such ecologically sensitive areas in respective territories, as mapped out by the National Centre for Sustainable Coastal Management (NCSCM), Chennai based on guidelines as contained in Annexure-I to this notification and integrated with the CZMP.

2.1.2 CRZ-I B: The intertidal zone i.e. the area between Low Tide Line and High Tide Line shall constitute the CRZ-I B.

2.2 CRZ-II:

CRZ-II shall constitute the developed land areas up to or close to the shoreline, within the existing municipal limits or in other existing legally designated urban areas, which are substantially built-up with a ratio of built-up plots to that of total plots being more than 50 per cent and have been provided with drainage and approach roads and other infrastructural facilities, such as water supply, sewerage mains, etc.

2.3 CRZ-III:

Land areas that are relatively undisturbed (viz. rural areas, etc.) and those which do not fall under CRZ-II, shall constitute CRZ–III, and CRZ-III shall be further classified into following categories: -

2.3.1 CRZ-III A:

Such densely populated CRZ-III areas, where the population density is more than 2161 per square kilometre as per 2011 census base, shall be designated as CRZ–III A and in CRZ-III A, area up to 50 meters from the HTL on the landward side shall be earmarked as the 'No Development Zone (NDZ)', provided the CZMP as per this notification, framed with due consultative process, have been approved, failing which, a NDZ of 200 meters shall continue to apply.

2.3.2 CRZ-III B:
All other CRZ-III areas with population density of less than 2161 per square kilometre, as per 2011 census base, shall be designated as CRZ-III B and in CRZ-III B, the area up to 200 meters from the HTL on the landward side shall be earmarked as the 'No Development Zone (NDZ)'.

2.3.3:
Land area up to 50 meters from the HTL, or width of the creek whichever is less, along the tidal influenced water bodies in the CRZ III, shall also be earmarked as the NDZ in CRZ III.

Note: The NDZ shall not be applicable in the areas falling within notified Port limits.

2.4 CRZ- IV:
The CRZ- IV shall constitute the water area and shall be further classified as under:-**2.4.1 CRZ- IVA:** The water area and the sea bed area between the Low Tide Line up to twelve nautical miles on the seaward side shall constitute CRZ-IV A.

2.4.2 CRZ- IVB:
CRZ-IV B areas shall include the water area and the bed area between LTL at the bank of the tidal influenced water body to the LTL on the opposite side of the bank, extending from the mouth of the water body at the sea up to the influence of tide, i.e., salinity of five parts per thousand (ppt) during the driest season of the year.

3.0 Areas requiring special consideration in the CRZ.- Following coastal areas shall be accorded special consideration for the purpose of protecting the critical coastal environment and difficulties faced by local communities: -

3.1 Critically Vulnerable Coastal Areas (CVCA):

Sundarban region of West Bengal and other ecologically sensitive areas identified as under Environment (Protection) Act, 1986 such as Gulf of Khambat and Gulf of Kutchh in Gujarat, Malvan, Achra-Ratnagiri in Maharashtra, Karwar and Coondapur in Karnataka, Vembanad in Kerala, Gulf of Mannar in Tamil Nadu, Bhaitarkanika in Odisha, Coringa, East Godavari and Krishna in Andhra Pradesh shall be treated as Critical Vulnerable Coastal Areas (CVCA) and managed with the involvement of coastal communities including fisher folk who depend on coastal resources for their sustainable livelihood.

3.2 CRZ for inland Backwater islands and islands along the mainland coast.

3.3 CRZ falling within municipal limits of Greater Mumbai.

4. Prohibited activities within CRZ.- The following activities shall be prohibited, in general, within the entire CRZ and exceptions to these and other permissible and regulated activities in specific CRZ categories viz. CRZ-I, II, III and IV, shall be governed by the provisions of paragraph 5:-

(i) Setting up of new industries and expansion of existing industries, operations or processes.

(ii) Manufacture or handling of oil, storage or disposal of hazardous substances as specified in the notification of the Ministry of Environment, Forest and Climate Change number G.S.R.395 (E), dated the 4th April, 2016.

(iii) Setting up of new fish processing units.

(iv) Land reclamation, bunding or disturbing the natural course of seawater except for the activities permissible under this notification and executed with prior permission from the competent authority.

(v) Discharge of untreated waste and effluents from industries, cities or towns and other human settlements.

(vi) Dumping of city or town wastes including construction debris, industrial solid wastes, fly ash for the purpose of land filling.

(vii) Port and harbour projects in high eroding stretches of the coast.

(viii) Mining of sand, rocks and other sub-strata materials.

(ix) Dressing or altering of active sand dunes.

(x) In order to safeguard the aquatic system and marine life, disposal of plastic into the coastal waters shall be prohibited and adequate measures for management and disposal of plastic materials shall be undertaken in the CRZ.

(xi) Drawal of ground water.

5. Regulation of permissible activities in CRZ:

5.1 CRZ-I:

5.1.1 CRZ–IA:

These areas are ecologically most sensitive and generally no activities shall be permitted to be carried out in the CRZ-I A area, with following exceptions:-

(i) Eco-tourism activities such as mangrove walks, tree huts, nature trails, etc., in identified stretches areas subject to such eco-tourism plan featuring in the approved CZMP as per this notification, framed with due consultative process, public hearing, etc. and further subject to environmental safeguards and precautions related to the Ecologically Sensitive Areas, as enlisted in the CZMP.

(ii) In the mangrove buffer, only such activities shall be permitted like laying of pipelines, transmission lines, conveyance systems or mechanisms and construction of road on stilts, etc. that are required for public utilities.

(iii) Construction of roads and roads on stilts, by way of reclamation in CRZ-I areas, shall be permitted only in exceptional cases for defence, strategic purposes and public utilities, subject to a detailed marine or terrestrial or both environment impact assessment, to be recommended by the Coastal Zone Management Authority and approved by the Ministry of Environment, Forest and Climate Change; and in case construction of such roads passes through mangrove areas or is likely to damage the mangroves, a minimum three times the mangrove area affected or destroyed or cut during the construction process shall be taken up for compensatory plantation of mangroves.

5.1.2 CRZ-I B - The inter tidal areas:

Activities shall be regulated or permissible in the CRZ-I B areas as under:-

(i) Land reclamation, bunding, etc. shall be permitted only for activities such as,-

(a) foreshore facilities like ports, harbours, Jetties, wharves, quays, slipway, bridges, hover ports for coast guard, sea links, etc;

(b) projects for defence, strategic and security purposes;

(c) road on stilts, provided that such roads shall not be authorised for permitting development on the landward side of such roads, till the existing High Tide Line:

Provided that the use of reclaimed land may be permitted only for public utilities such as mass rapid or multimodal transit system, construction and installation of all necessary associated public utilities and infrastructure to operate such transit or transport system including those for electrical or electronic signalling system, transit stopover of permitted designs; except for any industrial operation, repair or maintenance;

(d) measures for control of erosion;

(e) maintenance and clearing of waterways, channels, ports and hover ports for coast guard;

(f) measures to prevent sand bars, installation of tidal regulators, laying of storm water drains or for structure for prevention of salinity ingress and freshwater recharge.

(ii) Activities related to waterfront or directly needing foreshore facilities such as ports and harbours, jetties, quays, wharves, erosion control measures, breakwaters, pipelines, lighthouses, navigational safety facilities, coastal police stations, Indian coast guard stations and the like.

(iii) Power by non-conventional energy sources and associated facilities.

(iv) Transfer of hazardous substances from ships to Ports, terminals and refineries and vice versa.

(v) Facilities for receipt and storage of petroleum products and liquefied natural gas as specified in Annexure-II to this notification, subject to implementation of safety regulations including guidelines issued by the Oil Industry Safety Directorate in the Ministry of Petroleum and Natural Gas and guidelines issued by the Ministry of Environment, Forest and Climate Change, provided that such facilities are for receipt and storage of fertilizers and raw materials required for fertilizers, like ammonia, phosphoric acid, sulphur, sulphuric acid, nitric acid, etc.

(vi) Storage of non-hazardous cargo i.e. edible oil, fertilizers and food grains in notified Ports.

(vii) Hatchery and natural fish drying.

(viii) Existing fish processing units may utilise 25% additional plinth area for modernisation purposes (only for additional equipment and pollution control measures) subject to the following:-

(a). Floor Space Index of such reconstruction not exceeding the permissible Floor Space Index as per prevalent town and country planning regulations;

(b). additional plinth area is constructed only to the landward side.

(c). approval of the concerned State Pollution Control Board or Pollution Control Committee.

(ix) Treatment facilities for waste and effluents and conveyance of treated effluents.

(x) Storm water drains.

(xi) Projects classified as strategic, defence related projects and projects of the Department of Atomic Energy, Government of India.

(xii) Manual mining of atomic mineral(s) notified under Part-B of the First Schedule to the Mining and Minerals (Development and Regulation) Act, 1957)(67 of 1957) occurring as such or in association with one or other minerals in the intertidal zone by such agencies as authorised by the Department of Atomic Energy, Government of India as per mining plan approved by the Atomic Mineral Directorate for Exploration and Research:

Provided that the manual mining operations shall be carried out only by deploying persons using baskets and hand spades for collection of ore or mineral within the intertidal zone and as per approved mining plan, without deploying or using drilling and blasting or Heavy Earth Moving Machinery in the intertidal zone.

(xiii) Exploration and extraction of oil and natural gas and all associated activities and facilities thereto;

(xiv) Foreshore requiring facilities for transport of raw materials, facilities for intake of cooling water, intake water for desalination plants, etc, and outfall for discharge of treated wastewater or cooling water from thermal power plants in conformity with the environmental standards notified by Ministry of Environment, Forest and Climate Change and relevant directions of Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC), as the case may be.

(xv) Pipelines, conveying systems including transmission lines.

(xvi) Weather radar for monitoring of cyclones prediction, ocean observation platforms, movement and associated activities.

(xvii) Salt harvesting and associated facilities.

(xviii) Desalination plants and associated facilities.

(xix) Collection of dead shells by traditional communities for poultry and animal feed supplements and shall not require prior CRZ clearance;"

5.2 CRZ-II:

(i) Activities as permitted in CRZ-I B, shall also be permissible in CRZ-II, in so far as applicable.

(ii) Construction of buildings for residential purposes, schools, hospitals, institutions, offices, public places, etc. shall be permitted only on the

landward side of the existing road, or on the landward side of existing authorised fixed structures: Provided that no permission for construction of buildings shall be given on landward side of any new roads which are constructed on the seaward side of an existing road.

(iii) Buildings permitted as in (ii) above, shall be subject to the local town and country planning regulations as applicable from time to time, and the norms for the Floor Space Index (FSI) or Floor Area Ratio (FAR) prevailing as on the date of this Notification, and in the event that there is a need for amendment of the FSI after the date of publication of this notification in the official Gazette, the Urban Local Body or State Government or Union territory Administration shall approach the Ministry of Environment, Forest and Climate Change through the concerned State Coastal Zone Management Authority (SCZMA) or Union Territory Coastal Zone Management Authority, as the case may be and the SCZMA shall forward the proposal to the National Coastal Zone Management Authority (NCZMA) with its views in the matter, and the NCZMA shall thereafter examine various aspects like availability of public amenities, environmental protection measures, etc., and take a suitable decision on the proposal and it shall be the responsibility of the concerned Town Planning Authority to ensure that the Solid Wastes are handled as per respective Solid Waste Management Rules and no untreated sewage is discharged on to the coast or coastal waters.

(iv) Reconstruction of authorised buildings shall be permitted, without change in present land use, subject to the local town and country planning regulations as applicable from time to time, and the norms for the Floor Space Index or Floor Area Ratio, prevailing as on the date of publication of this notification in the official Gazette and in the event that there is a need for amendment of the FSI after the said date of this notification, the Urban Local Body or State Government or Union territory Administration shall approach the Ministry of Environment, Forest and Climate Change through the concerned State Coastal Zone Management Authority (SCZMA) or Union Territory Coastal Zone Management Authority, as the case may be and the CZMA shall forward the proposal to the National Coastal Zone Management Authority (NCZMA) with its views in the matter, and the NCZMA shall thereafter examine various aspects like availability of public amenities, environmental protection measures etc,. and take a suitable decision on the proposal and it shall be the responsibility of the concerned Town Planning Authority to ensure that the Solid Wastes are handled as per respective Solid Waste Management Rules and no untreated sewage is discharged on to the coast or coastal waters.

(v) Development of vacant plots in designated areas for construction of beach resorts or hotels or tourism development projects subject to the conditions or guidelines at Annexure-III to this notification.

(vi) Temporary tourism facilities shall be permissible in the beaches which shall only include shacks, toilets or washrooms, change rooms, shower panels; walk ways constructed using interlocking paver blocks, etc, drinking water facilities, seating arrangements, etc. and such facilities shall however be

permitted only subject to the tourism plan featuring in the approved CZMP as per this notification, framed with due consultative process or public hearing, etc. and further subject to environmental safeguards enlisted in the CZMP, however, a minimum distance of 10 meter from HTL shall be maintained for setting up of such facilities.

5.3 CRZ-III:

(i) Activities as permitted in CRZ-I B, shall also be permissible in CRZ-III, in so far as applicable.

(ii) **Regulation of activities in NDZ:**

Following shall be permissible and regulated in the NDZ:-

(a) No construction shall be permitted within NDZ in CRZ III, except for repairs or reconstruction of existing authorised structure not exceeding existing Floor Space Index, existing plinth area and existing density and for permissible activities under this notification including facilities essential for activities and construction or reconstruction of dwelling units of traditional coastal communities including fisher folk, incorporating necessary disaster management provisions and proper sanitation arrangements.

(b) Agriculture, horticulture, gardens, pastures, parks, playfields and forestry.

(c) Construction of dispensaries, schools, public rain shelter, community toilets, bridges, roads, provision of facilities for water supply, drainage, sewerage, crematoria, cemeteries and electric sub-station which are required for the local inhabitants may be permitted on a case to case basis by Coastal Zone Management Authority (CZMA).

(d) Construction of units or auxiliary thereto for domestic sewage, treatment and disposal with the prior approval of the concerned Pollution Control Board or Committee.

(e) Facilities required for local fishing communities such as fish drying yards, auction halls, net mending yards, traditional boat building yards, ice plant, ice crushing units, fish curing facilities and the like.

(f) Wherever there is a national or State highway passing through the NDZ of CRZ-III areas, temporary tourism facilities such as toilets, change rooms, drinking water facility and temporary shacks can be taken up on the seaward side of the road.

On landward side of such roads in the NDZ, resorts or hotels and associated tourism facilities shall be permitted and such facilities shall, however, be permitted only subject to the incorporation of tourism plan in the approved CZMP as per this notification and the conditions or guidelines at Annexure-III, to this notification as applicable.

(g). Temporary tourism facilities shall be permissible in the NDZ and beaches in the CRZ-III areas and such temporary facilities shall only include shacks, toilets or washrooms, change rooms, shower panels,

walk ways constructed using interlocking paver blocks, etc, drinking water facilities, seating arrangements etc., and such facilities shall, however, be permitted only subject to the tourism plan featuring in the approved CZMP as per this notification subject to maintaining a minimum distance of 10 meters from HTL for setting up of such facilities.

(h). Mining of atomic minerals notified under Part-B of the First Schedule to Mining and Minerals (Development and Regulation) Act, 1957 (67 of 1957) occurring as such or in association with one or other minerals by such agencies as authorised by the Department of Atomic Energy, Government of India, as per mining plan by the Atomic Mineral Directorate for Exploration and Research.

(iii) **Regulation of activities for CRZ–III areas beyond NDZ:**

(a). Development of vacant plots in designated areas for construction of beach resorts or hotels or tourism development projects subject to the conditions or guidelines at Annexure-III to this notification.

(b). Construction or reconstruction of dwelling units, so long it is within the ambit of traditional rights and customary uses such as existing fishing villages, etc. and building permission for such construction or reconstruction will be subject to local town and country planning rules, with an overall height of construction not exceeding 9 meters and with only two floors (ground + one floor).

(c). The local communities including fishermen may be permitted to facilitate tourism through 'home stay' without changing the plinth area or design or facade of the existing houses.

(d). Construction of public rain shelters, community toilets, water supply drainage, sewerage, roads, bridges, etc.

(e). Limestone mining:

Selective mining of limestone minerals may be permitted in specific identified areas under the mining plans, which are adequately above the height of HTL, based on the recommendations of reputed National Institutes in the mining field such as Council of Scientific and Industrial Research (CSIR), Central Mining Research Institute etc., provided that the extraction of minerals shall be carried out not below a height of 1 meter above the HTL and an adequate barrier shall be created so as to safeguard against saline water incursion and subject to appropriate safeguards related to pollution of coastal waters and prevention of coastal erosion.

(f). Mining of atomic minerals notified under Part-B of the First Schedule of Mining and Minerals (Development and Regulation) Act, 1957 (67 of 1957) occurring as such or in association with one or other minerals by such agencies as authorised by Department of Atomic Energy, Government of India, as per mining plan by the Atomic Mineral Directorate for Exploration and Research.

(iv) Drawing of groundwater and construction related thereto shall be prohibited

within 200 meters of HTL except for the use of local communities in areas inhabited by them and in the areas between 200 to 500 meters of the HTL, groundwater withdrawal may be permitted only through manual means from ordinary wells for drinking, horticulture, agriculture and fisheries, etc. where no other source of water is available and restrictions for such drawal may be imposed by the designated Authority by State Government or Union territory Administration in the areas affected by sea water intrusion, however, for horticulture and agriculture purpose, micro irrigation promoted by Government welfare schemes shall be permitted.

(v) Development of airports in wastelands and non-arable lands in CRZ-III areas with adequate environmental safeguards.

5.4 CRZ-IV:

Activities shall be permitted and regulated in the CRZ IV areas as under:-

(i) Traditional fishing and allied activities undertaken by local communities.

(ii) Land reclamation, bunding, etc to be permitted only for activities such as.-

(a) foreshore facilities like ports, harbours, Jetties, wharves, quays, slipway, bridges, sea links and hover ports for coast guard ,etc;

(b) projects for defence, strategic and security purpose including coast guard;

(c) measures for control of erosion;

(d) maintenance and clearing of waterways, channels and ports;

(e) measures to prevent sand bars, installation of tidal regulators, laying of storm water drains or for structure for prevention of salinity ingress and freshwater recharge.

(iii) Activities related to waterfront or directly needing foreshore facilities, such as ports and harbours, jetties, quays, wharves, erosion control measures, breakwaters, pipelines, navigational safety facilities and the like.

(iv) Power by non-conventional energy sources and associated facilities such as offshore wind, wave energy, ocean thermal energy conversion, etc.

(v) Transfer of hazardous substances from ships to Ports.

(vi) Storage of non-hazardous cargo like edible oil, fertilizers and food grains in notified Ports.

(vii) Facilities for discharging treated effluents into the water course.

(viii) Projects classified as strategic and defence related projects including coast guard coastal security network.

(ix) Projects of department of Atomic Energy.

(x) Exploration and extraction of oil and natural gas and all associated activities and facilities thereto.

(xi) Exploration and mining of atomic minerals notified under Part-B of the First Schedule of the Mining and Minerals (Development and Regulation) Act, 1957 (67 of 1957), occurring as such or in association with other mineral(s) and of such associated mineral(s).

(xii) Foreshore requiring facilities for transport of raw materials, facilities for

intake of cooling water and outfall for discharge of treated wastewater or cooling water from thermal power plants, and foreshore requiring facilities for transport of raw materials, facilities for intake of cooling water and outfall for discharge of treated wastewater or cooling water from thermal power plants, in conformity with the environmental standards notified by Ministry of Environment, Forest and Climate Change and relevant directions of the Central Pollution Control Board or State Pollution Control Board or Pollution Control Committee.

(xiii) Pipelines, conveying systems including transmission lines.

(xiv) Weather radar for monitoring of cyclone prediction, ocean observation platforms, movement and associated activities.

(xv) Construction of memorials or monuments and allied facilities by the concerned State Government in CRZ-IV (A) areas, in exceptional cases, with adequate environmental safeguards, subject to the following, namely: -

(a) the concerned State Government shall submit justification for locating the project in CRZ–IVA area along with details of alternate sites considered and weightage matrix on various parameters including environmental parameters, to State Coastal Zone Management Authority who will examine the project and make recommendation to the Central Government (Ministry of Environment, Forest and Climate Change) for grant of Terms of Reference (ToRs) for preparation of an environmental impact assessment report by the State Government;

(b) On grant of ToRs by the Central Government, the concerned State Government shall submit the draft Environmental Impact Assessment report (EIA) with Environmental Management Plan (EMP), draft Risk Assessment Report with Disaster Management Plan (DMP) including on-site and off-site emergency plan and evacuation plan during emergency, to the State Pollution Control Board for conduct of public hearing for the proposed project in accordance with the procedure laid down under the Environment Impact Assessment (EIA) notification number S.O. 1533(E), dated the 14th September, 2006;

(c) The concerned State Government shall, after addressing the relevant issues raised by the public during the public hearing referred to in sub-item (b), submit the final EIA, EMP, Risk Assessment and DMP, to the State CZMA for their examination and recommendation to MoEF&CC;

(d) The Central Government may, if it considers necessary so to do, dispense with the requirement of public hearing referred to in sub-clause (b), if it is satisfied that the project will not involve rehabilitation and resettlement of the public or the project site is located away from human habitation.

5.5 Requirement for Clearance from Department of Atomic Energy installations: Prior to undertaking any developmental activity including construction of new structures, falling in the boundary limits specified by Atomic Energy Regulatory Board (AERB) guidelines, prior clearance shall be obtained from Department of Atomic Energy installations.

6. Coastal Zone Management Plan (CZMP)

(i) All coastal States and Union territory administrations shall revise or update their respective coastal zone management plan (CZMP) framed under CRZ Notification, 2011 number S.O. 19(E), dated 6th January, 2011, as per provisions of this notification and submit to the Ministry of Environment, Forest and Climate Change for approval at the earliest and all the project activities attracting the provisions of this notification shall be required to be appraised as per the updated CZMP under this notification and until and unless the CZMPs is so revised or updated, provisions of this notification shall not apply and the CZMP as per provisions of CRZ Notification, 2011 shall continue to be followed for appraisal and CRZ clearance to such projects.

(ii) The CZMP may be prepared or updated by the coastal State Government or Union territory by engaging reputed and experienced scientific institution(s) or the agencies including the National Centre for Sustainable Coastal Management (hereinafter referred to as the NCSCM) of Ministry of Environment, Forest and Climate Change and in consultation with the concerned stakeholders.

(iii) The coastal States and Union territories shall prepare draft CZMP in 1:25,000 scale map identifying and classifying the CRZ areas within the respective territories in accordance with the guidelines given in Annexure-IV to this notification, which involve public consultation.

All developmental activities listed in this notification shall be regulated by the State Government, Union territory administration, the local authority or the concerned Coastal Zone Management Authority within the framework of such approved CZMP, as the case may be, in accordance with provisions of this notification.

(iv) The draft CZMP shall be submitted by the State Government or Union territory to the concerned Coastal Zone Management Authority for appraisal, including appropriate consultations, and recommendations in accordance with the procedure(s) laid down in the Environment (Protection) Act, 1986 (29 of 1986).

(v) The Ministry of Environment, Forest and Climate Change shall thereafter consider and approve the respective CZMP of concerned State Governments or Union territory administrations.

(vi) The CZMP shall not normally be revised before a period of five years after which, the concerned State Government or the Union territory may consider undertaking a revision.

7. CRZ clearance for permissible and regulated activities- Delegation:

(i) All permitted or regulated project activities attracting the provisions of this notification shall be required to obtain CRZ clearance prior to their commencement.

(ii) All development activities or projects in CRZ-I and CRZ-IV areas, which are regulated or permissible as per this notification, shall be dealt with by Ministry of Environment, Forest and Climate Change for CRZ clearance, based on the recommendation of the concerned Coastal Zone Management Authority.

(iii) For all other permissible and regulated activities as per this notification, which

fall purely in CRZ–II and CRZ-III areas, the CRZ clearance shall be considered by the concerned Coastal Zone Management Authority and such projects in CRZ –II and III, which also happen to be traversing through CRZ–I or CRZ-IV areas or both, CRZ clearance shall, however be considered only by the Ministry of Environment, Forest and Climate Change, based on recommendations of the concerned Coastal Zone Management Authority.

(iv) Projects or activities which attract the provisions of this notification as also the provisions of EIA notification, 2006 number S.O. 1533(E), dated the 14th September, 2006, shall be dealt with for a composite Environmental and CRZ clearance under EIA Notification, 2006 by the concerned approving Authority, based on recommendations of the concerned Coastal Zone Management Authority, as per delegations i.e., State Environmental Impact Assessment Authority (hereinafter referred to as the SEIAA) or the Ministry of Environment, Forest and Climate Change for category 'B' and category 'A' projects respectively.

(v) In case of building or construction projects with built-up area less than the threshold limit stipulated for attracting the provisions of the EIA Notification, 2006 these shall be approved by the concerned local State or Union territory Planning Authorities in accordance with this notification, after obtaining recommendations of the concerned Coastal Zone Management Authority.

(vi) Only for self-dwelling units up to a total built up area of 300 square meters, approval shall be accorded by the concerned local Authority, without the requirement of recommendations of concerned Coastal Zone Management Authority and such authorities shall, however, examine the proposal from the perspective of the Coastal Regulation Zone notification before according approval.

8. Procedure for CRZ clearance for permissible and regulated activities:

(i) The project proponents shall apply with the following documents to the concerned State or the Union territory Coastal Zone Management Authority for seeking prior clearance under this notification:-

(a) Project summary details as per Annexure-V to this notification.

(b) Rapid Environment Impact Assessment (EIA) Report including marine and terrestrial component, as applicable, except for building construction projects or housing schemes.

(c) Comprehensive EIA with cumulative studies for projects, (except for building construction projects or housing schemes with built-up area less than the threshold limit stipulated for attracting the provisions of the EIA Notification, 2006 number S.O 1533(E), dated 14th September, 2006) if located in low and medium eroding stretches, as per the CZMP to this notification.

(d) Risk Assessment Report and Disaster Management Plan, except for building construction projects or housing schemes with built-up area less than the threshold limit stipulated for attracting the provisions of the EIA Notification, 2006 number S.O 1533(E), dated 14th September, 2006).

(e) CRZ map in 1:4000 scale, drawn up by any of the agencies identified by the Ministry of Environment, Forest and Climate Change vide its Office Order number J-17011/8/92-IAIII, dated the 14th March, 2014 using the demarcation of the HTL or LTL, as carried out by NCSCM.

(f) Project layout superimposed on the CRZ map duly indicating the project boundaries and the CRZ category of the project location as per the approved Coastal Zone Management Plan under this notification.

(g) The CRZ map normally covering 7 kilometre radius around the project site also indicating the CRZ-I, II, III and IV areas including other notified ecologically sensitive areas.

(h) "Consent to establish" or No Objection Certificate from the concerned State Pollution Control Board or Union territory Pollution Control Committee for the projects involving treated discharge of industrial effluents and sewage, and in case prior consent of Pollution Control Board or Pollution Control Committee is not obtained, the same shall be ensured by the proponent before the start of the construction activity of the project, following the clearance under this notification.

(ii) The concerned Coastal Zone Management Authority shall examine the documents in clause (i) above, in accordance with the approved Coastal Zone Management Plan and in compliance with this notification and make recommendations within a period of sixty days from date of receipt of complete application as under: -

(a) For the projects or activities also attracting the EIA Notification, 2006 number S.O. 1533(E), dated 14th September, 2006, the Coastal Zone Management Authority shall forward its recommendations to Ministry of Environment, Forest and Climate Change or SEIAA for category 'A' and category 'B' projects respectively, to enable a composite clearance under the EIA Notification, 2006 number S.O. 1533(E), dated 14th September, 2006, however, even for such Category 'B' projects located in CRZ-I or CRZ-IV areas, final recommendation for CRZ clearance shall be made only by the Ministry of Environment, Forest and Climate Change to the concerned SEIAA to enable it to accord a composite Environmental Clearance and CRZ clearance to the proposal.

(b) Coastal Zone Management Authority shall forward its recommendations to the Ministry of Environment, Forest and Climate Change for the projects or activities not covered in the EIA notification, 2006, but attracting this notification and located in CRZ-I or CRZ-IV areas.

(c) Projects or activities not covered in the aforesaid EIA Notification, 2006, but attracting this notification and located in CRZ-II or CRZ-III areas shall be considered for clearance by the concerned Coastal Zone Management Authority within sixty days of the receipt of the complete proposal from the proponent.

(d) In case of construction projects attracting this notification but with built-up area less than the threshold limit stipulated for attracting the provisions of the aforesaid EIA Notification 2006, Coastal Zone Management Authority

shall forward their recommendations to the concerned State or Union territory planning authorities, to facilitate granting approval by such authorities.

(iii) The Ministry of Environment, Forest and Climate Change shall consider complete project proposals for clearance under this notification, based on the recommendations of the Coastal Zone Management Authority, within a period of sixty days.

(iv) In case the Coastal Zone Management Authorities are not in operation due to their reconstitution or any other reasons, then it shall be responsibility of the Department of Environment in the State Government or Union territory Administration, who are the custodian of the CZMP of respective States or Union territories, to provide comments and recommend the proposals in terms of the provisions of the said notification.

(v) The clearance accorded to the projects under this notification shall be valid for a period of seven years, provided that the construction activities are completed and the operations commence within seven years from the date of issue of such clearance. The validity may be further extended for a maximum period of three years, provided an application is made to the concerned authority by the applicant within the validity period, along with recommendation for extension of validity of the clearance by the concerned State or Union territory Coastal Zone Management Authority.

(vi) Post clearance monitoring: (a) It shall be mandatory for the project proponent to submit half-yearly compliance reports in respect of the stipulated terms and conditions of the environmental clearance in hard and soft copies to the regulatory authority(s) concerned, on the 1st June and 31st December of each calendar year and all such compliance reports submitted by the project proponent shall be published in public domain and its copies shall be given to any person on application to the concerned Coastal Zone Management Authority. The compliance report shall also be displayed on the website of the concerned regulatory authority.

(vii) To maintain transparency in the working of the Coastal Zone Management Authority, it shall be the responsibility of the Coastal Zone Management Authority to create a dedicated website and post the agenda, minutes, decisions taken, clearance letters, violations, action taken on the violations and court matters including the Orders of the Hon'ble Court as also the approved CZMP of the respective State Government or Union territory.

Annexures	
Annexure-I	Conservation, protection and management framework for ecologically sensitive areas
Annexure-II	List of petroleum and chemical products permitted for storage in CRZ, except CRZ-I A
Annexure-III	Guidelines for development of beach resorts, hotels and tourism development projects in the designated CRZ areas
Annexure -IV	Guidelines for preparation of coastal zone management plans
Annexure-V	Project information details

6.3 THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 *(as amended upto July 2017) MoEF Notification S.O. 123(E) dated 14.2.2000 as amended (Source: CPCB PCLS/02/2021-2022 Seventh Edition)*

Salient Features

Rules	
Rule 2	**Definitions.-** (c) "authority" means and includes any authority or officer authorized by the Central Government, or as the case may be, the State Government in accordance with the laws in force and includes a District Magistrate, Police Commissioner, or any other officer not below the rank of the Deputy Superintendent of Police designated for the maintenance of the ambient air quality standards in respect of noise under any law for the time being in force.
Rule 3	**Ambient Air Quality Standards in respect of Noise for different areas / Zones.-** (1) The ambient air quality standards in respect of noise for different areas / zones shall be such as specified in the schedule annexed to these rules. (2) The State Government shall categorize the area into industrial, commercial, residential or silence areas / zones for the purpose of implementation of noise standards for different areas. (3) The State Government shall take measures for abetment of noise including noise emanating from vehicular movements, blowing of horns, busting of sound emitting fire crackers, use of loud speakers, or public address system and sound producing instruments and ensure that the existing noise levels do not exceed the ambient air quality standards specified under these rules. (4) All development authorities, local bodies and other concerned authorities while planning developmental activity or carrying out functions relating to town and country planning shall take into consideration all aspects of noise pollution as a parameter of quality of life to avoid noise menace and to achieve the objective of maintaining the ambient air quality standards in respect of noise. (5) An area comprising not less than 100 meters around hospitals, educational institutions and courts may be declared as silence area / zone for the purpose of these rules.
Rule 4	**Responsibility as to Enforcement of Noise Pollution Control Measures.-** (1) The noise levels in any area / zone shall not exceed the ambient air quality standards in respect of noise as specified in the Schedule (2) The authority shall be responsible for enforcement of noise pollution control measures and due compliance of the ambient air quality standards in respect of noise. (3) The respective State Pollution Control Boards or Pollution Control

	Committees in consultation with the Central Pollution Control Board shall collect, compile and publish technical and statistical data relating to noise pollution and measures devised for its effective prevention, control and abetment.
Rule 5	**Restriction of the use of loud speakers / Public address system and Sound Producing Instruments.-** (1) A loudspeaker or public address system shall not be used except after obtaining written permission from the authority. (2) A loud speaker or public address system or any sound producing instrument or a musical instrument or a sound amplifier shall not be used at night time except in closed premises for communication within, like auditoria, conference rooms, community halls, banquet halls or during a public emergency. (3) Notwithstanding anything contained in sub-rule (2), the State Government may subject to such terms and conditions as are necessary to reduce noise pollution, permit use of loud speakers or public address systems and the like during night hours (between 10.00 pm to 12.00 midnight) on or during any cultural or religious festive occasion of a limited duration not exceeding fifteen days in all during a calendar year. The Concerned State Government shall generally specify in advance, the number and particulars of the days on which such exemption would be operative. (4) The noise level at the boundary of the public place, where loudspeaker or public address system or any other noise source is being used shall not exceed 10 dB(A) above the ambient noise standards for the area or 75 dB(A) whichever is lower. (5) The peripheral noise level of a privately owned sound system or a sound producing instrument shall not, at the boundary of the private place, exceed by more than 5 dB(A) the ambient noise standards specified for the area in which it is used.
Rule 5A	**Restrictions on the use of horns, sound emitting construction equipments and bursting of fire crackers.-** 1) No horn shall be used in silence zones or during night time in residential areas except during a public emergency. 2) Sound emitting fire crackers shall not be burst in silence zone or during night time. 3) Sound emitting construction equipments shall not be used or operated during night time in residential areas and silence zones.
Rule 6	**Consequences of any violation in silence zone / area.-** Whoever, in any place covered under silence zone / area commits any of the following offence, he shall be liable for penalty under the provisions of the Act.- (i) whoever, plays any music or uses sound amplifiers, (ii) whoever, beats a drum or tom – tom or blows a horn either musical or

	pressure, or trumpet or beats or sounds any instrument, or (iii) whoever, exhibits any mimetic, musical or other performances of a nature to attract crowds. (iv) whoever, bursts sound emitting fire crackers; or (v) whoever, uses a loud speaker or a public address system.
Rule 7	**Complaints to be made to the Authority.-** (1) A person may, if the noise level exceeds the ambient noise standards by 10 dB(A) or more given in the corresponding columns against any area / zone, or, if there is a violation of any provision of these rules regarding restrictions imposed during night time, make a complaint to the authority. (2) The authority shall act on the compliant and take action against the violator in accordance with the provisions of these rules and any other law in force.
Rule 8	**Power to prohibit etc., continuance of music sound or Noise.-** 1) If the authority is satisfied from the report of an officer in charge of a police station or other information received by him including from the complainant that it is necessary to do so in order to prevent annoyance, disturbance, discomfort or injury to the public or risk to any person who dwell or occupy property on the vicinity, he may, by a written order issue such directions as he may consider necessary to any person for preventing, prohibiting, controlling or regulating:- a. the incidence or continuance in or upon any premises of – (i) any vocal or instrumental music, (ii) sounds caused by playing, beating, clashing, blowing or use in any manner whatsoever of any instrument including loudspeakers, public address systems, horn, construction equipment, appliance or apparatus or contrivance which is capable of producing or re-producing sound, or (iii) sound caused by bursting of sound emitting fire crackers, or (b) The carrying on in or upon, any premises of any trade, a vocation or operation or process resulting in or attended with noise.

SCHEDULE

[See rule 3(1) and 4(1)]

Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area/Zone	Limits in dB (A) Leq*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Note :-

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Silence zone is defined as an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority

* dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq : It is an energy mean of the noise level over a specified period.

6.4 UTILIZATION OF FLY ASH FROM COAL OR LIGNITE BASED THERMAL POWER PLANTS, MoEF Notification Dated 14.9.1999 *(as amended upto January 2016) [Source: CPCB PCLS/02/2021-2022 Seventh Edition]*

Salient Features

<table>
<tr><th colspan="2">Paras</th></tr>
<tr><td>Para 1</td><td>Use of fly ash, bottom ash, or pond ash in the manufacture of bricks and other construction activities:-

((i) use of fly ash based products in construction activities.</td></tr>
<tr><td>Para 1(A)</td><td>Every construction agency engaged in construction of buildings within a radius of three hundred kilometers from a coal or lignite based thermal power plant shall use only fly ash based products for construction, such as cement or concrete, fly ash bricks or tiles or clay fly ash bricks, or bricks, blocks or tiles or cement fly ash bricks or blocks or similar products or a combination or aggregate of them, in every construction project.</td></tr>
<tr><td>Para 1(B)</td><td>The provisions of sub-paragraph (1A) shall be applicable to all construction agencies of Central or State or Local Government and private or public sector and it shall be the responsibility of the agencies either undertaking construction or approving the design or both to ensure compliance of the provisions of sub-paragraph (1A) and to submit annual returns to the concerned State Pollution Control Board or Pollution Control Committee, as applicable.</td></tr>
<tr><td>Para 1(C)</td><td>Minimum fly ash content for building materials or products to qualify as ‘fly ash based products’ category shall be as given in Table I below:
<table>
<tr><td>S.No.</td><td>Building Materials or Products</td><td>Minimum % of fly ash by weight</td></tr>
<tr><td>1</td><td>Fly ash bricks, blocks, tiles,</td><td>50% of total input materials</td></tr>
</table>
</td></tr>
</table>

		etc., made with fly ash, lime, gypsum, sand, stone dust etc., (without clay)	
	2	Paving blocks, paving tiles, checker tiles, mosaic tiles, roofing sheets, pre-cast elements, etc., wherein cement is used as binder.	Usage of PPC (IS-1489: Part-1) or PSC (IS-455) or 15% of OPC (IS-269/8112/12269) content.
	3	Cement	15% of total raw materials
	4	Clay based building materials such as bricks, blocks, tiles, etc.,	25% of total raw materials
	5	Concrete, mortar and plaster	Usage of PPC (IS-1489: Part-1) or PSC (IS-455) or 15% of OPC (IS-269/8112/12269) content.
Para 1[D)	The authority for ensuring the use of specified quantity of ash as per sub-paragraph (1C) shall be the concerned Regional Officer of the State Pollution Control Board or the Pollution Control Committee, as the case may be.		
Para 1(E)	The concerned State Government shall be the enforcing and monitoring authority for ensuring compliance of the provisions of sub-paragraph (1A) and 1(B).		
Para 2(1)	**Responsibilities of Thermal Power Plants** [Every coal or lignite based thermal power plant shall take the following steps to ensure the utilization of ash generated by it, namely:-] All coal or lignite based thermal power stations would be free to sell fly ash to the user agencies subject to the following conditions, namely:- (i) the pond ash should be made available free of any charge on "as is where basis" to manufactures of bricks, blocks or tiles including clay fly ash product manufacturing unit(s), farmers, the Central and the State road construction agencies, Public Works Department, and also to agencies engaged in backfilling or stowing of mines. (ii) at least 20% of dry ESP fly ash shall be made available free of charge to units manufacturing fly ash or clay-fly ash bricks, blocks and tiles on a priority basis over other users and if the demand from such agencies falls short of 20% of quantity, the balance quantity can be sold or disposed of by the power station as may be possible; Provided that the fly ash obtained from the thermal power station		

<table>
<tr><td></td><td>should be utilized on for the purpose for which it was obtained from the thermal power station or plant failing which no fly ash shall be made available to the defaulting users.

Provided further that the restriction to provide 20% of dry fly ash free of cost shall not apply to thermal power plants which are able to utilize 100% fly ash in the prescribed manner.</td></tr>
<tr><td>Para 2(2)</td><td>All coal and, or lignite based thermal power stations and, or expansion units in operation before the date of this notification are to achieve the target of fly ash utilization as per the Table-II given below:-
<table>
<tr><th>S. No</th><th>Percentage of Utilization of Fly Ash</th><th>Target Date</th></tr>
<tr><td>1.</td><td>At least 50% of fly ash generation</td><td>One year from the date of issue of this notification</td></tr>
<tr><td>2.</td><td>At least 60% of fly ash generation</td><td>Two years from the date of issue of this notification</td></tr>
<tr><td>3.</td><td>At least 75% of fly ash generation</td><td>Three years from the date of issue of this notification</td></tr>
<tr><td>4.</td><td>At least 90% of fly ash generation</td><td>Four years from the date of issue of this notification</td></tr>
<tr><td>5.</td><td>100% of fly ash generation</td><td>Five years from the date of issue of this notification</td></tr>
</table>
The unutilized fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for those years and the balance unutilized fly ash accumulated during first five years (the difference between the generation and the utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.</td></tr>
<tr><td>Para 2(3)</td><td>New coal and, or lignite based thermal power stations and, or expansion units commissioned after this notification to achieve the target of fly ash utilization as per the TABLE – III given below:-
<table>
<tr><th>S.No.</th><th>Fly Ash Utilization Level</th><th>Target Date</th></tr>
<tr><td>1.</td><td>At least 50% of fly ash generation</td><td>One year from the date of commissioning</td></tr>
<tr><td>2.</td><td>At least 70% of fly ash generation</td><td>Two years from the date of commissioning</td></tr>
<tr><td>3.</td><td>90% of fly ash generation</td><td>Three years from the date of commissioning</td></tr>
<tr><td>4.</td><td>100% of fly ash generation</td><td>Four years from the date of commissioning</td></tr>
</table>
The unutilized fly ash in relation to the target during a year, if any, shall be utilized within next two years, in addition to the targets stipulated for these years and the balance unutilized fly ash accumulated during first four years (the difference between the</td></tr>
</table>

	generation and the utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.
Para 2 (4)	All action plans prepared by coal or lignite based thermal power plants in accordance with sub-para (2) and (3) of para 2 of this notification, shall be submitted to the Central Pollution Control Board, concerned State Pollution Control Board/Committee and concerned Regional Office of the Ministry of Environment and Forests within a period of four months from the date of publication of this notification.
Para 2(5)	The Central and State Government Agencies, the State Electricity Boards, the National Thermal Power Corporation and the management of the thermal power plants shall facilitate in making available land, electricity and water for manufacturing activities and provide access to the ash lifting area for promoting and settling up of ash-based production units in the proximity of the area where ash is generated by the power plant.
Para 2 (7)	Annual implementation report (for the period 1st April to 31st March) providing information about the compliance of provisions in this notification shall be submitted by the 30th day of April, every year to the Central Pollution Control Board, concerned State Pollution Control Board or Committee and concerned Regional Office of the Ministry of Environment and Forests by the coal or lignite based thermal power plants, and also be made a part of the annual report of the thermal power plant as well as thermal power plant wise information be provided in the annual report of thermal power producing agency owning more than one thermal power plant.
Para 2 (15)	**Utilization of fly ash for reclamation of sea** Subject to the rules made under the Environment (Protection) Act, 1986, (29 of 1986) reclamation of sea shall be permissible method of utilization of fly ash and the coal or lignite based power plants located in coastal districts shall support, assist or directly engage into construction of shore line protection measures.

CHAPTER 7

CATEGORIZATION OF INDUSTRIES

7.1 CLASSIFICATION OF INDUSTRIES BASED ON GROSS FIXED ASSETS

The Board vide BP Ms. No. 13 Dated 22.11.2011 has revised classification of Industries based on gross fixed assets (GFA).

Classification of Industry	Gross Fixed Assets (Gross Value of Land, building, plant & machinery and all other fixed assets)
Small Scale	Upto Rs. 5 crores
Medium Scale	Above Rs 5 crores and upto Rs 10 Crores
Large Scale	Above Rs 10 Crores

Note: If the unit is on lease land or building or both, land and building component of GFA shall be 20 years lease value. (Source: Circular Memo No. TSI/16488/MISC/90, dt. 28.5.1991).

7.2 CATEGORIZATION OF INDUSTRIES

7.2.1 CPCB Guidelines for Categorization of Industrial Sectors under Red, Orange, Green and White Category (Extract from: CPCB Letter No. B-29012/ESS(CPA)/2015-16/dated 07.03.2016)

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

Air Pollution Score based on parameters namely PM, CO, NOx, SOx, HMs , Benzene, Ammonia and other toxic parameters relevant to the industry.	40 Marks
Water Pollution Score based on parameters namely pH, TSS, NH_3-N, BOD, Phenol and other toxic pollutants relevant to the industry.	40 Marks
Hazardous wastes (land fillable, incinerable, recyclable) as generated by the industry.	20 Marks
Note : • Parameters to be decided on the basis of the nature of the wastes generating from the industrial sector. • Industries having only either water pollution or air pollution, the score will be normalized wrt 100.	

5. SPCBs/PCCs may issue consent to the industries
   - Red category of industries for 5 years.
   - Orange category of industries for 10 years.
   - Green category of industries for 15 years.

- No necessity of consent for non-polluting industries

6. No red categories of industries will be permitted to establish in eco-sensitive areas and protected areas.

E: Follow-up Actions made on the Resolutions:

- Accordingly, a Committee comprising the Chairman of CPCB, APPCB, TNPCB, MPPCB, MPCB, PPCB, WMPCB and MS, CPCB was constituted vide CPCB OM dated 23.04.2015 to review & classify industrial sectors into different categories based on criteria of respective pollution potential.

- The categorization is made on the basis of following:
  - Quality of emissions (air pollutants) generated
  - Quality of effluents (water pollutants) generated
  - Types of hazardous wastes generated
  - Consumption of resources

- References is taken from the following:
  - The Water (Prevention and Control of Pollution) Cess Act, 1977
  - Standards so far prescribed for various pollutants under the Environment (Protection) Act, 1986
  - Doon Valley Notification, 1989 issued by MoEF.

F: Scoring Methodology:

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

Table F-1 : Water Pollution Scoring Methodology

Sl. No.	Activity / Types of Discharges	Score
Part A : Score W1 : Score based on types of expected criteria water-pollutants present in industrial processes waste waters. **Maximum of the following seven categories is to be taken.**		
W11	Waste-water which is polluted and the pollutants are - • not easily biodegradable (very high strength waste waters having BOD > 5000 mg/l);or • toxic;or • both toxic and not easily biodegradable. (Presence of criteria water pollutants having prescribed standard limits up-to10mg/l or having BOD > 5000 mg/l). For details **appendix 1** may be referred)	30
W12	Non-toxic high strength polluted waste-water having BOD in the range of 1000-5000 mg/l and the pollutants are biodegradable. (Presence of criteria water pollutants having prescribed standard limits from 11 mg/l to 250 mg/l and having BOD strength in the range of 1000-5000 mg/l). For details appendix 1 may be referred)	25

W13	Nontoxic- polluted waste-water having BOD below 1000 mg/l and the pollutants are easily biodegradable. (Presence of criteria water pollutants having prescribed standard limits from 11mg/l to 250 mg/l and having BOD strength below 1000 mg/l). For details appendix 1 may be referred)	20
W14	Waste-water generated from the chemical processes and which is polluted due to presence of high TDS (total dissolved solids) of inorganic nature. (Presence of criteria water pollutants having prescribed standard limits more than 250 mg/l. For details appendix 1 may be referred)	15
W15	Waste-water generated from the physical unit operations / processes and which is polluted due to presence of TDS (total dissolved solids) of inorganic nature and of natural origin like fresh-water RO rejects, boiler blow-downs, brine solution rejects etc. (Presence of criteria water pollutants having prescribed standard limits more than 250 mg/l. For details appendix 1 may be referred)	12
W16	Non-toxic polluted waste-water from those units which are: • Having the overall waste-water generation less than 10 KLD and • The pollutants are easily bio-degradable having BOD below 200 mg/l which can be easily treated in a single stage ASP(activated sludge process) based Effluent Treatment Plant. Note : This is a special category and is applicable to only those units having over-all liquid waste generation less than 10 KLD with low strength organic load.	12
W17	Waste-water from cooling towers and cooling-re-circulation processes	10
Part B : Score W2 : Score based on huge discharges of any kind (Penalty Clause)		
W2	Industry having overall liquid waste generation of 100 KLD or more including industrial & domestic waste-water.	10
Overall Water Pollution Score W = W1+W2		

Appendix 1

Water Pollutants covered under Group W11:

- ✓ Free available Chlorine, Total residual chlorine, Fluoride (as F), Sulphide(as S), Free Ammonical Nitrogen, Dissolved phosphates (as P), Free ammonia (as NH_3), Nitrate Nitrogen, Mercury (As Hg), Selenium (as Se), Hexa-valent chromium (as Cr^{+6}), Lead (as Pb), Tin, Vanadium (as V), Cadmium (as Cd), Manganese (as Mn), Total chromium (as Cr), Copper (as Cu), Iron (as Fe), Nickel (as Ni), Zinc (as Zn), Benzene, Arsenic (as As), Benzo-a-pyrene, Cyanide (as CN), Phenolic compounds (as C_6H_5OH) , Adsorbable Organic Halogens (AOX), Boron and/or

- ✓ BOD strength of waste water >5000mg/l

Water Pollutants covered under Group W12:

- ✓ Sodium Absorption Ratio (SAR), Biochemical oxygen demand (3 days at 27^{O}C), Total Kjeldahl nitrogen (TKN), Ammonical nitrogen (as N), Suspended solids, Total nitrogen (as N), Chemical oxygen demand, Oils & grease and
- ✓ BOD strength of waste water is in the range of 1000-5000mg/l

Water Pollutants covered under Group W13:

- ✓ Sodium Absorption Ratio (SAR), Biochemical oxygen demand (3 days at 27^{O}C), Total Kjeldahl nitrogen (TKN), Ammonical nitrogen (as N), Suspended solids, Total nitrogen (as N), Chemical oxygen demand and
- ✓ BOD strength of waste water is below 1000mg/l

Water Pollutants covered under Group W14 and W15:

Chlorides as Cl, Colour, Total dissolved solids (TDS - Inorganic)

Water Pollutants covered under Group W16

- ✓ BOD strength of waste water is below 200 mg/l and overall discharge is less than 10KLD.

Table F-2 : Air Pollution Score

Sl. No.	Air Pollutants Group	'Range of Prescribed Standard ' of criteria pollutants	Marks
Part 1: Score A1 = Score based on types of expected criteria Air Pollutants present in the emissions. Maximum of the following seven categories is to be taken. For details **appendix 2** may be referred.			
1	Group A1A	Presence of criteria air pollutants having prescribed standard limits up to 2 mg/Nm^3	30
2	Group A1B	Presence of criteria air pollutants having prescribed standard from 3 to10 mg/Nm^3	25
3	Group A1C	Presence of criteria air pollutants having prescribed standard from 11 to50 mg/Nm^3	20
4	Group A1D	Presence of criteria air pollutants having prescribed standard from 51 to 250 mg/Nm^3	15
5	Group A1E	Presence of criteria air pollutants having prescribed standard from251mg/Nm^3& above.	10
6	Group A1F	• Generation of fugitive emissions of Particulate Matters which are: o Not generated as a result of combustion of any kind of fossil-fuel. o Generated due to handling / processing of materials without involving the use of any kind of chemicals. o Which can be easily contained /controlled with simple conventional methods	10

7	Group A1G	• Generation of Odours which are: o Generated due to application of binding gums /cements/adhesives /enamels o Which can be easily contained /controlled with simple conventional methods	10
Part 2: Score A2 = Score based on consumption of fuels and technologies required for air pollution control :			
6	Group A2F1	• All such industries in which the daily consumption of coal/fuel is more than 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can be controlled only with high level equipments/technology like ESPs, Bag House Filters, High Efficiency chemical wet scrubbers etc.	10
7	Group A2F2	• All such industries in which the daily consumption of coal/fuel is from 12 MT/day to 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can be controlled with suitable proven technology.	5
Overall Air Pollution Score –A = A1 + A2			

Appendix 2

Air pollutants covered under Group A1A:
Cd+Th, Dioxins &Furans, Mercury, Asbestos

Air Pollutants covered under GroupA1B:
HF, Nickel+ Vanadium, HBr, Manganese, Lead, H_2S, P_2O_5 as H_3PO_4

Air Pollutants covered under GroupA1C:
Chlorine, Pesticide compounds, CH_3Cl, TOC, Total Fluoride, Hydrocarbons, NH_3, HCL vapour & Mist, H_2SO_4Mist,SO_2

Air Pollutants covered under Group A1D:
CO, PM, CO, NOx

Air Pollutants covered under Group A1E:
NOx with liquid-fuel, SO_2 with liquid-fuel

Table F-3: Hazardous Waste Generation Score

Sl.No.	**Types of Hazardous Waste Generated as** per Schedule 1 / Schedule 2 of Hazardous Waste (Management, Handling & Trans-boundary Movement) Rules, 2008. **Maximum of the following four categories is to be taken**	**Score**
HW1	• Land disposable HW which require special care &treatment for stabilization before disposal.	20
HW2	• Incinerable HW	15

HW3	• Land disposable HW which doesn't require treatment & stabilization before disposal. • High volume low effect wastes such as fly-ash, phspho-gypsum, red-mud, slags from pyro-metallurgical operations, mine tailings and ore beneficiation rejects)	10
HW4	• Recyclable HW, which are easily recyclable with proven technologies.	10

Table F-4 : Calculation Sheet

Industrial Sector - .....

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

Note :

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

Normalized Score = {100 x W (or A)} / 40

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

Normalized Score = {100 x (W+A)} / 80

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

Normalized Score = {100 x (A+H)} / 60

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

Normalized Score = {100 x (W+H)} / 60

Range of Pollution Index for the purpose of categorization of industrial sectors

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

The industrial sector which doesn't fall under any of the above four categories (Red, Orange, Green and White), decision with regard to its categorization will be taken at the level of concerned SPCB/PCC by a committee headed by the Member Secretary, SPCB/PCC and comprising of two senior cadre Engineers / Scientists of the SPCB /PCC in accordance with the scoring criteria specified in this document.

7.2.2 Categorization of Industries by TNPCB*(Source: B.P. Ms. No.6 dated 2.8.2016, Proc. No. TNPCB/P&D/Revised Categorisation/2016 dt. 26.10.2016 and B.P. No.66 Dt. 30.11.2017, B.P. No. 26, Dt. 30.07.2018)*

Industries are classified either as Red, Orange, Green and White on the basis of their potential for causing pollution. Red – Highly Polluting, Orange – Medium Polluting, Green – Less Polluting, White – Non Polluting.

Central Pollution Control Board issued direction dated 07.03.2016 to all SPCBs /PCCs under Section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974, to maintain uniformity in categorization of industries as red, orange, green and white for grant of consent, inventorization of industries and other related activities. As per the CPCB direction, there shall be no necessity of obtaining the 'Consent to Operate' for white category of industries and an intimation to concerned SPCB shall suffice. The categorization is as follows:

RED CATEGORY

Sl. No	Type code	Industry sector-Types
1	1001	Isolated storage of hazardous chemicals (as per schedule of Manufacturing, Storage of Hazardous Chemicals Rules,1989 as amended)
2	1002	Automobile Manufacturing plants (integrated facilities)having either one or combinations of polluting activities namely washing, metal surface finishing operations, pickling, plating, electroplating, phosphating, painting, heat treatment etc. Heavy Engineering and Ship building are merged in this Category.
3	1003	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule iv of HW(M,H & TBM) rules, 2008 - Items namely - Spent cleared metal catalyst containing copper, Spent cleared metal catalyst containing zinc
4	1004	Manufacturing of lubricating oils, grease and petroleum

		based products
5	1005	DG Set of capacity ≥ 5 MVA
6	1006	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black
7	1007	Lead acid battery manufacturing (excluding assembling and charging of lead- acid battery in micro scale)
8	1008	Phosphate rock processing plant
9	1009	Power generation plant [except Wind and Solar renewable power plants of all capacities and Mini Hydel power plant of capacity <25MW]
10	1010	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) Rules, 2008 - Items namely - Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt,
11	1011	Processes involving chlorinated hydrocarbons
12	1012	Sugar (excluding Khandasari)
13	1013	Fibre glass production and processing (excluding moulding) including Lead containing glass
14	1014	Fire crackers manufacturing and bulk storage facilities
15	1015	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW (M, H& TBM) Rules, 2008 - Items namely - Dismantlers Recycling Plants - Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule
16	1016	Milk processes and dairy products (integrated project)
17	1017	Phosphorous and its compounds
18	1018	Pulp & Paper (waste paper based without bleaching process to manufacture Kraft paper)
19	1019	Coke making, liquefaction, coal tar distillation or fuel gas making
20	1020	Manufacturing of explosives, detonators, fuses including management and handling activities
21	1021	Manufacturing of paints varnishes, pigments and intermediate (excluding blending/mixing)
22	1022	Organic Chemicals manufacturing
23	1023	Airports and Commercial Air Strips having waste water generation 100 KLD and above
24	1024	Asbestos and asbestos based industries

25	1025	Basic chemicals and electro chemicals and its derivatives including manufacturing of acid
26	1026	Cement
27	1027	Chlorates, per-chlorates & peroxides
28	1028	Chlorine, fluorine, bromine, iodine and their compounds
29	1029	Dyes and Dye- Intermediates
30	1030	Health-care Establishment (as defined in BMW Rules)having incinerator irrespective of waste generation (or) having total waste water generation 100 KLD and above
31	1031	Hotels having overall wastewater generation @ 100 KLD and more (or) having rooms 100 and above
32	1032	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule iv of HW(M, H & TBM) Rules, 2008 - Items namely - Lead acid battery plates and other lead scrap/ ashes/ residues not covered under Batteries (Management and Handling) Rules, 2001. [* Battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs covered by ISRI, Code word "Rakes". Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "rains".
33	1033	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) Rules, 2008 - Items namely - Integrated Recycling Plants -Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury- switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule
34	1034	Manufacturing of glue and gelatin
35	1035	Mining and ore beneficiation
36	1036	Nuclear power plant
37	1037	Pesticides (technical) (excluding formulation)
38	1038	Photographic film and its chemicals
39	1039	Railway locomotive work shop / Integrated road transport workshop / Authorized service centers having waste water generation 100 KLD and above
40	1040	Yarn / Textile processing involving any effluent/ emission generating processes including bleaching, dyeing, printing and colouring
41	1041	Chlor Alkali
42	1042	Ship Breaking Industries
43	1043	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)

44	1044	Industry or process involving metal surface treatment or process such as pickling/ electroplating/ paint stripping/ heat treatment using cyanide bath/ phosphating or finishing and anodizing / enamellings/ galvanizing
45	1045	Tanneries
46	1046	Ports and harbour, jetties and dredging operations
47	1047	Synthetic fibers including rayon, tyre cord, polyester filament yarn
48	1048	Thermal Power Plants
49	1049	Slaughter house (as per notification S.O.270(E)dated 26.03.2001)and meat processing industries, bone mill, processing of animal horn, hoofs and other body parts
50	1050	Aluminium Smelter
51	1051	Copper Smelter
52	1052	Fertilizer (basic) (excluding formulation)
53	1053	Iron & Steel (involving processing from ore/ integrated steel plants) and or Sponge Iron units
54	1054	Pulp & Paper (waste paper based units with bleaching process to manufacture writing & printing paper)
55	1055	Zinc Smelter
56	1056	Oil Refinery (mineral Oil or Petro Refineries)
57	1057	Petrochemicals Manufacturing (including processing of Emulsions of oil and water)
58	1058	Pharmaceuticals
59	1059	Pulp & Paper (Large-Agro + wood), Small Pulp & Paper (agro based-wheat straw/rice husk)
60	1060	Distillery (molasses / grain / yeast based)
61	1061	Synthetic detergents and soaps (excluding formulation) having waste water generation 100 KLD and above
62	1062	Automobile servicing, repairing and painting (excluding only fuel dispensing) having waste water generation 100 KLD and above
63	1063	Building and construction project more than 20,000 sq.m built up area and having waste water generation 100 KLD and above
64	1064	Ceramics and Refractories having coal/fuel consumption 12 MT/day and more
65	1065	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol) having waste water generation 100 KLD and above
66	1066	Ferrous and Non- ferrous metal extraction involving different furnaces through melting, refining, re-processing, casting and alloy making - secondary production of Ferrous and Non- ferrous metals more than 1 MT/hr production (or) Lead extraction irrespective of capacity (or) metal extraction having Induction Furnace clubbed with AOD furnace

67	1067	Industry or processes involving foundry operations having capacity of 5 MT/hr and more as such units require using coal/coke at more than 500 Kg/hr
68	1068	Manufacturing of glass (Lead glass only)
69	1069	Non-alcoholic beverages (soft drink) & bottling of alcohol/ non-alcoholic products having waste water generation 100 KLD and above
70	1070	Vegetable oil manufacturing including solvent extraction and refinery / hydrogenated oils having waste water generation 100 KLD and above
71	1071	Parboiled Rice Mills having waste water generation 100 KLD and above (or) fuel consumption 12 MTD and above (or) both
72	1072	Common treatment and disposal facilities-TSDF
73	1073	Common treatment and disposal facilities-E-waste recycling
74	1074	Common treatment and disposal facilities-CBMWTF
75	1075	Effluent conveyance project
76	1076	Common treatment and disposal facilities-Solvent/Acid recovery plant
77	1077	MSW sanitary landfill site
78	1078	Common treatment and disposal facilities-CETP for Red category Industries
79	1079	Industrial Estates/ Parks/ Complexes/ areas/ Export processing zones/ SEZs/ Bio-tech parks/ Leather complex
80	1080	Pharmaceutical R & D activities (For sustained release/ extended release of drugs only and not for commercial purpose)
81	1081	Sewage Treatment Plant
82	1082	Reclamation/deploymerisation/pyrolysis of plastic/rubber to get oil, carbon black etc.
83	1083	Tyre, tube & rubber components
84	1084	Analytical & material testing lab
85	1085	Stone/Savudu Quarries
86	1086	Infrastructure development projects including educational institutions, community hall, kalyanamadapam, IT park, Theme park (having wastewater generation more than 100 KLD)
87	1089	Sand/riverbed material mining from riverbed and its flood plains - (excluding manual excavation)- Mining lease area more than 5 hectares (or) mining lease upto 5 hectares which is part of cluster mining. [Cluster mining means that the distance of mining lease area is less than 500 metre from the periphery of another lease area from riverbed and its flood plains - (excluding manual excavation)- Mining lease area more than 5 hectares (or) mining lease upto 5 hectares which is part of cluster mining. [Cluster mining

		means that the distance of mining lease area is less than 500 metre from the periphery of another lease area. *(Ref. Memo No. TNPCB/P&D/F.9798/2006, dt 14.03.2024)*
88	1999	Miscellaneous (Red)

ORANGE CATEGORY

Sl. No	Type code	Industry sector-Types
1	2001	Dismantling of rolling stocks (wagons/ coaches)
2	2002	Bakery and confectionery units with production capacity > 1 TPD (With ovens / furnaces)
3	2003	Chanachur and ladoo from puffed and beaten rice(muri and shira) using husk fired oven
4	2004	Coated electrode manufacturing
5	2005	Compact disc computer floppy and cassette manufacturing / Reel manufacturing
6	2006	Flakes from rejected PET bottle
7	2007	Food and food processing including fruits and vegetable processing
8	2008	Jute processing without dyeing
9	2009	Manufacturing of silica gel
10	2010	Manufacturing of tooth powder, toothpaste, talcum powder and other cosmetic items
11	2011	Printing or etching of glass sheet using hydrofluoric acid
12	2012	Silk screen printing, sari printing by wooden blocks
13	2013	Synthetic detergents and soaps(excluding formulation)having waste water generation less than 100 KLD
14	2014	Thermometer manufacturing
15	2015	Cotton spinning and weaving (medium and large scale)
16	2016	Almirah, Grill Manufacturing (Dry Mechanical Process)with painting
17	2017	Aluminium& copper extraction from scrap using oil fired furnace (dry process only)
18	2018	Automobile servicing, repairing and painting (excluding only fuel dispensing)having waste water generation less than 100 KLD
19	2019	Ayurvedic and homeopathic medicine (with Boiler)
20	2020	Brickfields (excluding fly ash brick manufacturing using lime process)
21	2021	(i) Building and construction project more than 20,000 sq.m built up area and having waste water generation less than 100 KLD. (ii) Building and construction Projects having built-up area upto 20,000 m^2 and waste water generation ≥50 KLD (Ref. CPCB Letter IPC-VI/ROGW, dt 12.01.2021)

22	2022	Ceramics and Refractories having coal/fuel consumption less than 12 MT/day
23	2023	Coal washeries
24	2024	Dairy and dairy products (small scale)
25	2025	DG set of capacity >1MVA but < 5MVA
26	2026	Dry coal processing, mineral processing, industries involving ore sintering, pelletisating, grinding & pulverization
27	2027	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol)having waste water generation less than 100 KLD
28	2028	Ferrous and Non- ferrous metal extraction involving different furnaces through melting, refining, re-processing, casting and alloy making- Secondary production of Ferrous and Non- ferrous metals (excluding lead) upto 1 MT/hr production
29	2029	Fertilizer (granulation / formulation / blending only)
30	2030	Fish feed, poultry feed and cattle feed
31	2031	Fish processing and packing (excluding chilling of fishes)
32	2032	Forging of ferrous and non- ferrous metals (using oil and gas fired furnaces)
33	2033	Formulation/ pelletization of camphor tablets, naphthalene balls from camphor/ naphthalene powders.
34	2034	Glass ceramics, earthen potteries and tile manufacturing using oil and gas fired kilns, coating on glasses using cerium fluorides and magnesium fluoride etc.
35	2035	Gravure printing, digital printing on flex, vinyl
36	2036	Heat treatment using oil fired furnace (without cyaniding)
37	2037	Hot mix plants
38	2038	Hotels (< 3 star) (or) hotels having > 20 rooms and less than 100 rooms (or) having waste water generation > 10 KLD and less than 100 KLD and having a coal/Oil fired Boiler
39	2039	Ice cream
40	2040	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule iv of HW (M, H& TBM) Rules, 2008 - Items namely - Paint and ink Sludge/residues
41	2041	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule iv of HW (M, H & TBM) Rules, 2008 - Items namely - Brass Dross, Copper Dross, Copper Oxide Mill Scale, Copper Reverts, Cake & Residues, Waste Copper and copper alloys in dispersible form, Slags from copper processing for further processing or refining, Insulated Copper Wire, Scrap/copper with PVC sheathing including ISRI-code material namely "Druid", Jelly filled Copper cables, Zinc Dross-Hot dip Galvanizers

		SLAB, Zinc Dross-Bottom Dross, Zinc ash/Skimming arising from galvanizing and die casting operations, Zinc ash/ Skimming/ other zinc bearing wastes arising from smelting and refining, Zinc ash and residues including zinc alloy residues in dispersible form.
42	2042	Industry or processes involving foundry operations having capacity less than 5 MT/hr as such units require coal/coke at less than 500 Kg/hr
43	2043	Lime manufacturing (using lime kiln)
44	2044	Liquid floor cleaner, black phenyl, liquid soap, glycerol mono-stearate manufacturing
45	2045	Manufacturing of glass (except Lead glass)
46	2046	Manufacturing of iodized salt from crude/ raw salt
47	2047	Manufacturing of mirror from sheet glass
48	2048	Manufacturing of mosquito repellent coil
49	2049	Manufacturing of Starch/Sago
50	2050	Mechanized laundry using oil fired boiler
51	2051	Modular wooden furniture from particle board, MDF< swan timber etc, Ceiling tiles/ partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (With boiler)
52	2052	New highway construction project
53	2053	Non-alcoholic beverages (soft drink) & bottling of alcohol/ non-alcoholic products having waste water generation less than 100 KLD
54	2054	Paint blending and mixing (Ball mill)
55	2055	Paints and varnishes (mixing and blending)
56	2056	Ply-board manufacturing (including Veneer and laminate) with oil fired boiler/ thermic fluid heater(without resin plant)
57	2057	Potable alcohol (IMFL) by blending, bottling of alcohol products
58	2058	Printing ink manufacturing
59	2059	Printing press
60	2060	Reprocessing of waste plastic including PVC
61	2061	Rolling mill (oil or coal fired) and cold rolling mill
62	2062	Spray painting, paint baking, paint shipping
63	2063	Steel and steel products using various furnaces like blast furnace /open hearth furnace/ induction furnace / arc furnace / submerged arc furnace / basic oxygen furnace /hot rolling reheated furnace. (Foundries based on Induction furnace shall also be covered under this sector. Source: CPCB Lr No. B-29012/ESS/CPA/2016-17, dated 21.11.2016).
64	2064	Stone crushers
65	2065	Surgical and medical products including prophylactics and latex

66	2066	Tephlon based products
67	2067	Thermocol manufacturing (with boiler)
68	2068	Tobacco products including cigarettes and tobacco/ opium processes
69	2069	Transformer repairing/ manufacturing (dry process only)
70	2070	Tyres and tubes vulcanization/ hot retreating
71	2071	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils having waste water generation less than 100 KLD
72	2072	Wire drawing and wire netting
73	2073	Dry cell battery (excluding manufacturing of electrodes) and assembling & charging of acid lead battery on micro scale
74	2074	Pharmaceutical formulation and for R & D purpose (For sustained release/ extended release of drugs and not for commercial purpose)
75	2075	Synthetic resins
76	2076	Synthetic rubber excluding molding
77	2077	Cashew nut processing
78	2078	Coffee seed processing
79	2079	Parboiled Rice Mills having waste water generation less than 100 KLD and fuel consumption less than 12 MTD
80	2080	Foam manufacturing
81	2081	Industries engaged in recycling / reprocessing/ recovery/ reuse of Hazardous Waste under schedule iv of HW (M, H& TBM) Rules, 2008 - Items namely - Used Oil - As per specifications prescribed from time to time.
82	2082	Industries engaged in recycling / reprocessing/ recovery /reuse of Hazardous Waste under schedule iv of HW (M, H& TBM) rules, 2008 - Items namely - Waste Oil-As per specifications prescribed from time to time.
83	2083	Producer gas plant using conventional up drift coal gasification (linked to rolling mills glass and ceramic industry refectories for dedicated fuel supply)
84	2084	Airports and Commercial Air Strips having waste water generation less than 100 KLD
85	2085	Health-care Establishment (as defined in BMW Rules) without Incinerator and having total waste water generation less than 100 KLD
86	2086	Common treatment and disposal facilities- CETP for Orange category Industries
87	2087	Manufacturing of pasted veneers using coal fired boiler and by sun drying
88	2088	Tea processing (with boiler)
89	2089	Railway locomotive work shop / Integrated road transport workshop / Authorized service centers having waste water generation less than 100 KLD

90	2090	Match work units
91	2091	Infrastructure development projects including educational institutions, community hall, kalyanamandam, IT Park, Theme park (having waste water generation <100 KLD).
92	2092	Desalination plant.
93	2093	Sizing Units
94	2094	Chemical mixing cum storage units
95	2095	Natural rubber processing
96	2096	Pesticides formulation
97	2097	Sand/riverbed material mining from riverbed and its flood plains- (excluding manual excavation) – Standalone mining lease area upto 5 hectares (in area not part of any cluster mining) *(Ref. Memo No. TNPCB/P&D/F.9798/2006, dt 14.03.2024)*
98	2098	M.Sand Units with or without stone crushers
99	2099	Restaurant having rooms and waste water generation of more than 10 KLD with / without underground sewer system provided with Activated Sludge Process (ASP) *[Ref. Proc. T2/TNPCB/F.11503/Revised Categorization/2020, dt 15.10.2020]*
100	2100	Construction and Demoliion (C&D) Waste Processing Plants (*Ref. CPCB/IPC-VI/ROGW/ dt 12.01.2021*)
101	2101	Tyre Pyrolosis Oil (TPO) industries – applicable for advanced batch automated process / Continuous TPO. *[Ref. TNPCB Circular Memo. T2/F.1409/RL&OL/2021, dt 15.02.2021]*
102	2102	Gold Assaying & Hallmarking Centres *(Ref. CPCB/IPC-VI/ROGW/ dt 12.01.2021)*
103	2999	Miscellaneous (Orange)

GREEN CATEGORY

Sl. No	Type code	Industry sector-Types
1	3001	Aluminium utensils from aluminium circles by pressing only (dry mechanical operation)
2	3002	Ayurvedic and homeopathic medicines (without boiler)
3	3003	Bakery /confectionery / sweets products (with production capacity <1tpd (with gas or electrical oven)
4	3004	Bi-axially oriented PP film along with metalizing operations
5	3005	Biomass briquettes (sun drying) without using toxic hazardous wastes
6	3006	Blending of melamine resins & different powder, additives by physical mixing
7	3007	Brass and bell metal utensils manufacturing from circles (dry mechanical operation without re-rolling facility)
8	3008	Candy
9	3009	Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)

10	3010	Carpentry & wooden furniture manufacturing (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.
11	3011	Cement products (without using asbestos / boiler / steam curing) like pipe, pillar, jafri, well ring, block/ tiles etc.(should be done in closed covered shed to control fugitive emissions)
12	3012	Ceramic colour manufacturing by mixing & blending only (not using boiler and wastewater recycling process)
13	3013	Chilling plant, cold storage and ice making
14	3014	Coke briquetting (sun drying)
15	3015	Cotton spinning and weaving (small scale)
16	3016	Dal Mills
17	3017	Decoration of ceramic cups and plates by electric furnace
18	3018	Digital printing on PVC clothes
19	3019	Facility of handling, storage and transportation of food grains in bulk
20	3020	Flour mills (dry process)
21	3021	Glass, ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln
22	3022	Glue from starch (physical mixing) with gas / electrically operated oven / boiler
23	3023	Gold and silver smithy (purification with acid smelting operation and sulphuric acid polishing operation) (using less or equal to 1 litre of sulphuric acid/ nitric acid per month)
24	3024	Heat treatment with any of the new technology like ultrasound probe, induction hardening, ionization beam, gas carburizing etc.(Finalization of categorization subject to field verification)
25	3025	Insulation and other coated papers (excluding paper or pipe manufacturing)
26	3026	Leather foot wear and leather products (excluding tanning and hide processing except cottage scale)
27	3027	Lubricating oil, greases or petroleum based products (only blending at normal temperature)
28	3028	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying (except coal fired Boiler)
29	3029	Oil mill Ghani and extraction (no hydrogenation / refining)
30	3030	Packing materials manufacturing from non-asbestos fibre, vegetable fibre yarn
31	3031	Phenyl / toilet cleaner formulation and bottling
32	3032	Polythene and plastic processed products manufacturing (virgin plastic)

33	3033	Poultry, Hatchery and piggery (Poultry farms less than one lakh birds need not to obtain CTO – As per CPCB F.No. B-29012/IPC-VI/2017-18, dated 19.07.2017)
34	3034	Power looms (without dye and bleaching)
35	3035	Puffed rice (muri) (using gas or electrical heating system)
36	3036	Pulverization of bamboo and scrap wood
37	3037	Ready mix cement concrete
38	3038	Reprocessing of waste cotton
39	3039	Rice mill (Rice hullers only)
40	3040	Rolling mill (gas fired) and cold rolling mill
41	3041	Rubber goods industry (with gas operated baby boiler)
42	3042	Saw mills
43	3043	Soap manufacturing (hand made without steam boiling / boiler)
44	3044	Spice grinding (upto 20 HP motor)
45	3045	Spice grinding (>20 HP motor)
46	3046	Steel furniture without spray painting
47	3047	Steeping and processing of grains
48	3048	Tyres and tube retreating (without boilers)
49	3049	Chilling plant and ice making without using ammonia
50	3050	CO2 recovery
51	3051	Distilled water (without boiler) with electricity as source of heat
52	3052	Hotels (up to 20 rooms and without boilers) having waste water generation less than 10 KLD and no Hazardous waste generation
53	3053	Manufacturing of optical lenses (using electrical furnace)
54	3054	Mineralized water
55	3055	Tamarind powder manufacturing
56	3056	Cutting, sizing and polishing of marble stone
57	3057	Emery powder (fine dust of sand) manufacturing
58	3058	Flyash export, transport & disposal facilities
59	3059	Mineral stack yard / Railway sidings
60	3060	Oil and gas transportation pipeline contains small gas based power plants upto 5 MW
61	3061	Seasoning of wood in steam heated chamber
62	3062	Synthetic detergent formulation units which are not manufacturing LABSA
63	3063	Tea processing (without boiler)
64	3064	Modular wooden furniture from particle board, MDF< swan timber etc, Ceiling tiles/ partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (Without boiler)

65	3065	Crematorium
66	3066	Light Engineering & Fabrication units with painting.
67	3067	Steam calendaring / Zero finishing/centering etc.
68	3068	Stone and Granite cutting, sizing and polishing units
69	3069	Single Boiled Rice Mills using steam boiling with pre-cleaning process
70	3070	Standalone restaurants using boilers with LPG having waste water generation less than 10 KLD with provision of underground sewer system / septic tank with dispersion trench. *(Ref.Proc.T2/TNPCB/F.11503/Revised Categorization/ 2020, dt 15.10.2020)*
71	3999	Miscellaneous (Green)

WHITE CATEGORY

Sl.No	Type code	Industry sector-Types
1	4001	Assembly of air coolers / conditioners, repairing and servicing
2	4002	Assembly of bicycles, baby carriages and other small non motorizing vehicles
3	4003	Bailing (hydraulic press)of waste papers
4	4004	Bio fertilizer and bio-pesticides without using inorganic chemicals
5	4005	Biscuits trays etc from rolled PVC sheet (using automatic vacuum forming machines)
6	4006	Blending and packing of tea
7	4007	Block making of printing without foundry (excluding wooden block making)
8	4008	Chalk making from plaster of Paris (only casting without boilers etc. (sun drying / electrical oven)
9	4009	Compressed oxygen gas from crude liquid oxygen (without use of any solvents and by maintaining pressure &temperature only for separation of other gases)
10	4010	Cotton and woolen hosiers making (Dry process only without any dying / washing operation)
11	4011	Diesel pump repairing and servicing (complete mechanical dry process)
12	4012	Electric lamp (bulb) and CFL manufacturing by assembling only
13	4013	Electrical and electronic item assembling (completely dry process)
14	4014	Engineering and fabrication units (dry process without any heat treatment / metal surface finishing operations / painting)
15	4015	Flavoured betel nuts production/ grinding (completely dry mechanical operations)
16	4016	Fly ash bricks/ block manufacturing
17	4017	Fountain pen manufacturing by assembling only
18	4018	Glass ampules and vials making from glass tubes
19	4019	Glass putty and sealant (by mixing with machine only)

20	4020	Ground nut decorticating
21	4021	Handloom/ carpet weaving (without dying and bleaching operation)
22	4022	Leather cutting and stitching (more than 10 machine and using motor)
23	4023	Manufacturing of coir items from coconut husks
24	4024	Manufacturing of metal caps containers etc
25	4025	Manufacturing of shoe brush and wire brush
26	4026	Medical oxygen
27	4027	Organic and inorganic nutrients (by physical mixing)
28	4028	Organic manure (manual mixing)
29	4029	Packing of powdered milk
30	4030	Paper pins and u clips
31	4031	Repairing of electric motors and generators (dry mechanical process)
32	4032	Rope (plastic and cotton)
33	4033	Scientific and mathematical instrument manufacturing
34	4034	Solar module non-conventional energy apparatus manufacturing unit
35	4035	Solar Power generation through solar photovoltaic cell plants of all capacities, Wind Power plants of all capacities and Hydel Power Plants upto and including capacity of 25 MW. *(Ref. Proc.TNPCB/P&D/F.9798/2006/Revised categorization /Sector Type/2017, dt 20.12.2017)*
36	4036	Surgical and medical products assembling only (not involving effluent / emission generating processes)

Note: When any industry not listed in Red, Orange, Green & White category wants to apply, then the DEE shall workout the score as per CPCB guidelines and arrive the category. Then the industry shall be asked to select Miscellaneous type available in that category.

7.3 17 CATEGORY OF HIGHLY POLLUTING INDUSTRIES

The Ministry of Environment and Forests, Government of India have classified the following 17 category of Industries as highly polluting industries which are to be closely monitored.

1	Sugar	10	Caustic Soda
2	Cement	11	Pharmaceuticals
3	Distillery	12	Dye and Dye Stuff
4	Petrochemical	13	Refinery
5	Pulp & Paper	14	Copper Smelter
6	Fertilizer	15	Iron & Steel
7	Tannery	16	Zinc Smelter
8	Pesticides	17	Aluminium
9	Thermal Power Station		

CHAPTER 8

PROCEDURE FOR OBTAINING CONSENT, AUTHORIZATION AND REGISTRATION

8.1 CONSENT TO ESTABLISH (CTE)

Consent of the Board has to be obtained for both establishment and operation of the industry (new and existing industries), as required under the provisions of the Water / Air Acts. The industries which commissioned before 27.2.1982 are considered as existing industries and the industries which have commissioned on or after 27.2.1982 are considered as new industries.

1. The Tamil Nadu Pollution Control Board enforces the Water (Prevention and Control of Pollution) Act, 1974 as amended, Air (Prevention and Control of Pollution) Act, 1981 as amended and the Environment (Protection) Act, 1986. Under the Water (P&CP) Act, 1974 as amended and under the Air (P&CP) Act, 1981 as amended, the industries have to obtain the consent of the Board for the establishment and operation of the industry.

As per Section 25 of the Water (P&CP) Act, 1974 as amended, no person shall without the previous consent of the State Board, establish or take any steps to establish any industrial plant or process or any treatment and disposal system or any extension or addition thereto which is likely to discharge sewage or trade effluent into any stream or well or sewer or on land. As per sub section 2 of Section 25 of the said Act, an application for consent of the State Board under sub section (1) shall be made in such form containing such particulars and shall be accompanied by such fees as may be prescribed.

Also as per Section 21 of the Air (P & CP) Act, 1981 as amended, no person shall without the previous consent of the State Board, operate any industrial plant for the purpose of any industry in an Air Pollution Control area. (The Govt. of Tamil Nadu vide GO Ms. No.4 Environment Control Dept. dt. 28.09.1983 declared the entire area within the state of Tamil Nadu as air pollution control area). As per sub section (2) of Section 21 of the said Act, an application for consent of the State Board under sub section (1) shall be accompanied by such fees as may be prescribed and shall be made in the prescribed form and shall contain the particulars of the industrial plant and such other particulars as may be prescribed.

2. **The project proponent shall apply for consent only through Online Consent Management & Monitoring System (OCMMS).**

The Board gives consent for establishment and operation of industries and processes based on the proposal submitted by the proponent. As a part of e-governance initiative of the Government of Tamil Nadu and with a view to provide a healthy and proactive interface between the regulatory authority and the industries, TNPCB has introduced the facility of Online Consent Management and Monitoring System (OCMMS) from 19.01.2015 onwards.

Accordingly, application will be received only online. Web portal for online consent application is **tnocmms.nic.in** OCMMS is a web based generic application software

package for automating the workflow associated with Consent Management and Monitoring. This system allows the industries for online submission of application for Consent to Establish (CTE), Consent to Operate (CTO), Renewal of Consents, uploading of documents, online payment of consent fee, online submission of clarification and for knowing the status of application. In order to help the project proponent on filing of application through OCMMS, TNPCB operates Care Centre at the Head office and in all the District Offices. (web address: tnocmms.nic.in)

3. After submission of application in complete shape, it will be processed and site will be inspected by the officers of TNPCB. Thereafter, the subject will be placed before the respective Committee and decision will be taken. The applications which are in complete shape will be cleared and CTE will be issued.

4. If the project proponent is not able to complete the establishment of the project within stipulated years, then he/she has to apply for extension of CTE one month before the expiry of CTE to the concerned District Officer. Extension of CTE will be issued after field inspection by the concerned Officer.

5. As per EIA Notification 2006 as amended, 38 categories of industries have to obtain Environmental Clearance from Ministry of Environment, Forests & Climate Change, Government of India / State Environmental Impact Assessment Authority, Government of Tamil Nadu as the case may be. (Please refer salient features of EIA notification 2006). TNPCB will issue CTE to the projects which attract EIA notification 2006, only on receipt of environment clearance from MOEF&CC/SEIAA, as the case may be and after satisfying the siting criteria and all other requirements.

6. In case of Projects which are covered under Coastal Regulation Zone Notification, 2019, Clearance shall be obtained from Coastal Zone Management Authority, before applying for Consent of TNPCB. District Environmental Engineer, TNPCB is the convener of the District Coastal Zone Management Committee.

Consent to Establish validity period shall be as follows:

Projects	Validity Period
All EIA Projects	7 Years (1 Fee)
All Non-EIA Projects	5 Years (1 Fee)

All the Consent to Establish order will be issued with validity date ending 31st March of the corresponding year.

8.2 CONSENT TO OPERATE (CTO)

The Industries have to apply for the consent of the Board for operation of the industry two months in advance of the commissioning of the operation. The application shall be submitted through **OCMMS.** The District Officer will inspect the industry to verify whether all the conditions imposed in the CTE have been complied with. The above report will be scrutinized and CTO will be granted. All the Consent to Operate orders will be issued with validity date ending 31st March of the corresponding year.

8.2.1 Enclosures with consent application

S.No	Enclosures to be accompanied
Consent to Establish (CTE) under Water Act and Air Act	
1	A covering requisition letter stating the status of the industry and activities clearly.
2	Copy of attested sale Deed [Lease Deed or any other relevant documents as proof to ensure possession of the site/factory for which application is made by the applicant.
3	Copy of attested Memorandum of Articles in case of Public/Private sectors or registered partnership deed in case of partnership company
4	Layout plan showing the location of various process equipments, utilities like boiler, generator etc, effluent treatment plant, outlet location, non-hazardous and hazardous waste storage yard.
5	Topo sketch showing the distance of water bodies, roads, existing/proposed residential areas, agricultural lands, important religious locations, educational institutions, ancient monuments, archaeological places and other sensitive areas for 1KM. radius from the units.
6	Detailed manufacturing process for each product along with detailed process flow chart.
7	Details of Water Balance and wastewater balance for process.
8	Details of Material balance for each products and process.
9	Land use classification certificate as obtained from CMDA/ DTCP/LPA.
10	Auditor's Certificate with break up details for the proposed Gross fixed Assets duly certified by a Chartered Accountant in the prescribed format.
11	Consent fee under Water and Air Acts payable to the Board.
12	Ground water clearance obtained from the competent Authority (lf applicable).
13	Sewage Treatment Plant(STP) proposal which must contain details of design characteristics of sewage, treatment methodology, mode of disposal, design criteria for various units, detailed drawing of STP and its layout, diagram showing the hydraulic profile and mode of disposal of treated sewage and its adequacy (lf applicable).
14	Effluent Treatment Plant (ETP) proposal which must contain details including breakup quantity of water requirement with sources, breakup quantity of trade effluent, sources of trade effluent, characteristics of wastewater, treatment methodology, mode of disposal, design criteria for various units, detailed drawing of ETP and its layout, diagram showing the hydraulic profile and mode of disposal of treated effluent and its adequacy (If applicable).
15	Air pollution control (APC) measures proposal which must contain the details regarding fuels used, sources of emission, characteristics, concentration and quality of pollutant, proposal along with design criteria

	and drawing for the proposed APC measures, adequacy of APC measures and stack, odour/noise causing operations and its specific odour/noise control measures(lf applicable).
16	In case of hazardous chemicals used as raw materials, the Material Safety Data Sheets (MSDS) should be enclosed for each and every item. If the quantity of the hazardous chemicals handled is more than the threshold limit, the unit shall furnish any one or combination of the following documents as required under the MSIHC Rules (If applicable).: Risk assessment report/Onsite emergency preparedness plan/Off site emergency preparedness plan.
17	In case of transport of hazardous chemicals, details of chemicals transported, method of transport and its safety measures (If applicable).
18	Industries attracting EIA Notification shall submit Environmental Clearance obtained from the MOEF/SEIAA along with the Environmental Impact Assessment Report (If applicable).
19	CRZ clearance obtained from the competent Authority (If applicable).
Consent to Operate (CTO) under Water Act and Air Act	
1	A covering requisition letter stating the status of the industry and activities clearly.
2	Compliance statement on the CTE special conditions stipulated under Water & Air Acts
3	Auditor's Certificate with break up details for the actual Gross fixed Assets (final cost) duly certified by a Chartered Accountant in the prescribed format.
4	Photographs of the provided measures of ETP/APC/ other compliances of conditions (If applicable).
5	Compliance statement on the EC conditions stipulated under EP Act (If applicable).
6	Agreement with Common TSDF/ CBMWTF (If applicable).

8.3 TIME LIMIT FOR PROCESSING APPLICATION BY TNPCB

(Source: Proc.No.TNPCB/OCMMS/F.No.6517/Time limit/2017 dated 4.7.2017)

TNPCB prescribed time limit for processing of the applications received for issue of consent to establish, consent to operate, renewal of consent, consent for expansion activity, amendment, extension of consent, authorization under Bio-Medical Waste Rules, Hazardous Waste rules, Municipal Solid Waste Rules, E-Waste Rules, Plastic Waste Rules etc., as detailed below:

Sl.No.	Category / Classification	Time Limit Prescribed for processing in days
1	Red / Large	45
2	Red / Medium	45
3	Red / Small	30
4	Orange / Large	30
5	Orange / Medium	30
6	Orange / Small	30
7	Green / Large	30
8	Green / Medium	30

9	Green / Small	30
10	Industries attracting EIA / CRZ Notification	45
11	Hazardous Waste Authorization	45
12	Bio-Medical Waste Authorization	45
13	Municipal Solid Waste Authorization	30
14	E-Waste Authorization	45
15	Plastic Waste Registration	45

8.4 INSPECTION PROCEDURE

(Source: Proc. No.TNPCB/Per./F.No.025714/2013 dated 19.6.2015)

The following procedure will be followed for inspection of industries.

1. Notice of inspection to the responsible person/occupier of the premises shall be served before the actual inspection of the premises.
2. Then in the presence of the responsible person/occupier of the premises the inspecting officer shall visit the industry site and surroundings to collect all the information as required in the prescribed inspection report.
3. In case of Green site (Vacant land) industry importance shall be given to the following details:
   a. Location and details of water bodies
   b. Location and details of habitations
   c. Location and details of other industries
   d. Location and details of roadways
4. In case of existing industries importance shall be given to the following details:
   a) All manufacturing process operations right from the raw materials receipt to product dispatch.
   b) Records and log books used for accounting the raw materials, by/intermediate products and products quantities.
   c) Sources, treatment and consumption, locations of fresh water and related records and log books.
   d) The sources of generation of wastewater and air emission, their treatment/control and disposal activities and related records and log books.
   e) The sources of generation of Hazardous and Non-Hazardous Solid Waste, their storage, treatment and disposal activities and related records and log books.
   f) Log book of the readings of flow meters fixed at various locations in water and wastewater pipelines.
   g) Log book of the readings of energy meters used for the purpose of water drawl and usage, wastewater treatment and disposal, solid and hazardous waste management and air pollution control.
5. During the inspection of the industry, the inspecting officer also collect samples of wastewater, hazardous waste and ground/surface water, depending upon the requirement. In case of legal sample, the procedure

available in the Water (P&CP) Act shall be followed.

6. Also the inspecting officer shall inform the non-compliance/violations orally and record them in the log book maintained by the industry.
7. After the inspection, the inspecting officer shall prepare an inspection report in the prescribed format and submit it to the appropriate authorities along with the non-compliances observed if any and recommendations for taking further action.
8. Based on the inspection report the appropriate authority will issue consent/authorization or instructions/show cause notice for the non-compliances/violations observed if any, along with the corrective actions to be taken with time limit as the case may be, in writing, to the industry.

8.5 AUTHORIZATION / REGISTRATION /EPR AND FILING ANNUAL RETURN UNDER WASTE MANAGEMENT RULES [Source: Extract from corresponding waste management rules]

Sl.No	Waste Rules	Stake Holder	Authorization / Registration	Annual Returns
1	Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016	Hazardous Waste generating industries, Common TSDF	Authorization from SPCB (5 years validity)	Annual Return (FY) in Form-4 to SPCB on or before 30th day of June
		Hazardous waste importing units for recycling, recovery, reuse and utilization including co-processing	• For Wastes listed in Part-A & B in Schedule-III – Permission from MoEF&CC. • For Wastes listed in Part-D Schedule-III – MoEF&CC permission is not required. Actual user shall get authorization (5 year validity) from SPCB. Trader shall get one time authorization from SPCB.	
		Tyre – Producers, Recylcers, Retreaders	EPR registration with CPCB	File quarterly and annual returns to CPCB
		Used Oil – Producers (Manufactures / Importers)	EPR registration with CPCB	File annual returns to CPCB

		Used Oil – Collection agent / Recyclers	Reister in EPR Portal	File quarterly and annual return in portal
2	Bio-medical Waste Management Rules,2016	CBMWTDF, Health Care Facility	Authorization from SPCB (Validity synchronized with validity of consent order)	Annual Return (CY) in Form-IV to SPCB on or before 30th day of June
		Non-bedded HCF	One time authorization from SPCB	
3	Solid Waste Management Rules, 2016	Local Body / Operator of Facility	Authorization from SPCB (Validity synchronized with validity of consent order)	Annual Return (FY) in Form-IV to CMA on or before 30th day of April.
4	Plastic Waste Management Rules, 2016	Producer, Recycler, Manufacturer	Registration from SPCB (1year validity)	Annual Return (FY) in Form-IV to Local Body on or before 30th day of April
		Producers Importers Brand Owners	EPR Registration (With CPCB if more than two States, With SPCBs if operated in one or two States)	
5	E-Waste Management Rules, 2022	Producer	EPR Authorization from CPCB (5 years validity)	Annual Return (FY) in Form-3 to CPCB on or before 30th day of June
		Manufacturer, Recycler	Authorization from SPCB (5 Years validity)	Annual Return (FY) in Form-3 to SPCB on or before 30th day of June
		Refurbisher	One time authorization from SPCB	
		Bulk Consumer	Nil	
6	C&D Waste Management Rules, 2016	Facility Operator	Authorization from SPCB	Annual Return (FY) in Form-III to SPCB on or before 30th day of April
7	Batteries (M&H) Rules, 2022	Producers	EPR Registration	EPR Plan in Form 1C to CPCB by June of every FY. Annual Returns in Form-3 to CPCB before 30th June of next FY
		Refurbisher	One time Registration	Quarterly

		her & Recyclers	with SPCB	Returns in Form-4 to SPCB

8.6 APPEAL BEFORE THE APPELLATE AUTHORITY

As per section 28 of the Water (P&CP) Act, 1974, any person aggrieved by an order made by the Tamil Nadu Pollution Control Board under section 25, section 26 or section 27 of the Water Act may, within thirty days from the date on which the order is communicated to him, prefer an appeal to Appellate Authority constituted by the State Government under this section.

Similarly, as per Section 31 of the Air(P&CP) Act, 1981, any person aggrieved by an order made by the Tamil Nadu Pollution Control Board under the Air Act, may, within thirty days from the date on which the order is communicated to him, prefer an appeal to Appellate Authority constituted by the State Government.

8.7 APPEAL BEFORE THE NATIONAL GREEN TRIBUNAL

As per Section 5A of the Environment (Protection) Act, 1986, any person aggrieved by any directions issued under Section 5 of the Environment (Protection) Act, 1986 may file an appeal to the National Green Tribunal. As per Section 16 of the National Green Tribunal Act, 2010, any person aggrieved by

(i) an order or decision, made by the Appellate Authority under Section 28 of the Water (P&CP) Act, 1974.
(ii) an order passed by the State Government under Section 29 of the Water (P&CP)Act, 1974
(iii) directions issued by a Board under section 33A of the Water (P&CP) Act, 1974
(iv) an order or decision made, by the Appellate Authority under Section 31 of the Air (P&CP) Act, 1981
(v) any direction issued under section 5 of the Environment (Protection)Act,1986,

may, within a period of thirty days from the date on which the order or decision or direction or determination is communicated to him, prefer an appeal to the Tribunal.

8.8 PROCEDURES FOR OBTAINING RENEWAL OF CONSENT TO OPERATE (RCO)

Red category industries have to get the renewal of consent to operate annually. Orange category industries have to get the renewal of consent to operate annually till the Effluent Treatment Plant & Air Pollution Control measures are operated satisfactorily and there after once in two years. Green category industries have to get the renewal of consent to operate once in two years. Application for renewal has to be made sixty days prior to the date of expiry of the consent order to the District Officer along with appropriate consent fee. The District Officer will inspect the industry and submit report. Renewal of consent to operate will be granted only after satisfactory compliance of all the conditions imposed in previous consent order.

Renewal of Consent to Operate (RCO) will also be issued with validity period for

Red / Orange / Green category industries for 5 / 10 / 14 Years respectively on remittance of total consent fee for the entire period in advance Or else the validity period of renewal of consent to operate will be restricted accordingly to the number of fees remitted.

Enclosures with Renewal consent application

S.No	Enclosures to be accompanied
1	A covering requisition letter stating the status of the industry and activities clearly.
2	Details of production capacity, actual products manufactured in month wise during the previous financial year.
3	Details of changes if any in the quantity of sewage/trade effluent generated and mode of disposal of the same indicated against in the original consent order (lf applicable).
4	Details of changes if any in the quantity of emission and number and height of chimney/stacks indicated against in the original consent order (lf applicable).
5	Details of changes if any in the name or in the management of the company (lf applicable).
6	A consolidated report of analysis of the treated sewage/ trade effluent samples collected by TNPCB Officials during the previous financial year (If applicable).
7	Latest reports of AAQ, Stack Monitoring and Noise Level Survey conducted through TNPCB lab during the previous financial year (If applicable).
8	Compliance report on the conditions of latest Hazardous waste Authorization/ Biomedical Waste Authorization issued to the unit (If applicable).
9	Compliance report on the latest consent/renewal of consent order conditions stipulated under Water & Air Acts issued to the unit.
10	The latest Audited Balance Sheet/Auditor's certificate showing the Gross Fixed Assets (GFA) without depreciation of the unit in the prescribed format.
11	Consent fee under Water and Air Acts and water Cess fee under Water Cess Act payable to the Board.

8.8.1 Validity Period CTE, CTO and RCO

As per Board vide B.P. Ms No.5 dt.2.8.2016 all the Consent to Establish, Consent to Operate and renewal consent to operate orders will be issued with validity date ending 31st March.

From 2021-2022, 'Consent to Operate (CTO)/Renewal of Consent (RCO)' to the industries are issued as a block, with a validity period of 5 years for Red, 10 years and 14 years for Orange and Green category industries respectively under the Ease of Doing Business.

Further, as a part of "ease of doing business" and for promoting industries in the State, the Green category industries located in the Industrial Use Zone / Industrial Estate as classified by the Directorate of Town & Country Planning (DTCP) / Chennai Metropolitan Development Authority (CMDA) / Local Planning Authority (LPA) can apply directly for Consent to Operate (CTO) without obtaining CTE. This concept of issuing CTO without CTE is known as CTO Direct.

8.8.2 Power delegation for the issue of consent orders, renewal of consent orders *(Source: B.P. Ms. No. 19 dated 03.04.2023)*

S. No.	Particulars	17 Category	Red Large	Red Medium	Red Small, Orange (Large and Medium), and Green Large	Orange Small, Green (Medium and Small)
1	Consent to Establish & Expansion (CTE Revised)	TSC	CCC	CCC	ZLCCC	DLCCC
1A	Consent to Establish - Extension	CCC	CCC	CCC	ZLCCC	DLCCC
2	Consent to Operate & Expansion	TSC	CCC	CCC	ZLCCC	DLCCC
3	EIA & CRZ attracted Projects CTE & Expansion	TSC	TSC	CCC	CCC	CCC
3A	EIA & CRZ attracted Projects CTE & Extension	CCC	CCC	CCC	CCC	CCC
4	EIA & CRZ attracted Projects CTO & CTO Expansion	TSC	CCC	CCC	CCC	CCC
5	CRZ alone attracting Projects CTE & Expansion	TSC	TSC	CCC	ZLCCC	DLCCC
5A	CRZ alone attracting Projects CTE - Extension	CCC	CCC	CCC	ZLCCC	DLCCC
6	CRZ alone attracting Projects CTO & Expansion	TSC	CCC	CCC	ZLCCC	DLCCC
7	Consent Renewal	Chairperson	M S* JCEE (M)**	JCEE (M)	DEE	DEE
8	Fresh consent for Name Change, Changes in stack for DG set, Merger of adjacent units without any changes in existing consent etc.,	Chairperson	M S * JCEE (M) **	JCEE (M)	DEE	DEE
9	Mining of minor minerals falling under B1 and B2 category projects which are granted EC by MoEF&CC / SEIAA and of area up to 25 hectares	-	TSC	DLCCC	DLCCC	DLCCC
10	For any expansion projects of highly polluting industries those are attracting the G.O 213 & G.O 127, the Issue of Consent will be considered by placing it in TSC in the case of Red Large, CCC in the case of Red Medium and ZLCCC in the case of Red Small followed by recommending the project in Board meeting for obtaining relaxation from Government. After getting the G.O relaxation, CTE will be issued by Chairman in the case of Red Large, Member Secretary in the case of Red Medium and DEE in the case of Red Small.					

11	• * for all CRZ and EIA attracting industries and all Red-Large industries except the categories mentioned in Table-C • ** Red – Large industries for categories mentioned in Table-C only.

Note: TSC-Technical Sub Committee, CCC-Consent Clearance Committee, ZLCCC-Zonal Level Consent Clearance Committee, DLCCC-District Level Consent Clearance Committee, MS-Member Secretary, JCEE(M)-Joint Chief Environmental Engineer (Monitoring), DEE-District Environmental Engineer.

8.8.3 Power delegation for the issue of authorization, pass book and registration under various Waste Management Rules *(Source: B.P. Ms. No. 19 dated 03.04.2023)*

Sl. No.	Particulars	Function	17 Category (Large & Medium scale only)	Red Large	Red Medium	Red Small, Orange (Large & Medium)	Orange Small & All Green
1	First Time & subsequent Authorization & amendment under various Rules * mentioned in Sl No 6 of this table.	Inspection Authority	JCEE(M)	DEE	DEE	AEE/AE	AEE/AE
		Approving Authority	M.S	M.S** JCEE (M)***	JCEE (M)	JCEE (M)	DEE
		Issuing Authority	Sector JCEE	Sector JCEE ** JCEE (M)***	JCEE (M)	JCEE (M)	DEE
2	Authorization & Pass Book for actual users [Under Rule 9 & Rule 13(2) - Part D Schedule 3 of H& OW Rules]	Inspection Authority	JCEE(M)	DEE	DEE	AEE/AE	AEE/AE
		Approving Authority	M.S	M.S	MS	MS	MS
		Issuing Authority	Sector JCEE	Sector JCEE	Sector JCEE	Sector JCEE	Sector JCEE
3	Authorization & Pass Book for list of recyclable Hazardous Waste as per Schedule IV of H&OW Rules.	Inspection Authority	JCEE(M)	DEE	DEE	AEE/AE	AEE/AE
		Approving Authority	M.S	M.S	MS	MS	MS
		Issuing Authority	Sector JCEE	Sector JCEE	Sector JCEE	Sector JCEE	Sector JCEE
4	One time Authorization of Traders for Import of Hazardous waste under H&OW Rules.	Inspection Authority	DEE	DEE	DEE	DEE	DEE
		Approving Authority	MS	MS	MS	MS	MS
		Issuing Authority	Sector JCEE	Sector JCEE	Sector JCEE	Sector JCEE	Sector JCEE
5	Plastic Registration under Plastic Waste (Management and Handling)	Inspection Authority	AEE/AE	AEE/AE	AEE/AE	AEE/AE	AEE/AE
		Approving Authority	DEE	DEE	DEE	DEE	DEE
		Issuing Authority	DEE	DEE	DEE	DEE	DEE

	Rules, 2011 as amended.						
6	• * Hazardous and Other Wastes (Management and Transboundary) Rules, 2016, Bio-Medical Waste Management Rules, 2016, Solid Waste Management Rules, 2016, E-Waste (Management) Rules, 2016 and Construction and Demolition Waste Management Rules, 2016. • ** Red-Large industries except the categories mentioned in Table-C • *** Red – Large industries for categories mentioned in Table-C • H&OW Rules in the above Table refers to the Hazardous and Other Wastes (Management and Transboundary) Rules, 2016						

Note:

1). **Inspection Authority means** - the officer whose I.R. shall be considered for issue of Authorization, Registration etc.,
2). **Approving Authority means** – authority who takes decision on issue of Authorization, Registration
3). **Issuing Authority means** - authority issuing Authorization, Registration after getting necessary approval from Approving Authority

Table C

Type of Red- Large Industries for which Renewal of Consent can be approved by JCEE(M)

S.No.	Type	Industry Sector - Types
1	1005	DG Set of Capacity ≥ 5MVA
2	1006	Industrial carbon including electrodes and graphite blocks activated carbon, carbon black.
3	1007	Lead acid battery manufacturing (excluding assembling and charging of lead-acid battery in micro scale)
4	1008	Phosphate rock processing plant
5	1009	Power generation plant (except Wind and Solar renewable power plants of all capacities and Mini Hydel Power Plant capacity < 25 MW
6	1013	Fibre glass production and processing excluding moulding) including Lead containing glass
7	1014	Fire crackers manufacturing and bulk storage facilities
8	1016	Milk processes and dairy products (integrated product)
9	1017	Phosphorous and its compounds
10	1018	Pulp & Paper (waste paper based without bleaching process to manufacture Kraft Paper)
11	1025	Basic chemicals and electro chemicals and its derivatives including manufacturing of acid
12	1030	Health-care Establishment (as defined in BMW Rules) having incinerator irrespective of waste generation(or)having total waste water generation100 KLD and above (attracting EIA) {Renewal – JCEE(M)}
13	1031	Hotels having over all waste water generation @100KLDand more (or) having Rooms 100 KLD and above (attracting EIA)
14	1038	Photographic film and its chemicals

15	1039	Railway locomotive work shop /Integrated road transport workshop / Authorized service centers having waste water generation 100 KLD and above
16	1042	Ship Breaking Industries
17	1049	Slaughter house (as per notification S.O.270(E) dated:26.03.2001) and meat processing industries, bone mill, processing of animal horn, hoofs and other body parts
18	1061	Synthetic detergents and soaps (excluding formulation)having waste water generation100 KLD and above
19	1062	Automobile servicing, repairing and painting (excluding only fuel dispensing) having waste water generation 100 KLD and above
20	1063	Building and construction project more than 20,000 sq.m built up area and having waste water generation 100KLD and above (attracting EIA)
21	1068	Manufacturing of Glass (Lead Glass only)
22	1069	Nonalcoholic beverages (soft drink) & Bottling of alcohol/nonalcoholic products having waste water generation 100 KLD and above.
23	1070	Vegetable Oil manufacturing including solvent extraction and refinery/hydrogenated oils having waste water generation 100 KLD and above
24	1077	MSW sanitary land fill site
25	1081	Sewage Treatment plant
26	1084	Analytical & material testing lab
27	1085	Stone/Savudu Quarries
28	1999	Miscellaneous (Red)

8.8.4 Duties and responsible authorities with respect to inspection sampling and complaint investigation*(Source : B.P. No. 39, dated 01.06.2013)*

Sl. No	Responsibility	17-Category	Red-Large	Red-Medium	Red-Small	Orange-Large	Orange-Medium	Orange Small & All Green
1	Inspection for First Consent & Expansion of CTE & CTO	JCEE(M)	DO	AEE	AEE	AEE	AEE	Jurisdiction AE
2	Renewal Inspection	JCEE(M)	DO	AEE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE
3	Sampling	Jurisdiction AE	AEE	AEE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE
4	Complaint Inspection	JCEE(M)	AEE	AEE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE
5	Hazardous Waste Management	JCEE(M)	DO	AEE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE
6	BMW Inspection	Not applicable	DO	AEE	Jurisdiction AE	Not applicable	Not applicable	Not applicable
7	MSW Inspection	Not applicable	DO	AEE	Jurisdiction AE	Not applicable	Not applicable	Not applicable
8	Court Cases	JCEE(M)	AEE	AEE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE	Jurisdiction AE

DO – District Officer (DEE/AEE – Head of Office)

Note 1: The above table defines the responsibility to the field officers. However Consent Renewal / Hazardous / BMW Inspections and sampling responsibility may be assigned / altered by the concerned District Officer as when required based on the workload / Geographical area and any other circumstances with a view to dispose / process the applications, Renewal consent orders etc.

Note 2: The AEE shall look after all the office works and verifying all the registers and records maintained by the staff. He shall assist the District Officer in all respects such as attending of Collector Office meetings, court cases and inter departmental co-ordination and correspondence. Preparation of agenda for ZLCCC meetings and convener for the DLCCC meetings. He will be the Nodal officer for the computerization activity of the Board.

8.8.5 Inspection / Sample Collection Frequency

The Board vide B.P. Ms No. 22 dated 25.2.2004 have fixed norms for inspection and sample collection from the industries as follows:

Type of Industry	Category	Inspection	Sample Collection
Large	Red Orange Green	Once in 3 months Once in 6 months Once in 2 years	Once in a month Once in 4 months ------
Medium	Red Orange Green	Once in 4 months Once in 6 months Once in 2 years	Once in 3 months Once in 6 months ------
Small	Red Orange Green	Once in a year Once in 2 years Once in 2 years	Once in 3-6 months Once in 6 months ------
17 Category of Industry		Once in a month	Once in a month

8.9 NO INCREASE IN POLLUTION LOAD CERTIFICATION

Procedures for getting consent by the industries with no increase in pollution load under the EIA Notification 2006 as amended *(Ref: Circular Memo: TNPCB/F.004987/PLAC/2017, dated 24.03.2021)*

The MoEF & CC vide Notification S.O.980 (E) dated 02.03.2021 has amended the EIA Notification 2006 as below,

- Any increase in production capacity in respect of processing or production or manufacturing sectors (listed against item numbers 2,3,4, and 5 in the schedule to this notification) with or without any change in (i) raw material-mix or (ii) quantities within products or (iii) number of products including new products falling in the same category or (iv) configuration of the plant or process or operations in existing area or in areas contiguous to the existing area (for which prior environmental clearance has been granted) shall be exempt from the requirement of prior environmental clearance that there is no increase in pollution load (derived on the basis of such prior environmental

clearance)."

- A copy of "No increase in pollution Load" certificate and intimation, as provided by the Ministry from time to time on PARIVESH portal, shall be uploaded by the unit for which system generated acknowledgement shall be issued online,
- The unit shall inform the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be specified format along with.
  i. No increase in pollution load' Certificate from the Environmental Auditor or reputed institutions empaneled by the State Pollution Control Board or Pollution Control Committee or Central Pollution Control Board or Ministry;
  ii. Last Consent To Operate Certificate for the project or activity; and
  iii. Online system generated acknowledgement of uploading of intimation and 'no increase in pollution load' certificate on PARIVESH Portal;

In this regard it is informed that the procedure of issuing "No increase in Pollution Load" certificate is only applicable for those industries listed in the item numbers 2,3,4 and 5 in the schedule of EIA notification 2006 as amended which have already obtained Environmental Clearance for their existing activity and having online connectivity with CAC / WQW of TNPCB and CPCB. Further, the following procedure/steps shall be followed hereafter for processing the application filed and issuing, "No increase in pollution load certificate".

I. Preparation of report on Pollution Load Assessment for "No increase in pollution load";

1). The project proponent who seeks 'No Increase in Pollution Load' Certificate shall submit 10 copies of pollution load assessment report booklet to Corporate Office. TNPCB, Chennai, which is duly studied and prepared by the Environmental Auditors/Consultant/ reputed institutions, who have been Approved / Accredited by the MoEF&CC & NABET/QCl from time to time,

2). A copy of the "No Increase in pollution load certificate"(As in Appendix -I enclosed) and intimation shall be uploaded in the Parivesh Portal and acknowledgement to be obtained before approaching the Board.

3). The Project proponent shall enclose the copy of the online system generated acknowledgement of uploading of intimation and the "No increase in Pollution Load Certificate".

4). The information on Change in Product Mix / Modernization / increase in production capacity permitted in earlier Environmental Clearance shall be provided as per the check slip prescribed by the TNPCB (As in Appendix Ⅲ enclosed) and guidelines given in the Notification.

II. Procedure to convene the Pollution Load Assessment Committee (PLAC) meeting:

1). The concerned sector JCEEs of the Corporate Office shall forward a copy of the pollution load assessment report submitted by the proponent to the concerned JCEE (M) / DEE.

2). The JCEE (M) / DEE shall send his/her remarks and recommendations to the

Board within a - week's time in accordance with as in Appendix II enclosed.

3). On receipt of the report from the JCEE(M) / DEE, the sector JCEE in Corporate Office shall examine the proposal and put-up the file along with a brief agenda as per Appendix II to the Member Secretary for getting approval to place before the PLAC.

4). After Member Secretary's approval, the agenda along with seven copies of the report (given by the unit) shall be handed over to the Board Meeting Section (BMS),

5). The BMS Section shall convene the PLAC meeting after confirmation of the date from the Chairman of the PLAC (MS/CEE).

6). The BMS section shall communicate the date of meeting along with agenda & report to the panel members of the PLAC. It is to be ensured that the Agenda is communicated to the committee members at least 7 days prior to the meeting

7). The concerned sector JCEEs of Corporate Office is the convener of the PLAC committee meeting. The project proponent along with the Environmental Auditors/consultants/ reputed institutions who have prepared the report shall make a presentation before the committee as per Appendix III.

8). The sector JCEEs of Corporate Office shall prepare the minutes Appendix-IV (enclosed) of the meeting and get the approval of the committee.

9). Based on the recommendations of the PLAC, the Board shall communicate its decision to the proponent in accordance with Appendix V (enclosed).

8.10 BANK GUARANTEE FORMAT

(Source: Circular Memo No.TNPCB/MISC/F 17978/ 2005 Dated 13.09.2005)

The Board insists the industries to furnish bank guarantee to ensure that they will install pollution control measures within the time schedule as assured. Even though the units install the pollution control measures as per the time schedule, their performance consistency shall be monitored by the District Officers by periodical sampling. Therefore the bank guarantee period shall include the performance monitoring period also. Hence the following time schedule shall be adopted for getting bank guarantee from the units.

Period given by the Board to install pollution control measures	Period required to monitor the performance	Period for which bank guarantee is to be obtained
3 months	3 months	6 months
6 months	6 months	12 months
12 months	6 months	18 Months

Format (*to be typed in Rs.100/- non-judicial stamp paper*)

THIS DEED OF GUARANTEE made on the _____ day of _____ dated _____ by _____ of the one part in favour of TNPC Board of other part.

WHEREAS M/s._____ running an industry at _____ has approached the TNPC Board for the purpose of _____ and the TNPC Board having agreed to consider the request of the industry of M/s.

_____ under the terms and conditions put forth in the schedule enclosed hereunder.

AND WHEREAS in accordance with clause _____ of the conditions put forth in the schedule enclosed hereunder the industry M/s. _____ is desirous of furnishing a Bank Guarantee from _____ for the sum of Rs._____ towards security deposit valid for _____ months.

AND WHEREAS at the request of the industry holder the Bank has agreed to give its guarantee as hereinafter contained. Now this deed witnesses as follows:

We (*Bank name and address is to be typed here*) (Herein after referred to as the Bank) do hereby undertake to pay the Board an amount not exceeding Rs._ _____ (*amount to be typed in figures & words*) against any non-fulfillment of the conditions contained in the schedule, wholly or partly by the said industry M/s. (*full address of the unit is to be type here*) and we, (*Bank name and address is to be typed here*) do hereby undertake to pay the amount due payable under this guarantee without any demur, merely on demand from the Board stating that the amount claimed is due by non-fulfillment of the conditions in the schedule wholly or partly by the said industry. Any such demand made on the Bank shall be conclusive as regards the amount due payable by the Bank under this guarantee. However our liability under this guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said schedule and that it shall continue to be enforceable till all dues of the Board under the schedule have been fully performed and its claim satisfied or discharged or till the Tamil Nadu Pollution Control Board (Office/Department) certifies that the terms and conditions of the said schedule have been fully and properly carried out by the said industry and accordingly discharges the guarantee. Unless a demand or claim under the guarantee is made on us in writing on or before_____ *(date of expiry of bank guarantee to be typed here*) we shall be discharged from all liability under this guarantee thereafter.

We *(Bank name and address is to be typed here*) further agree with the Board that the Board shall have full liberty without our concern and without affecting in any manner our obligation hereunder to every one of the terms and conditions of the said schedule or to the extent the time of performance by the said industry from time to time or to postpone for any time or from time to time any of the powers exercised by the Board against the said industry and forbear and enforce any of the terms and conditions relating to the said schedule and we shall not be relieved of our liability by reason of any such variation, or extension being granted to the said industry or for any forbearance, act or omission on the part of the Board or any indulgence by the Board.

We *(Bank name and address is to be typed here)* lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Board in writing.

(*Banker Signature with Seal*)

SCHEDULE TO THE BANK GUARANTEE NO.
M/s.

Name of the Industry which applied for the consent of the Board	Bank guarantee Rupees	Terms and conditions
(full address of the unit is to be typed here)	Rs.....	(*Conditions mentioned in Board letter shall be typed here*)

(Banker Seal with Signature)

8.11 IMPORTANT GOVERNMENT ORDERS

8.11.1 Ban on setting up of highly polluting industries with in 1 km from water bodies

ABSTRACT

ENVIRONMENT CONTROL – Control of Pollution of Water Sources – Location of industries within 1 k.m. From the embankments of rivers, streams, dams etc. – Imposition of restrictions – Orders – Issued.

ENVIRONMENT AND FORESTS (EC-I) DEPARTMENT

G.O.Ms.No.213 Dated the 30th March 1989

Read:-

1. G.O.Ms.No.1, Environment Control Dated 6.2.84.
2. From the Member – Secretary, Tamil Nadu Pollution Control Board Lr.No.BMS (1)/ 18878/88/ Dated 23.8.88.
3. From the Chairman, Tamil Nadu Pollution Control Board Lr.BMS (1)/44365/88 dt.3.11.88 and letter of even No. Dated 30.12.88.

ORDER

In the Government Order first read above, the Government have ordered, among other things, that no industry causing serious water pollution should be permitted within one kilometer from the embankments of rivers, streams, dams etc., and that the Tamil Nadu Pollution Control Board should furnish a list of such industries to all local bodies. It has been suggested that it is necessary to have a sharper definition for water sources so that ephemeral water collections like rain water ponds, drains, sewerages (bio-degradable) etc., may be excluded from the purview of the above order. The Chairman, Tamil Nadu Pollution Control Board has stated that the scope of the Government Order may be restricted to reservoirs, rivers and public drinking water sources. He has also stated that there should be a complete ban on location of highly polluting industries within 1 kilometer of certain water sources.

2. The Government have carefully examined the above suggestions. The Government impose a total ban on the setting up of the highly polluting industries mentioned in Annexure – I to this order within one kilometer from the embankments of the water sources mentioned in Annexure – II to this order.

3. The Government also direct that under any circumstances if any highly polluting industry is proposed to be set up within one kilometer from the embankments of water sources other than those mentioned in Annexure – II to this order, the Tamil Nadu Pollution Control Board should examine the case and obtain the approval of the Government for it.

4. The receipt of this order may be acknowledged

(BY ORDER OF THE GOVERNOR)
D.SUNDARESAN
COMMISSIONOR AND SECRETARY TO GOVERNMENT

Annexure – I to the G.O. Ms.No.213 Dated 30.3.1989
LIST OF HIGHLY POLLUTING INDUSTRIES

1. Distilleries
2. Tanneries, Sago, Sugar, Dairies and Glue,
3. Fertilizer.
4. Pulp & Paper (With digester)
5. Chemical units generating trade effluent containing such pollutants which may pollute air, water and land before treatment and those chemicals which may alter the environmental quality by undergoing physical, chemical and biological transformation.
6. Petroleum Refinery
7. Textile Dying Units.
8. Steel Plant (Electroplating, Heat Treatment etc.)
9. Ceramics.
10. Thermal Power stations (except Natural Gas / LNG/ CNG /Naphtha / Biomass based power plants, Power plants using duel fuel of biomass & coal upto 25 MW, Power Plants using waste heat recovery boiler without any auxiliary fuel) [Amendment issued vide Letter (Ms). No.85, EC.3/2019, Dated 26.08.2019]
11. Basic Drug Manufacturing Units
12. Pesticide
13. Asbestos
14. Foundries

[Note: The Government in G.O. Ms. No. 127/E&F/EC Dept./ECIII/dt. 8.5. 1998 read with G.O. MS.No. (ID) 223/E&F/EC.III/dt. 2.9.1998 have issued orders imposing a total ban of setting up of the above mentioned highly polluting industries within 5 kilometers from the embankments of the following rivers.

1. Cauvery and its tributaries
2. Pennaiyar
3. Palar
4. Vaigai
5. Tamirabarani**].**

Annexure – II to the G.O.Ms. 213 dated 30.3.1989
LIST OF RIVERS, STREAMS, RESERVOIRS ETC.

Sl. No	Rivers	Tanks and Reservoirs	Canals
(1)	(2)	(3)	(4)
CHENNAI, THIRUVALLUR AND KANCHEEPURAM DISTRICT			
1.	Araniyaru	Chembarambakkam Tank	Upper Supply Channel (Poondi to Cholavaram)
2.	Koratalaiyar	Thenneri Hissa Tank	Lower Supply Channel (Cholavaram to Redhills)
3.	Cooum	Uthiramerur Tank	Cheyyar Anicut Main Channel.
4.	Adyar	Madurantagam Tank	
5.	Palar	Parayankalathur Tank	
6.	Nagari	Cooum Tank	
7.	Nandiyaru	Manimangalam Tank	
8.	Cheyyar	Poondi Reservoir	
9.	Kiliyaru	Cholavaram Lake	
10.	Ongur	Red Hills Lake	
CUDDALORE AND VILLUPURAM DISTRICT			
1.	Varahanadhi	Willington Reservoir	Sathanur Reservoir Project Canal
2.	Malattaru	Vidur Reservoir	Sathanur Reservoir Project Right Bank Canal
3.	Pennariaru	Gomuki Reservoir	Pambai Channel - Thirukkoilur Anicut
4.	Gadilam	Manimukthanadhi Reservoir	Malattar Channel - Thirukkoilur Anicut
5.	Vellar	Veeranam Tank	Raghavian Channel - Thirukkoilur Anicut
6.	Coleroon	Perumal Tank	Sithalingamadam Channel - Thirukkoilur Anicut
7.	Tundiaru	-	Vadamarudur Channel - Thirukkoilur Anicut
8.	Pambaiyar	-	Maragadapuram Channel - Ellis Choultry Anicut
9.	Gomuki	-	Alargal Channel - - Ellis Choultry Anicut
10.	Manimukthanandhi	-	Eralur Channel - Ellis Choultry Anicut
11.	Musukundanadhi	-	Kandapakkam Channel - Ellis Choultry Anicut
12.	Vasistanadhi	-	Wellington Reservoir Supply Channel (from Toludur Regulator)
13.	Thurijalar	-	Wellington Reservoir Main Canal
14.	Vadavar	-	Wellington Reservoir Low Level Canal
15.	-	-	Pelandorai Anicut Main Channel
16.	-	-	North Rajan Channel – Lower Coleroon Anicut
17.	-	-	South Rajan Channel - Lower

			Coleroon Anicut
18.	-	-	Kunukkumanniyar Channel - Lower Coleroon Anicut
19.	-	-	Vellar Rajan Channel – Sethiathope Anicut
20.	-	-	Veeranam New Supply Channel - Sethiathope Anicut
21.	-	-	Gomuki Reservoir Main Canal - Sethiathope Anicut
22.	-	-	Manimuthanandhi Reservoir Main Canal –Sethiathope Anicut
23.	-	-	Vridhachalam Anicut Main Channels (North & South)
24.	-	-	Mehamathur Anicut Channel
THANJAVUR NAGAPATTINAM AND THIRUVARUR DISTRICTS			
1.	Cauvery	-	-
2.	Coleroon	-	Grand Anicut Canal
3.	Kodamurutty	-	Lower Coleroon Anicut Canals
4.	Arasalar	-	-
5.	Veerasholan	-	-
6.	Vikramanar	-	-
7.	Vennar	-	-
8.	Vettar	-	-
9.	Vadavar	-	-
10.	Koraiyar	-	-
11.	Paminiar	-	-
12.	Pandavayar	-	-
13.	Vellayar	-	-
14.	Mulliyar	-	-
15.	Ayyanar	-	-
THIRUCHIRAPALLI, PERAMBALUR AND KARUR DISTRICTS			
1.	Cauvery	Ponnaniyar Reservoirs	North Bank Canal - Kattalai Bed Regulator
2.	Amaravathi	-	South Bank Canal - Kattalai Bed Regulator
3.	Coleroon	-	Kattalai Right-Left canal
4.	-	-	Uyyakondan Channel
5.	-	-	Nanganur Channel
6.	-	-	Pullambadi Channel
7.	-	-	Ponniyar Reservoir New Canal
PUDUKKOTTAI DISTRICT			
1.	Vellar	-	Grand Anicut Canal
2.	Ambuliyaru	-	-
3.	Angiceru	-	-
4.	Koraiar	-	-
MADURAI AND THENI DISTRICTS			
1.	Vaigai	Vaigai Reservoir	Gungun Valley Anicut Canals
2.	Suriliyar	Sathiar Odai Reservoir	Periyar Main Canal
3.	Kottakudiar	-	Manjalar Canal
4.	-	-	Thirumangalam Main Canal
5.	-	-	Sathiar Odai Reservoir Canals

DINDIGAL DISTRICT			
1.	Shanmughanathai	Palar- Porandalar	Palar-Porandalar Main Canal
2.	Koduvanaru	Parappalar	Thadakulam Tank Canals
3.	Manjalaru	Vardamanadhi	Ramasandram Anicut Channel (Posappalam)
4.	Mamdanadhi	Manjaluru	Varadamanadhi Reservoir System
5.	Palar-Porandalar	Kodaikanal Lake	Thirumangalam Main Channel
6.	Parajipalar	Berijam lake	Periyar Main Canals
7.	Vaigai River	Kamarajar Sagar	Murudanadhi Reservoir Left and Right Side
8.	-	-	Mayalaru Reservoir Canals
RAMANATHAPURAM DISTRICT			
1.	Vaigai	R.S.Mangalam Tank	-
2.	Vaipparu	Ramanathapuram Big Tank	-
3.	Vembaru	Kanoor Tank	-
4.	-	Maranadu Tank	-
SIVAGANGAI DISTRICT			
1.	Vaigai	-	Periyar Main Canals
2.	Manimuthar	-	-
VIRUDHUNAGAR DISTRICT			
1.	Vaipparu	KullurSandai Reservoir	-
2.	-	Vembokottai Reservoir	-
THIRUNELVELI DISTRICT			
1.	Tamiraparani	Manimuthar	North Kodamelagian Channel
2.	Karuppanadhi	Karuppanadhi	Nadiyunni Channel
3.	Chittiar	Ramanadhi	Kannadian Channel
4.	Servalar	Gatana	Kodayan Channel
5.	Manimuthar	Papanasam	Palayam Channel
6.		Kadamba Tank	Tirunelveli Channel - Ramanadhi Reservoirs
7.		Vijayanarayan-Periyakulam	Tenkal Channel - Ramanadhi Reservoirs
8.		Tenkanai Tank	Vadakal Channel - Ramanadhi Reservoirs
9.			Manimuthar Reservoir Main Channel – Gatana Reservoirs
10.			Arasapattu Channel – GatanaReservoirs
11.			Vadakuruvaipathu Channel
12.			Radhapuram Channel
TUTICORIN DISTRICT			
1.	Tamiraparani	Korampalam Tank	Marudur Melakkal Channel
2.	Vaippar	-	South Main Channel of Srivaikundam Anicut
3.	-	-	North Main Channel of Srivaikundam Anicut
KANYAKUMARI DISTRICT			
1.	Kodaiyar	Pechiparai	Padamanabhapuram Puthen Channel

2.	Valliar	Perunchani	Pandankai
3.	Pazhayaru	Chittar	Thovala Channel
4.	-	-	N.P.Channel
5.	-	-	Pazhayaru
6.	-	-	EK Kal System
7.	-	-	AVM Channel
8.	-	-	Thiruvithan code Canal System
9.	-	-	Pechiparai Left Bank Canal
10.	-	-	Pattanamkal System
11.	-	-	Radhapuram Canal
COIMBATROE DISTRICT			
1.	Bhavani	Parambikulam	Ramakulan Channel
2.	Noyyal	Sholayar	Kallapuram Channel
3.	Amaravathi	Amaravathi	Parambikulam Right Left Canal
4.	Aliyar	Aliyar	Parambikulam Main Canal
5.	-	Poruvanpallar	Bhalli Channel System
6.	-	Thunnokhadam	Vettai Karan Pudur Canal
7.	-	Upper Nivan	Sethumadai Canal
8.	-	Lower Nivan	Udumalaipet Canal
9.	-	Thirumurthi	Aliyar Feeder Canal
10.	-	-	Pollachi Canal
THE NILGIRIS DISTRICT			
1.	Moyar	Upper Bhavani	Avara halla Canal
2.	Bhavani	Emerald	-
3.	PillurPallam	Avalanche	-
4.	Kulkathurai Halla	Pillur	-
5.	Dedavahalla	Kunda	-
6.	Avarai Halla	Paikara	-
7.	Paikara	Ooty Halla	-
8.	Amkour Halla	Glenmorgon	-
9.	Singara	Singara	-
10.	-	Parsens valley	-
ERODE DISTRICT			
1.	Cauvery	Bhavani Sagar	Modineri Anaicut Canals
2.	Bhavani	Uppar	Thadappalli Channel
3.	Moyar	Uttamalaikarai Odai	Lower Bhavani Channel
4.	Noyyal	Yaratthupallam	Kalingarayan Anicut Canal
5.	-	Gunderipallam	Upper Reservoirs Canal
6.	-	-	Vattamalai Kaveri Odai Reservoirs Canal
7.	-	-	Uarattupallam Keshmir Canal
8.	-	-	GunderiPallam Reservoirs Right and left side – Canals
SALEM AND NAMAKKAL DISTRICTS			
1.	Cauvery	Mettur Reservoir	Mettur Canals (East & West Bank Canals)
2.	Thirumanimuthar	Yercadu Lake	-
3.	Vashishtanadhi	-	-
DHARMAPURI DISTRICT			
1.	Cauvery	Krishnagiri	Krishnagiri Reservoir Main Canal

		Reservoir	
2.	Pennaiyaru	Chinnar Reservoir	Bargur Tank Supply Channel (West & East)
3.	Palar	Thunvalahalli Reservoir	NedungalAnaicut Channel
4.	Chinnar I	Bargur Big Tank	Devanahalli Tank Supply Channel
5.	Chinnar II	Mettur Reservoir	Chinnar Reservoir Right side Channel
6.	Bargur River	Pambar	-
7.	Pambar	-	-
8.	Vaniar	-	-
9.	Chinnaru	-	-
10.	Palaru	-	-
VELLORE AND THIRUVANNAMALAI DISTRICTS			
1.	Palar	Sathanur Reservoir	Mahendravadi Channel - Palar Anicut
2.	Poiney	Dusi Mamandur Tank	Kaveri Pak Channel - Palar Anicut
3.	Cheyyar	Kaveripakkam Tank	Sukkiramallur Channel - Palar Anicut
4.	Pennaiyar	-	Dari (Temmampathu) Channel - Palar Anicut
5.	Thurinjilaru	-	Kavi Channel - Palar Anicut
6.	-	-	Govindavadi Channel - Palar Anicut
7.	-	-	Poiney Eastern main Channel - Palar Anicut
8.	-	-	Poiney Western main Channel - Poiney Anicut
9.	-	-	Sathanur Reservoir Project Canal - Poiney Anicut
10.	-	-	Sathanur Reservoir Project Right bank Canal - Sathanur Reservoir

8.11.2 Ban on setting up of highly polluting industries with in 5 km from rivers (G.O. 127 & 223)

தமிழ்நாடுஅரசு

சுருக்கம்

சுற்றுச்சூழல்– நீர் ஆதாரங்களின் தன்மையை பாதுகாத்தல்–நீரை அதிக அளவில் மாசுபடுத்தும் தொழிற்சாலைகள் நிறுவுவதை வரன்முறைப்படுத்தல்– நீர் ஆதாரங்களிலிருந்து 5 கி.மீ. தூரம் வரை தொழிற்சாலைகள் நிறுவுவதை தடை செய்தல் –ஆணைகள் வெளியிடப்படுகின்றன.

சுற்றுப்புறம் & வனத் (சுக 3) துறை

அ.ஆ.நிலை எண் 1 **நாள் 8.5.98**

பார்வை:

1. அரசாணை (நிலை) எண்.1 இ சுற்றுப்புறம் & வனத்துறை நாள் 6.2.84
2. அரசாணை (நிலை) எண்.213, சுற்றுப்புறம் & வனத்துறை நாள் 30.3.89

ஆணை:

6.2.84 ஆம் நாளிட்ட சுற்றுப்புறம் மற்றும் வனத்துறை அரசாணை (நிலை) எண்.1 இல் ஆறுகள், ஓடைகள் மற்றும் அணைகளிலிருந்து 1 கி.மீ. தூரம் வரை எந்தவித அதிக மாசு ஏற்படுத்தும் தொழிற்சாலைகளையும் நிறுவக்கூடாது என்றும் அதிகமாக மாசு ஏற்படுத்தும் தொழிற்சாலைகள் பற்றிய பட்டியலை அனைத்து உள்ளாட்சி நிறுவனங்களுக்கும் தெரிவிக்க வேண்டும் என தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம் கேட்டுக் கொள்ளப்பட்டது. 30.3.1989 ஆம் நாளிட்ட சுற்றுப்புறம் மற்றும் வனத்துறை அரசாணை (நிலை) எண் 213 இல் குறிப்பிடப்பட்ட அதிக மாசு ஏற்படுத்தும் தொழிற்சாலைகளை சில நீர் ஆதாரங்களிருந்து 1 கி.மீ. தொலைவிற்குள் அமைக்கக்கூடாது என அரசு ஆணையிட்டுள்ளது. (அந்த நீர் ஆதாரங்களின் விவரப் பட்டியலும் அவ்வாணையில் இணைக்கப்பட்டுள்ளது).

2. தோல் தொழிற்சாலைள் தொடர்பாக உச்சநீதிமன்றத்தில் வேலூர் நலமக்கள் மன்றத்தின் மூலமாக தொடுக்கப்பட்ட வழக்கில் உச்சநீதிமன்றம் வெளியிட்டஉத்தரவிற்கிணங்கஅரசாணை (நிலை) எண். 213 சுற்றுப்புறம் வனத்துறை, நாள் 30.3.89ஐ உடனடியாக தீவிரமாக கடைபிடிக்க வேண்டும் எனவும் அரசாணையின் இணைப்பில் கூறப்பட்டுள்ள தொழிற்சாலைகள் எதுவும் புதியதாக தடை செய்யப்பட்ட பகுதியில் நிறுவக்கூடாது எனவும் மேலும் அதற்காக நிறுவப்பட்டுள்ள குழுமம் இத்தொழிற்சாலைகளைப் பற்றி ஆராய்ந்து ஏற்கனவே நிறுவப்பட்டுள்ள தொழிற்சாலைகளை ஆய்வு செய்து தேவைப்படின் வேறிடத்திற்கு மாற்றுமாறும் உத்தரவிடப்பட்டுள்ளது.

3. மக்களிடையே மாசுகட்டுப்பாடு பற்றிய விழிப்புணர்வு ஏற்படுவதற்கு முன் பலதொழிற்சாலைகள் காவிரி, பெண்ணையாறு, பாலாறு, வைகை, தாமிரபரணி மற்றும் அதன் உப நதிகளின் அருகில் தொடங்கப்பட்டுவிட்டன. கூடதாழிற்சாலைகள் வெளியேற்றும் கழிவுநீர் மற்றும் தொழிற்சாலை கழிவுநீர் ஆகியவற்றால் நிலம் மற்றும் நீரின் தன்மை வெகுவாக பாதிக்கப்பட்டுள்ளது. இதனை தடுத்து நிறுத்தாமல் தொடர்ந்து அனுமதிக்கப்படும் போது நீர் வளமும் அதன் தன்மையும், மக்குலூ நலமும், பிற உயிர்வாழ் இனங்களின் நலமும் பாதிக்க வாய்ப்புள்ளது. தற்போது தொழிற்சாலைகள் பொதுகழிவு நீர் சுத்திகரிப்பு நிலையம் / தனியார் சுத்திகரிப்பு நிலையங்கள்அமைத்து செயல்படும்படி அரசினால் வற்புறுத்தப்பட்டுவருகிறது.

4. தற்போது சில தொழிற்சாகைள் நீர் ஆதாரங்களிலிருந்து, நீரைபயன்படுத்தி தொழில் வளாகங்கள் ஏற்படுத்தப்படுகின்றன. நீரின் தன்மையை சரிவ ரபாதுகாக்கவும், நீர்வளம், மக்கள்நலம், உயிர்வாழ் இனங்களின் நலன் ஆகியவைகளைக் கருத்தில்கொண்டும், உயர்நீதிமன்றம் மற்றும் உச்சநீதிமன்றங்களின் தீர்ப்பின் அடிப்படையிலும் இலட்சகணக்கான மக்களின் நலநன கருத்தில் கொண்டு நீர் ஆதாரங்களின் தன்மையை பாதுகாக்கவும், அதே நேரத்தில் தொழில்வளர்ச்சி குன்றாமல் இருக்கவும் நீரை அதிக அளவில் மாசுபடுத்தும் தொழிற்சாலைகள் தொடங்கப்படுவதை வரன் முறைப்படுத்துவது பற்றி ஒருகொள்கை முடிவுஎடுக்க வேண்டிய நிலைஅரசிற்கு ஏற்பட்டுள்ளது.

5. மேலே உள்ள பத்தி 4இல் கண்டுள்ள சூழ்நிலைகளின் அடிப்படையில்அரசாணை (நிலை) எண் 213 சுற்றுப்புறம் & வனத்துறை நாள் 30.3.89ஐ சற்று விரிவுப்படுத்தி தீவிரமாக அமல்படுத்த கீழ்கண்டவாறு ஆணையிடுகிறது.

1. அரசாணை (நிலை) எண.213, சுற்றுப்புறம் & வனத்துறை, 30.3.89ஐ முழு அளவில் தீவிரமாக நடைமுறைப்படுத்தப்படல் வேண்டும்

2. தமிழ்நாட்டில் முக்கிய நீர் ஆதாரங்களான காவிரி மற்றும் அதன் உபநதிகள், பெண்ணையாறு, பாலாறு, வைகை மற்றும் தாமிரபரணி ஆகிய நதிகளிலிருந்து 5 கி.மீ. தூரத்திற்கள் நீரை அதிக அளவில் மாசுபடுத்தும் எந்த தொழிற்சாலையும் (சிவப்புவகை) நிறுவப்பட அனுமதி அளித்தல் கூடாது.

3. பிற வகை தொழிற்சாலைகளான ஆரஞ்சு மற்றும் பச்சை தொழிற்சாலைகளுக்கு நீர் ஆதாரங்களிலிருந்து நீரை எடுப்பதற்கு அனுமதி வழங்குவதற்கு முன்னரும், புதிய தொழில் வளாகங்கள் ஏற்படுத்துவதற்கு முன்னரும் முறையே பொதுப்பணித்துறை, தொழில்துறை, மற்றும் பிற துறைகள் சுற்றுச்சூழல் மற்றும் வனத்துறையை கலந்து ஆலோசிக்கப்படல் வேண்டும். இனி வரும் காலங்களில் புதியதாக தொடங்கவிருக்கும் தொழிற்சாலைகளுக்கு இந்த நடைமுறை பொருந்தும்.

4. ஆரஞ்சு மற்றும் பச்சை வகை தொழிற்சாலைகள் நிறுவுவதற்கான விதிமுறைகளின் வரைமுறைகள் குறித்து, உள்ளாட்சி நிறுவனங்களுக்கு தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம், தெளிவாக்கி நடவடிக்கை எடுக்கவேண்டும்.

(ஆளுநரின் ஆணைப்படி)

கே.எஸ்.ஸ்ரீபதி
அரசு செயலாளர்

[Note: *The Government in Letter (Ms.) No. 93/EC.3/2019, dt. 17.09.2019 issued amendment to G.O. (Ms.) No. 127, Environment and Forests Department, dated 08.05.1998 by exempting the foundry units (new foundry units as well as expansion of existing foundries), subject to the following conditions.*

1. *(a) New/Proposed foundry establish with Induction Furnace/Cupola Furnace with wet or dry Scrubber are exempted under G.O.(Ms.) No. 127, Environment and Forests Department, dated 08.05.1998.*

   (b) Existing industry having valid consent order are permitted to go for expansion with existing furnaces by addition of Induction/Cupola furnace for the expansion quantity or conversion of existing furnaces to Induction Furnace/Cupola Furnace with NPC designed Wet Scrubber or Dry Scrubber are exempted under G.O. (Ms.) No. 127 Environment and Forests Department, dated 08.05.1998.

   (c) Any conversion/modernization of the plant other than the furnaces having valid consent order permitted under G.O. (Ms.) No. 127 Environment and Forests Department, dated 08.05.1998.

2. *Foundry units generate more than 10 KLD of sewage shall install STP for treatment and to have adequate land so as to gardening the treated sewage at the norms of 35 KL/hectare of land for disposal of treated sewage. Medium scale foundries (generation of sewage is 5-10 KLD) shall install septic tank with dispersion trench and small scale foundries (generation of sewage is*

<5KLD) shall install septic tank with soak pit for treatment and disposal of sewage.

3. *All the new foundries/expansion of the existing foundries shall dispose the waste water from scrubber for mould preparation or into elevated solar evaporation pan. There shall not be any discharge of waste water into land or water sources directly or indirectly.*
4. *All foundries irrespective of use of any type of sand, the used sand to be recycled directly or indirectly about 75-80%. The burnt sand and slag has to be disposed either for fire bricks/fly ash bricks/hollow bricks making. Residues from Solar Evaporation Pan shall be disposed along with burnt sand.*
5. *All the foundries combinedly or individually shall dispose the solid wastes such as slag for construction purposes or making fire clay bricks/fly ash bricks/hollow blocks after pulverizing.**]***

தமிழ்நாடுஅரசு

சுருக்கம்

சுற்றுச்சூழல் – நீர் ஆதாரங்களைப் பாதுகாத்தல்– 8.5.98 ஆம் நாளிட்ட சுற்றுச்சூழல் மற்றும் வனத்துறை அரசாணை (நிலை) எண். 127க்கு திருத்தம் வெளியிடப்படுகிறது.

சுற்றுபுறம் &வனத் (சுக 3) துறை

அரசு ஆணை (1டி) எண். 223 **நாள்: 2.9.98**

பார்வை:

1. 30.3.89 ஆம் நாளிட்ட சுற்றுச் சூழல் மற்றும் வனத்துறை அரசாணை (நிலை) எண். 213.
2. 8.5.98 ஆம் நாளிட்ட சுற்றுச் சூழல் மற்றும் வனத்துறை அரசாணை (நிலை) எண். 127.

ஆணை:

30. 3.89 ஆம் ஆம் நாளிட்ட சுற்றுச் சூழல் மற்றும் வனத்துறைஅரசாணை (நிலை) எண். 213 இல் இன்ன பிறவற்றுடன், இவ்வாணையில் இணைப்பு 1இல் கண்டுள்ள 14 வகையான தொழிற்சாலைகள் இவ்வாணையில் இணைப்பு IIஇல் கண்டுள்ள நீர் ஆதாரங்களிலிருந்து 1 கி. மீட்டர் தூரத்திற்குள் நிறுவப்பட அனுமதி அளித்தல்கூடாது என்று ஆணையிடப்பட்டது. பின்னர் 8.5.98 ஆம் நாளிட்ட சுற்றுச் சூழல் மற்றும் வனத்துறை அரசாணை (நிலை) எண். 127 இல் இன்ன பிறவற்றுடன் காவிரி மற்றும் அதன் உபநதிகள், பெண்ணையாறு, பாலாறு, வைகை மற்றும் தாமிரபரணி ஆகிய நதிகளிலிருந்து 5 கி. மீட்டர் தூரத்திற்குள் நீரை அதிக அளவில் மாசுப்படுத்தும் எந்த தொழிற்சாலையும் (சிவப்பு வகை) நிறுவப்பட அனுமதி அளித்தல் கூடாது என்று ஆணையிடப்பட்டது.

2. 30.03.89 ஆம் ஆம் நாளிட்ட அரசாணையின் இணைப்பு 1 இல் கண்டுள்ள குறிப்பாக 14 வகை தொழிற்சாலைகள் இந்த 8.5.98 ஆம் நாளிட்ட அரசாணையில் கண்டுள்ள முக்கிய நீர் ஆதாரங்களிலிருந்து 5 கி. மீட்டர் தூரத்திற்குள்அமைக்க அனுமதித்தல் கூடாது என்று அரசு கருதுவதால் 8.5.98 ஆம் நாளிட்ட சுற்றுச் சூழல் மற்றும் வனத்துறை அரசாணை (நிலை) எண். 127க்கு கீழ்க்கண்ட திருத்தத்தை அரசு இவன் வெளியிடுகிறது.

திருத்தம்

8.5.98 ஆம் நாளிட்ட சுற்றுச் சூழல் மற்றும் வனத்துறை அரசாணை (நிலை) எண். 127 இல்பத்தி 5 துணைப்பத்தி 2 இல் கண்டுள்ள சொற்டொடரான "தமிழ்நாட்டில் முக்கிய நீர் ஆதாரங்களாக காவிரி மற்றும் அதன் உபநதிகள், பெண்ணையாறு, பாலாறு, வைகைமற்றும் தாமிரபரணி ஆகிய நதிகளிலிருந்து 5 கி.மீட்டர் தூரத்திற்குள் நீரை அதிக அளவில் மாசுப்படுத்தும் எந்த தொழிற்சாலையும் (சிவப்பு வகை)

நிறுவப்பட அனுமதி அளித்தல்கூடாது". இதற்குப் பதிலாக கீழ்க்கண்ட சொற்டொடரைப் படிக்கவும். "தமிழ்நாட்டின் முக்கிய நீர் ஆதாரங்களான காவிரி மற்றும் அதன் உபநதிகள், பெண்ணையாறு, பாலாறு, வைகை மற்றும் தாமிரபரணி நதிகளிலிருந்து 5 கி. மீட்டர் தூரத்திற்குள் 30.3.89 ஆம் நாளிட்ட சுற்றுச் சூழல் மற்றும் வனத்துறை அரசாணை (நிலை) எண். 213 இன் இணைப்பு 1 இல்கண்டுள்ள 14 வகையான தொழிற்சாலைகள் நிறுவப்பட அனுமதி அளித்தல்கூடாது.

(ஆளுநரின் ஆணைப்படி)

கே. எஸ். ஸ்ரீபதி
அரசுச் செயலாளர்

8.11.3 Cauvery Delta Region - Prohibition of Certain New Industrial Activities under the Environment (Protection) Act, 1986

Copy of:-

TAMIL NADU GOVERNMENT GAZETTE

NOTIFICATIONS BY GOVERNMENT

ENVIRONMENT AND FORESTS DEPARTMENT

CAUVERY DELTA REGION – PROHIBITION OF CERTAIN NEW INDUSTRIAL ACTIVITIES UNDER THE ENVIRONMENT (PROTECTION) ACT, 1986

[G.O. Ms. No. 21, Environment and Forests (EC.3) 24th February 2020, விகாரி, மாசி 12, திருவள்ளுவர் ஆண்டு – 2051] **No. II (2)/EF/148(j)/2020**

WHEREAS, Article 48-A of the Constitution *inter alia*, envisages that the State shall endeavour to protect and improve the environment;

AND WHEREAS, the Environment (Protection) Act, 1986 (Central Act 29 of 1986) provides for the protection and improvement of environment;

AND WHEREAS, section 5 of the said Central Act enables the Central Government, in the exercise of its powers and performance of its functions under that Act, issue directions, among others, for the closure, prohibition or regulation of any industry, operation or process, in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions;

AND WHEREAS, the Central Government in exercise of the powers conferred under section 23 of the said Act have delegated the powers vested in it under the said section 5, among other States, to the State of Tamil Nadu vide Notification No. S.O. 152 (E), dated: 10th February, 1988;

AND WHEREAS, the Cauvery delta region considered as the rice bowl of the State is as an ecologically fragile agricultural zone;

AND WHEREAS certain industrial projects and activities in the Cauvery delta region adversely affect the environment including depletion of ground water, sanctuaries, wet lands/bio-diversity/eco-sensitive areas of that region, which are highly vulnerable to climatic change apart from causing threat to sustainable agricultural developments, livelihood and security of the farmers and wellbeing of the region;

AND WHEREAS, to protect the agricultural lands in the Cauvery delta region of the State, the State Government have very recently enacted the Tamil Nadu

Protected Agricultural Zone Development Act, 2020 (Tamil Nadu Act 11 of 2020). The said Act prohibits certain new industrial projects or new activities in the protected agricultural zone;

NOW THEREFORE, in exercise of the powers conferred under section 5 of the Environment (Protection) Act, 1986 (Central Act 29 of 1986) read with Notification No. S.O. 152 (E), dated 10th February, 1988 issued by the Ministry of Environment and Forests, Government of India, the Governor of Tamil Nadu hereby prohibits new projects or new activities specified in TABLE II hereunder in the areas specified in TABLE I hereunder:

Provide that such prohibition shall not affect the activities or projects in operation in the said areas on the date of publication of this notification in the *Tamil Nadu Government Gazette.*

TABLE I

AREAS

1. Thanjavur district
2. Tiruvarur district
3. Nagapattinam district
4. Kattumannarkoil, Melbhuvanagiri, Keerapalayam, Parangipettai and Kumaratchi blocks of Cuddalore district.
5. Aranthangi, Avudaiyarkoil, Manamelkudi, Tiruvarangulam and Karmbakudi blocks of Pudukottai district.

TABLE II

PROJECTS

1. Zinc smelter
2. Iron one process plant, integrated steel plant and sponge iron plant.
3. Copper Smelter
4. Aluminium Smelter
5. Bone meal, processing of animal horn, hoofs and other body parts.
6. Tannery
7. Exploration, drilling and extraction of oil and natural gas including coal-bed methane, shale gas and similar hydrocarbons.
8. Ship breaking industry

SHAMBHU KALLOLIKAR
Principal Secretary to Government

8.11.4 District Co-Ordination Committee to take action against the units polluting the water bodies / land

ABSTRACT

Environment – Environment Control - District Co-Ordination Committee to ensure Co-ordinated and continued action to arrest discharge to water bodies / land and to take stringent action against defaulting units – Constituted – Orders – Issued.

Environment and Forests (EC.1) Department

G.O.(Ms) No. 23 திருவள்ளுவர் ஆண்டு-2048
ஹேவிளம்பி, மாசி-17

Dated: 01.03.2018

Read:

1. G.O. (Ms). No. 213, Environment and Forests Department, dated 30.03.1989.
2. G.O. (Ms) No. 127, Environment and Forests Department, dated 08.05.1998
3. G.O. (D) No. 223, Environment and Forests Department, dated 02.09.1998
4. From the Principal Secretary to Government / Chairman (FAC), Tamil Nadu Pollution Control Board, Letter No. P&D/F.012260/2015, dated 25.10.2017 and 17.01.2018.

ORDER:

The Principal Secretary to Government / Chairman (FAC), Tamil Nadu Pollution Control Board has informed that as per section 17 of the Water Act, one of the functions of the State Pollution Control Board is '*to advise the State Government on any matter concerning the prevention, control or abatement of water pollution'.* As per section 24 of the Water Act, the State Government may issue notification on the recommendations of the State Pollution Control Board for protection of water bodies.

2. On above lines and based on the recommendations of Tamil Nadu Pollution Control Board, in the Government Order 1st read above the Government of Tamil Nadu imposed a total ban on setting-up of the 14 types of highly polluting industries within one kilometer from the embankments of the specified Rivers, Tanks and Reservoirs and Canals. Further in the Government Order 2nd and 3rd read above the ban was extended to 5 kilometer from the banks of River Cauvery and its tributaries, Penniaaru, Palar, Vaigai and Thamirabarani Rivers.

Several complaints were received regarding discharge of untreated waste into River Cauvery. In this regard, writ petition was also filed in the Hon'ble High Court by the People Health and Development Council, Erode against the pollution of river Cauvery. The Hon'ble High Court of Madras in the W.P.Nos.5494/98 and 30153/03 on 04.07.2007 and subsequently on 09.08.2007 has passed the various directions inter-alia that

"Para 18 (ix) The District Collector is directed to set up a Committee for co-ordinated action headed by the District Collector or his representative and comprising of the District Environmental Engineer, Tamil Nadu Pollution Control Board, S.E, TNEB and the District Superintendent of Police or his nominee, to ensure coordinated and continued action to arrest discharge to water bodies / land and to take stringent action against defaulting units, including criminal prosecution wherever warranted."

Based on the High Court order the District Collector, Erode and Namakkal

have constituted a District Co-Ordination Committee.

3. The Principal Secretary to Government / Chairman (FAC), Tamil Nadu Pollution Control Board in his letter 4th read above has stated that considering the above model, the Board vide B.P. Ms. No. 12 Dated 21.04.2015 issued orders to all the District Collectors to constitute District Co-ordination Committee(DCC) in their respective districts to restrain the operation of illegal units discharging the untreated effluent on land or into water bodies. Accordingly the Committees have been constituted in most of the districts.

However, during all Joint Chief Environmental Engineers (Monitoring) review meeting held on 06.10.2017, it was mentioned by the JCEEs (M) that the District Co-ordination Committees are unable to function with full sprit, since there is no legal powers vested or back-up for the committee. In the meeting it was requested to give additional powers to the JCEE(M) to handle illegal discharges without procedural delays. It was thereby suggested that Government may be addressed to issue Orders for constituting the District Co-ordination Committee in all the Districts with suitable terms of reference for the committee.

4. Based on the above and considering the importance of protecting the precious water bodies in the State of Tamil Nadu, the Principal Secretary to Government / Chairman (FAC), Tamil Nadu Pollution Control Board has requested the Government to issue necessary order constituting District Co-Ordination Committee in all the Districts with the following members:-

The District Co-ordination Committee shall be constituted with the following officials.

1	District Collector	Chairman
2	District Environmental Engineer, Tamil Nadu Pollution Control Board	Convenor
3	Environmental Engineer (Flying Squad), Tamil Nadu Pollution Control Board (if available)	Member
4	District Superintendent of Police	Member
5	Superintending Engineer, TANGEDCO	Member
6	Executive Engineer, Public Works Department (WRO Division)	Member
7	Revenue Divisional Officer	Member

5. The Government after careful consideration, accept the proposal of the Principal Secretary to Government / Chairman (FAC), Tamil Nadu Pollution Control Board and constitute a District Coordination Committee in all the districts with the following members and the following guidelines:-

1	District Collector	Chairman
2	District Environmental Engineer, Tamil Nadu Pollution Control Board	Convenor
3	Environmental Engineer (Flying Squad), Tamil Nadu Pollution Control Board (if available)	Member
4	District Superintendent of Police	Member
5	Superintending Engineer, TANGEDCO	Member
6	Executive Engineer, PWD (WRO Division)	Member
7	Revenue Divisional Officer	Member

Guidelines of the DCC:-

(i). The Committee shall take action against any unauthorized unit including Textile processing units and tannery units.

(ii). The Committee shall take action against units which discharge untreated trade effluent into the water bodies/on land/outside the premises. Action may include disconnection of power supply, disconnection of water supply, seizure of the materials, sealing of units' premises/machinery and eviction etc.

(iii). Criminal cases may be filed against the unit owners and land owner who allow running of unauthorized units.

(iv). The Committee shall also examine and take action against the illegal/unauthorized effluent discharges based on the inspection reports furnished by the District Environmental Engineer, Tamil Nadu Pollution Control Board / Environmental Engineer (Flying Squad).

(v). The DCC shall take up periodical / surprise inspections (including night times and holidays) along the water bodies including Rivers, Canals, Lakes and odais etc., so as to prevent indiscriminate discharge of effluent from any source.

(vi). Necessary Police Protection shall be given to officials during inspection and acting on behalf of the DCC to carry out the above activities.

(vii). The expenses incurred for eviction, demolition etc., shall be collected from the polluter on the basis of "Polluter Pay Principle".

(viii). In case of any illegal movement and dumping of hazardous wastes, bio-medical wastes or other wastes in any private/porambokku land, near water bodies/open land which may cause environmental pollution, the District Co-ordination Committee would take immediate action including criminal action.

(ix). The DCC shall take action against illegal movement of fabrics/yarn for the purpose of dyeing outside and also to prevent movement of sludge arising from the treatment system so as to prevent illegal dumping of sludge.

(x). To prevent un-authorized movement of Hazardous wastes and illegal transportation of sewage/process effluent, criminal action to be initiated against violators with the help of RTO.

(BY ORDER OF THE GOVERNOR)

Md. NASIMUDDIN
PRINCIPAL SECRETARY TO GOVERNMENT

8.11.5 Industries requiring prior consent of TNPCB to get building license and TNEB power connection (GO. 17 & 111)

தமிழ்நாடுஅரசு

சுருக்கம்

சுற்றுப்புற சூழல் கட்டுப்பாடு – நீர் (மாசு தடுப்பு மற்றும் கட்டுப்பாடு) சட்டம் 1974 மற்றும் காற்று (மாசு தடுப்பு மற்றும் கட்டுப்பாடு) சட்டம் 1981–இல் கீழ் எந்த தொழிற்சாலை அமைப்பதற்கும் கட்டிட உரிமம் வழங்கு முன் தொழிலதிபர்களை மாசு கட்டுப்பாடு வாரியத்திடமிருந்து பெற்ற ஒப்புதலை காட்டும்படி வலியுறுத்தல் – ஆணை வழங்கப்படுகிறது.

சுற்றுப்புறச் சூழல் கட்டுப்பாட்டுதுறை

அரசு ஆணை (நிலை) எண்.17 நாள் 10 ஏப்ரல் 1984
பங்குனி 28–ருத்ரோத்காரி 2014
திருவள்ளுவர் ஆண்டு

ஆணை:

தொழிற்சாலைகளிலிருந்து வெளிப்படும் கழிவுகளை நீரோடை அல்லது கிணறு (அதாவது அரசால் அறிவிக்கப்பட்டுள்ள எல்லைக்குட்பட்டுள்ள ஆறு மற்றும் நீர் நிலைகள் பூமி மற்றும் பூமிக்கடியில் உள்ள நீர், மற்றும் கடல் உட்பட) இவற்றில் கலக்க எதுவாகும்படி வெளியேற்றும் அனைத்து தொழிற்சாலைகளும் நீர் (மாசு தடுப்பு மற்றும் கட்டுப்பாடு சட்டம் 1974–இன் கீழ் அடங்கும். அத்தொழிற்சாலைகள் கழிவுகளை வெளியேற்ற தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் இசைவைப் (consent) பெற வேண்டும்.

2. இதே போல், காற்று (மாசு தடுப்பு மற்றும் கட்டுப்பாடு) சட்டம் 1981–இன் கீழ் 20 வகை தொழிற்சாலைகள் தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்திடமிருந்து இசைவைப் பெற வேண்டும்.

3. ஊர் வளர்ச்சி மற்றும் உள்ளாட்சித் துறையின் 3.2.1983–ம் நாளிட்ட அரசாணை எண்.148–ன்படி, உள்ளாட்சி மன்றங்கள், தொழிலதிபர்கள் தொழிற்சாலைக்கான உரிமத்திற்காக விண்ணப்பிக்கும் போதே தொழிற்சாலையிலிருந்து கழிவுகள் வெளியேற்றப்படுவதற்கு தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்திடமிருந்து ஒப்புதல் பெற்று அத்துடன் இணைக்க வற்புறுத்த வேண்டும். மேற்கண்ட ஆணையில் உரிமம் என்பது தொழில் உரிமத்தை மட்டுமே குறிக்கிறது. கட்டிட உரிமம் வழங்கு முன் தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் இசைவைக் கேட்க வேண்டுமா என்று பரிசீலிக்கப்பட்டது. தொழில் உரிமத்திற்காக விண்ணப்பிக்கப்படும்போதே கட்டிடம் கட்டி முடிக்கப்பட்டு இருக்கும். ஆகையால் மாசு கட்டுப்பாடு வாரியம் குறிப்பிட்டுள்ள வரையறைக்குக்கேற்ப குறுகிய காலத்தில் கழிவுகளை சுத்திகரிக்கும் அமைப்பு அல்லது இயந்திரம் ஏற்படுத்த இயலாமலிக்கலாம். எனவே, இத்தொழிற்சாலை அமைக்கத் திட்டமிடும்போதே, அதாவது உள்ளாட்சி மன்றங்களால் கட்டிட உரிமம் வழங்கப்படும் முன்னரே, சில வகை தொழிற்சாலைகள் தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் ஒப்புதலைப் பெறுவது அவசியமாகிறது.

4. ஆகவே, கட்டிட விதிகளின் கீழ், மாநகராட்சிகள், நகரமன்றங்கள் மற்றும் உள்ளாட்சி மன்றங்கள் தொழிற்சாலைகள் கட்டுவதற்கான கட்டிட உரிமத்திற்கான (Building Licence) விண்ணப்பத்தை பெறும்போதே, அல்லது உரிமம் வழங்கும் முன், இவ்வாணையின் இணைப்பில் குறிப்பிட்டுள்ள தொழிற்சாலைகளைப் பொறுத்த வரையில் தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்திடமிருந்து பெறப்பட்ட ஒப்புதலையும் இணைக்குமாறு கேட்டுக் கொள்ள வேண்டும் என ஆணை பிறப்பிக்கப்படுகிறது.

5. மாசு கட்டுப்பாடுச் சட்டங்களின் கீழ் பழைய மற்றும் புதிய தொழிற்சாலைகள் மாசு கட்டுப்பாடு வாரியத்திடமிருந்து பெற வேண்டிய இசைவு, இவ்வாணையால் பாதிக்கப்படமாட்டாது.

(ஆளுநரின் ஆணைப்படி)

ஓம்/–மு.அகமது
ஆணையாளர் மற்றும் செயலாளர்

பெறுநர்
தலைவர், தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம், சென்னை–4.

இணைப்பு

1. சுராயவடி தொழிற்சாலைகள்
2. மிருக மற்றும் தாவரயினப் பொருட்களைப் பதனிடும் தொழிற்சாலைகள் (தோல் பதனிடுதல், ஜவ்வரிசி, பசை, சர்க்கரைமற்றும் பால்பண்ணைத் தொழிற்சாலைகள்உட்பட)
3. உரத் தொழிற்சாலைகள்
4. மரக்கூழ் மற்றும் காகிதம் தயாரிக்கும் தொழிற்சாலைகள் (கையினால் தயாரிக்கப்படும் காகிதங்கள் உட்பட)
5. இராசயனத் தொழிற்சாலைகள்
6. நில எண்ணை (Petroleum) சுத்திகரிப்பு ஆலை
7. துணியாலைகள் (சாயமிடுதல் மற்றும் வெளுப்பாலைகள் உட்பட)
8. இரும்பு உலைக் கூடம் (மின் முலாம் பூசுதல், வெப்ப சுத்திகரிப்பு இயந்திரம் உட்பட)
9. மண்பான்டத் தொழிற்சாலை
10. அனல்மின் நிலையங்கள்
11. சிமெண்ட் தொழிற்சாலைகள்
12. மருந்துதயாரிக்கும் தொழிற்சாலைகள்
13. வர்ணம் மற்றும் மெருகு எண்ணை(Varnish) தயாரிக்கும் தொழிற்சாலைகள்
14. கரைப்பான் (Solvent) தயாரிக்கும் தொழிற்சாலை
15. வாகனங்களுக்கு உதிரிபாகங்கள் தயாரிக்கும் தொழிற்சாலைகள்
16. பூச்சிமற்றும் களைக் கொல்லிமருந்துதயாரிக்கும் தொழிற்சாலைகள்
17. வார்ப்புத் தொழிற்சாலைகள்
18. கல்நார் (Asbestos) தயாரிக்கும் தொழிற்சாலைகள்

ஒம்/– மு.அகமது
ஆணையாளர் மற்றும் செயலாளர்

தமிழ்நாடுஅரசு

சுருக்கம்

சுற்றுச்சூழல் கட்டுப்பாடு – நீர் (மாசு தடுப்பு மற்றும் கட்டுப்பாடு) சட்டம் 1974 மற்றும் காற்று (மாசு தடுப்பு மற்றும் கட்டுப்பாடு) சட்டம் 1981–ன்படி தொழிற்சாலைகள் அமைப்பதற்கு முன் தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் ஒப்புதல் பெறுதல் – ஆணைகள் வழங்கப்பட்டுள்ளது – திருத்தங்கள் வெளியிடுதல்–ஆணைகள் வெளியிடப்படுகிறது.

சுற்றுச்சூழல்மற்றும் வனத் (சு.சூ.1) துறை

அரசு ஆணை (நிலை) எண்.111 **நாள்: 21.09.2011**

படிக்க:

(ய) அரசாணை (நிலை) எண் 17, சுற்றுப்புறச் சூழல் கட்டுப்பாடுதுறை, நாள்: 10.04.1984.

மேலும் படிக்க:

(ஙி) கடித எண் 41268/சு1/91–1, சுற்றுச்சூழல்கட்டுப்பாடுதுறை, நாள்: 09.04.1992

(உ) தலைவர், தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம் அவர்களின் கடித எண்.
தநாமாகவா / P&D /9798/2006, நாள்:16.03.2009.

(d) தலைவர், தமிழ்நாடுமின்சாரவாரியம் அவர்களின் கடித எண்:
CE/Comml/EE3/AEE1/F.PCB/D.426/10, Dated: 24.06.2010.

ஆணைகள்:

பார்வை ஒன்றில் படிக்கப்பட்ட அரசாணை நிலை) எண்.17, சுற்றுப்புறச்சூழல் கட்டுப்பாடு துறை, நாள்: 10.04.1984–ல் நீர் (மாசு தடுப்பு மற்றும் கட்டுப்பாடு) சட்டம் 1974 மற்றும் காற்று (மாசு தடுப்பு மற்றும் கட்டுப்பாடு) சட்டம், 1981–ன் கீழ் தொழிற்சாலை அமைப்பதற்கும் கட்டிட உரிமம் வழங்கு முன் தொழிலதிபர்களை மாசு கட்டுப்பாடு வாரியத்திடமிருந்து பெற்ற ஒப்புதலை காட்டும்படியும், கட்டிட

விதிகளின் கீழ், மாநகராட்சிகள், நகரமன்றங்கள், உள்ளாட்சி மன்றங்கள், தொழிற்சாலைகள் கட்டுவதற்கான கட்டிட உரிமத்திற்கான (building license) விண்ணப்பத்தைப் பெறும்போதே, அல்லது உரிமம் வழங்கு முன், சாராயவடி தொழிற்சாலைகள் உள்ளிட்ட 17 வகையான தொழிற்சாலைகளைப் பொறுத்தவரையில் தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்திடமிருந்து பெறப்பட்ட ஒப்புதலையும் இணைக்குமாறும் ஆணை வெளியிடப்பட்டுள்ளது.

2. பார்வை இரண்டில் படிக்கப்பட்ட அரசு கடிதத்தில் சில கூடுதல் தொழிற்சாலைகளும் சேர்க்கப்பட்டு, அரசாணை (நிலை), எண்.17, சுற்றுப்புறச்சூழல் கட்டுப்பாடு துறை, நாள்: 10.04.1984–க்கு திருத்தங்கள் வெளியிடப்பட்டது.

3. பார்வை மூன்றில் படிக்கப்பட்ட கடிதத்தில் தமிழ்நாடு மாசு கட்டுப்பாடு வாரிய தலைவர், தனது கருத்துருவில், அரசாணை (நிலை) எண்.17, சுற்றுப்புறச்சூழல் கட்டுப்பாடு துறை, நாள் 10.04.1984–ல் வெளியிடப்பட்டபோது, தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம் தோற்றுவிக்கப்பட்ட ஆரம்ப காலகட்டத்தில், தொழிற்சாலைகள் வகைப்படுத்துவது பற்றி விரிவான முறையில் ஆராயப்படவில்லை என்றும், தற்போது தொழிற்சாலைகள் வகைப்படுத்தப்பட்டு, ஆராய்ச்சி செய்யப்பட்டதில், இணைப்பில் உள்ள சிவப்பு மற்றும் ஆரஞ்சு வகை என்று வகைப்படுத்தப்பட்ட தொழிற்சாலைகளை அரசாணை (நிலை) எண்.17, சுற்றுப்புறச்சூழல் கட்டுப்பாடு துறை, நாள்: 10.04.1984–ல் சேர்க்கப்பட திருத்திய ஆணைகள் வெளியிடப்பட வேண்டும் என்றும் கேட்டுக் கொண்டுள்ளார். மேலும், மேற்கண்ட வகைப்படுத்தப்பட்ட தொழிற்சாலைகள் தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் உரிய இசைவாணையை சமர்ப்பித்த பின், மின் இணைப்பினை அளிக்குமாறும், ஏற்கனவே உள்ள தொழிற்சாலைகள் தமிழ்நாடு மாசு கட்டுப்பாடு வாரிய இசைவாணையினை அளித்த பின் கூடுதல் மின்சாரம் வழங்கவும். தமிழ்நாடு மின்சார வாரியத்திற்கு அறிவுறுத்தவும் கேட்டுக் கொண்டுள்ளார்.

4. தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் மேற்படி கருத்துரு மீது தமிழ்நாடு மின்சார கட்டுப்பாடு வாரியத்தின் கருத்து கேட்கப்பட்டது. தமிழ்நாடு மின்சார வாரியத் தலைவர் பார்வை 4ல் படிக்கப்பட்ட கடிதத்தில், அரசாணை (நிலை) எண்.17. சுற்றுப்புறச்சூழல் கட்டுப்பாடு துறை, நாள் 10.04.84 ல் குறிப்பிட்டுள்ள தொழிற்சாலைகள் தொழில் தொடங்குவதற்காக மின் இணைப்பிற்கான மனு சமர்ப்பிக்கும் போதே தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் இசைவாணையினை பெற்று இணைக்குமாறு தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தால் அறிவுறுத்தப்படுகிறது. எனவும், அரசாணை (நிலை) எண்.17, சுற்றுப்புறச்சூழல் கட்டுப்பாடுதுறை, நாள் 10.04.84 ல் தொழிற்சாலையின் ஒருங்கிணைத்த பட்டியல் வெளியிடப்படுமானால், அதனையும் தமிழ்நாடு மின்சார வாரியத்தால் பின்பற்றப்படும் எனவும் தெரிவுத்துள்ளார்.

5. தலைவர், தமிழ்நாடு மின்சார கட்டுப்பாடு வாரியம் அவர்களின் கருத்துரு அரசால் ஆய்வு செய்யப்பட்டு, அரசாணை (நிலை) எண் 17, சுற்றுப்புறச்சூழல் கட்டுப்பாடு துறை, நாள் 10.04.84க்கு தக்க திருத்தங்கள் வெளியிடக்கோரும் அன்னாரின் கருத்துருவை ஏற்கலாம் என முடிவு செய்யப்பட்டது. அவ்வாறே இணைப்புகளில் (I&II) உள்ள 48 வகையான சிவப்பு தொழிற்சாலைகள் மற்றும் 25 வகையான ஆரஞ்சு தொழிற்சாலைகளை அரசு ஆணை (நிலை) எண். 17, சுற்றுப்புறச்சூழல் கட்டுப்பாடு துறை, நாள் 10.04.84ல் சேர்த்து அரசு ஆணையிடுகிறது.

(ஆளுநரின் ஆணைப்படி)

ச.வி.சங்கர்
அரசுமுதன்மைச் செயலாளர்

இணைப்பு–1

அரசாணை (நிலை) எண் :111 சுற்றுச்சூழல்மற்றும் வனத் (சு.சூ.1) துறைநாள் : 21. 09.2011

CATEGORISATION OF INDUSTIES (RED)

Sl.No	Code	Type	சிவப்பு
1	1004	Aluminium	தாதுவிலிருந்து அலுமினியம் தயாரிக்கும் ஆலை
2	1006	Aromatics Manufacturing Units	வேதி வாசைன உற்பத்தி தொழிற்சாலைகள்
3	1007	Asbestos Products Manufacturing Units	கல் நார் உற்பத்தி தொழிற்சாலைகள்
4	1008	Atomic Power Plant	அணு மின்சக்தி கூடம்
5	1010	Batteries Manufacturing Units	மின்கலன் உற்பத்தி தொழிற்சாலைகள்
6	1012	Bulk Drugs & Pharmaceuticals	மருந்து கலவை தயாரிக்கும் தொழிற்சாலைகள்
7	1014	Cement	சிமெண்ட் தொழிற்சாலைகள்
8	1016	CETPs	பொதுகழிவு நீர் சுத்திகரிப்பு நிலையங்கள்
9	1017	Chemical Units	இரசாயனத் தொழிற்சாலைகள்
10	1018	Chloro Alkali Units	குளோரோ கார தயாரிப்பு தொழிற்சாலைகள்
11	1019	Cogeneration/Captive Power Unit	கோ ஜனரேஷன் / கேப்டிவ் பவர் கூடம்
12	1020	Cake making, coal liquefaction, Coal tar distillation, processing of coal tar distillate or fuel gas marking, coke briquetting (excluding sundrying)	கல்கரி, நிலக்கரிவாயு, தார் வடிப்பான் ஆலை
13	1023	Copper Smelter	தாமிரதாதுஉருக்கு ஆலை
14	1025	Distillery	சாராய வடி தொழிற்சாலை
15	1028	Dye & Dye intermediates	சாயம் மற்றும் இடைநிலைசாயப் பொருட்கள் தயாரிக்கும் தொழிற்சாலை
16	1030	Edible Oil refinery	உணவு எண்ணெய் சுத்திகரிப்பு ஆலை
17	1032	Electro Plating Units	மின்முலாம் தொழிற்சாலை
18	1034	Fertilizer	உரத் தொழிற்சாலை
19	1035	Fire Crackers Manufacturing Units	பட்டாசு தயாரிப்பு தொழிற்சாலை
20	1037	Forging Units (Excluding Cold Forging)	வடிப்பு அலகுகள் (குளிர்முறை வடிப்பு தவிர)
21	1038	Foundries	வார்ப்பு தொழிற்சாலை
22	1039	Galvanizing Units	துத்த நாகபூச்சு தொழிற்சாலை
23	1042	Glue/Gelatin Manufacturing Units	விலங்கு / தாவரவழிபசை / பிசின் உற்பத்தி தொழிற்சாலை
24	1046	Hazardous Substances storage	ஆபாயகரமான பொருட்கள் சேமிப்பு
25	1048	Heat Treatment Units (With Cyanide)	வெப்ப கடினப்படுத்துதல் தொழிற்சாலை (சயனைடு வழி)
26	1052	Hot Mix Plant	வெப்பகலவை கூடம்
27	1059	Integrated Iron and steel Plants	ஒருங்கிணைந்த இரும்பு மற்றும் துரு பிடிக்காத இரும்பு தயாரிக்கும் கூடங்கள்.
28	1060	Lead smelting refining and manufacturing of its oxides	காரியம் உருக்குதல், சுத்திகரிப்பு மற்றும் காரிய ஆக்சைடு தயாரித்தல் தொழிற்சாலை.
29	1062	Lubricating Oil / Grease	மசகு எண்ணெய் /மசகுகளி நெய்

		Manufacturing Units	தயாரித்தல்
30	1062	Match Units	தீப்பெட்டி தொழிற்சாலை
31	1067	Mosquito Coil Manufacturing Units	கொசுவர்த்தி சுருள் உற்பத்தி தொழிற்சாலை
32	1072	Paint/ Enamel / Varnish Manufacturing Units	பெயிண்ட் /வார்னீஷ் / எனாமல் தொழிற்சாலை
33	1073	Pesticide (Synthetic)	பூச்சிக் கொல்லி (செயற்கை தொகுப்பு முறை) மற்றும் களைக் கொல்லி தயாரிக்கும் தொழிற்சாலை.
34	1074	Pesticide (Formulation Mixing Units)	பூச்சிக்கொல்லி கலவை தொழிற்சாலை
35	1075	Petro Chemical	பில எண்ணெய் வேதிபொருட்கள் (பெட்ரோலிய வேதிபொருட்கள் தொழிற்சாலை .
36	1077	Petroleum Refinery	கச்சா எண்ணெய் சுத்திகரிப்பு ஆலை.
37	1079	Pigments &Intermediates Manufacturing Units	கூழணம் மற்றும் அலன் இடைநிலைகள் தயாரிப்பு தொழிற்சாலை
38	1083	Pulp and Paper (with Digestor)	காகிதகூழ் மற்றும் காகிதம் (செரிப்பான் வசதியுடன்)
39	1090	Sponge Iron	தொன் இரும்பு ஆலை
40	1091	Sugar	சர்க்கரை தொழிற்சாலை
41	1092	Synthetic Detergents Manufacturing Units	டிடர்ஜன்ட் தொழிற்சாலை
42	1093	Synthetic Detergent Manufacturing Units	கூடிசயற்கை ரெசின்கள் மற்றும் பசை தயாரிப்பு தொழிற்சாலை
43	1094	Tannery	தோல் பதனிடும் தொழிற்சாலை
44	1095	Tar & Tar Products Manufacturing Units	தார் மற்றும் தார் பொருட்கள் தயாரிப்பு தொழிற்சாலை
45	1097	Textile Dyeing Units	துணிநூல் சாயமிடும் தொழிற்சாலை
46	1101	Units Recovering Lead From Batteries	மின் கலத்திலிருந்து காரீயம் மீளப்பெறும் தொழிற்சாலை
47	1102	Waste Oil Reclamation Units	கழிவு எண்ணெயிலிருந்து எண்ணெய் மீட்டெடுக்கும் தொழிற்சாலை
48	1104	Zinc Smelter	தாதுவிலிருந்து துத்தநாகம் பிரித்தெடுத்தல் தொழிற்சாலை.

இணைப்பு–II

அரசாணை (நிலை) எண் :111 சுற்றுச்சூழல்மற்றும் வனத் (சு.சூ.1) துறைநாள் : 21. 09.2011

CATEGORISATION OF INDUSTIES (ORANGE)

Sl.No.	Code	Type	ஆரஞ்சு
1.	2001	Agar agar manufacturing unit	கடற்பாசி கூழ்மம் தயாரிப்பு
2.	2008	Battery Reconditioning and Repair units	மின்கலம் மறு நிலைப்படுத்துதல் மற்றும் பழுது நீக்கும் தொழிற்சாலை
3.	2012	Bleaching Units	சுலவை தொழிற்சாலை
4.	2014	Bone Crushing Mills	எலும்பு நொறுக்கும் ஆலை.
5.	2021	Cashew Nut Processing Units	முந்திரி தொழிற்சாலை
6.	2025	Chemical Mixing/Storage Units	வேதிப் பொருட்கள் கலப்பு மற்றும் சேமிப்பு தொழிற்சாலை
7.	2043	Fish/Cattle/Poultry Feed Unit	மீன்/ கால்நடை/ கோழி/ தீவனம் தயாரிப்பு தொழிற்சாலை

8.	2046	Food and Beverage Units	உணவு மற்றும் பானங்கள் தயாரிப்பு தொழிற்சாலை
9.	2052	Ginning Mills/Waste Cotton Units	ஜின்னிங் ஆலை/ கழிவுபஞ்சு தொழிற்சாலை
10.	2065	Ice Plants/Ice Creams manufacturing unit	ஐஸ்/ஐஸ் கிரீம் தயாரிப்பு தொழிற்சாலை
11.	2066	IMFL Units	சாராயத்தை பாட்டில்களில் அடைக்கும் தொழிற்சாலை
12.	2073	Leather Meal	சூதால் கழிவிலிருந்து உரம் தயாரிக்கும் தொழிற்சாலை
13.	2076	Lime Manufacture (Lime Kiln) Units	சுண்ணாம்பு தயாரிப்பு தொழிற்சாலை
14.	2078	Mercerising Units	காரவினையாக்கம் தொழிற்சாலை(Mercerism)
15.	2081	Mineral Water Units	குடிநீர் தயாரிப்பு தொழிற்சாலை
16.	2089	Pharmaceutical Formulation Units	மருந்துகள் கலந்திடும் தொழிற்சாலைகள்
17.	2090	Phosphating/Anodising Units	பாஸ்பேட்டிங் / ஆனடைசிங் தொழிற்சாலை
18.	2099	Pulp & paper Without Digestor	காகித மற்றும் காகிதகூழ் தயாரிப்பு (சௌிப்பான் வசதி இல்லாதது)
19.	2106	Sago Units	சவ்வரிசி தொழிற்சாலை
20.	2118	Sizing Units	சைசிங் தொழிற்சாலை
21.	2122	Solvent extraction units (edible oil)	உணவு எண்ணெய் தயாரிப்பு ஆலை
22.	2123	Starch units	மாவு பெருட்கள் தயாரிப்பு ஆலை(Starch)
23.	2126	Steel Rolling Mills	இரும்பு உருக்கு ஆலை
24.	2129	Stone/Mineral Crushing Units	கல் / கனிமங்கள் உடைக்கும் ஆலை
25.	2130	Surface Coating/Units Powder Coating/Spray Painting	புறப்பரப்புபூச்சு/ பவுடர் பூச்சு/ ஸ்பிரேபெயிண்டிங் ஆலை

ச.விசங்கர்
அரசு முதன்மைச் செயலாளர்

8.11.6 Empowering the TNPCB to monitor the compliance of the EC conditions and issuance of the compliance certificate relating to category "B" projects issued by the SEIAA

GOVERNMENT OF TAMIL NADU

ABSTRACT

Environment Control – Empowering the Tamil Nadu Pollution Control Board to monitor the compliance of the Environmental Clearance conditions and issuance of the compliance certificate relating to category "B" issued by the State Level Environment Impact Assessment Authority – Orders – Issued.

ENVIRONMENT AND FORESTS (EC.3) DEPARTMENT

G.O. (Ms) No. 29 **Dated: 21.03.2020**
திருவள்ளுவர் ஆண்டு - 2051
விகாரி, பங்குனி – 8

Read:

1. From the Deputy Director General of Forests (Central) (I/C), Ministry of Environment, Forest and Climate Change, Government of India, Regional Office

(South Eastern Zone), Chennai letter No. DP/12.1/2016-17/ROSEZ/Mon. SEIAA&DEIAA/1593 Dated: 25.09.2019

2. From the Member Secretary, State Level Environment Impact Assessment Authority letter No. SEIAA-TN/F.No.011850/2018, dated 21.10.2019
3. From the Chairman, Tamil Nadu Pollution Control Board letter No. TNPCB/P&D/F.25015/2019, dated 20.12.2019.

ORDER:

In the letter first read above, the Deputy Director General of Forests (Central) (I/C), Ministry of Environment Forest and Climate Change, Government of India, Regional Office (South Eastern Zone), Chennai has stated that the Government of Tamil Nadu to examine the necessary enabling orders as done in Andra Pradesh, Telangana and Meghalaya enabling the State Pollution Control Board or any other Competent agency to assist State Level Environment Impact Assessment Authority in monitoring the Environmental Clearance issued by State Level Environment Impact Assessment Authority and requested that orders may be issued to Tamil Nadu Pollution Control Board to atleast take over the work of issuing Certified Compliance reports to project proponents who have obtained Environmental Clearance for category – B projects from State Level Environment Impact Assessment Authority, Tamil Nadu as an interim measure to reduce to the workload and increase the efficiency in this Regional Office and to ensure speedy and timely disposal of requests from project proponents in Tamil Nadu for Certified Compliance reports with respect to Environmental Clearances issued by State Level Environment Impact Assessment Authority-Tamil Nadu.

2. In the letter second read above, the Member Secretary, State Level Environment Impact Assessment Authority has stated in the Circular received from Ministry of Environment, Forests and Climate Change vide Lr.No.J-11013/6/2010-IA/II(Part), dated: 07.09.2017, it has been directed as follows :-

i. "This is in continuation to this Ministry's Circular No.J-11011/6/18/2010-IA/II(1), dated: 30.05.2012, wherein, it was directed that for consideration of Environmental Clearance (EC) to all expansion projects activities under the Environment Impact Assessment Notification, 2006, the project proponent shall submit the certified compliance report on the conditions stipulated in the ECs to the existing projects/activities, through the Regional Offices of the Ministry of Environment, Forest and Climate Change.

ii. Now, it has been decided that in order to get the certified compliance report on time, the Member Secretary of the sectoral Expert Appraisal Committee (EAC) shall make a request to the concerned Regional Office of the Ministry at the time of issue of Terms of Reference (ToR) for the said project.

iii. Regional Offices of the Ministry are requested to submit certified compliance report within one month of receipt of such requests from the Member Secretary of the sectoral EAC. In case the inspection is not carried out within one month, the certified compliance report from the concerned Regional Offices of Central Pollution Control Board (CPCB) or the Member Secretaries of the respective State Pollution Control Boards shall also be accepted for

deliberations by the sectoral EAC.

iv. This issues with approval of the Competent Authority."

3. The Member Secretary, State Level Environment Impact Assessment Authority has also stated that as requested by the Regional Office, Chennai, Ministry of Environment, Forests and Climate Change, Government of India that Tamil Nadu Pollution Control Board may take over the work of issuing Certified Compliance report and monitoring of the Environment Clearance Terms and Conditions issued to project proponent, who have obtained Environment Clearance for category-B projects from State Level Environment Impact Assessment Authority – Tamil Nadu and to ensure speedy and timely disposal of requests from the project proponents in Tamil Nadu for certified compliance report with respect to Environmental Clearances issued by State Level Environment Impact Assessment Authority, Tamil Nadu and for the effective monitoring and implementation of the Environment Clearance conditions in the State of Tamil Nadu.

4. In the letter third read above, the Chairman, Tamil Nadu Pollution Control Board has stated that the Ministry of Environment, Forest and Climate Change, Government of India has specified the authorities such as State Pollution Control Board (SPCB), Central Pollution Control Board (CPCB), State Level Environment Impact Assessment Authority (SEIAA), District Level Environment Impact Assessment Authority (DEIAA) & Ministry of Environment, Forest & Climate Change (MoEF&CC) to monitor the Environmental Clearance compliance falls under the B2 category, vide it's notification dated 15.01.2016 with reference to mining of minor minerals. In continuation to the above notification, the MOEF&CC Regional Office, Chennai in its letter dated 25.09.2019 has requested the Principal Secretary to Government, Environment and Forest Department to issue G.O/Order authorizing the State Pollution Control Board to monitor and to issue Compliance report on the conditions of Environmental Clearance granted by the State Level Environmental Impact Assessment Authority.

5. The Chairman, Tamil Nadu Pollution Control Board has also stated that the Hon'ble National Green Tribunal in its order, dated 30.11.2018 in O.A.No.837/2018 has directed that the compliance of conditions of Environmental Clearances must be monitored on periodical basis, atleast once in a quarter and further observed that in the absence of an appropriate monitoring mechanism the conditions issued in the Environmental Clearances are flouted with impunity and rendered futile. Accordingly, the Ministry of Environment, Forest and Climate Change (MoEF& CC) was directed to evolve an appropriate mechanism to that effect and furnish a report.

6. The Chairman, Tamil Nadu Pollution Control Board has further stated that the Hon'ble National Green Tribunal in its order dated 23.07.2019 in O.A. No. 837/2018, passed various orders in connection with effective monitoring mechanism for compliance of Environmental Clearance conditions interalia that;

"Para (5) During interaction, the Tribunal has conveyed to the Joint Secretary that with regard to category 'A' projects, the data validation has to be the primary concern of the Ministry of Environment, Forest and Climate Change and ought not

be outsourced. For category 'B' projects, such data validation may be done through State Level Environmental Impact Assessment Authority. It is necessary to have an action plan providing for revamping the existing mechanism by providing for 100% monitoring of category 'A' projects through the mechanism of regional offices of Ministry of Environment, Forest and Climate Change and Central Pollution Control Board. The Monitoring of category 'B' projects may be done through instrumentalities of the State Level Environmental Impact Assessment Authority and the State Boards in the same manner. Accordingly both the regional offices of Ministry of Environment, Forest and Climate Change and the Central Pollution Control Board for category 'A' projects and State Level Environmental Impact Assessment Authority and State Boards/PCCs for category 'B' projects need to be strengthened by way of gap analysis and providing of adequate man force / human resources / scientific / technical personnel as and when needed. The action plan in this regard may be prepared within one month which may be implemented in two phases of three months each".

7. The Chairman has also stated that considering the above, suitable proposal was placed before the Board meeting held on 18.11.2019. The Board vide it's resolution No.279-3-9, dated 18.11.2019, stated that the Board has gone through the proposal and directed to bring the subject again before the Board, with the legal provisions to the proposed monitoring cell to verify the compliance of the conditions stipulated in Environmental Clearance issued by the State Level Environment Impact Assessment Authority under the provision of the Environment (Protection) Act, 1986.

8. The Chairman has further stated that it was decided to obtain opinion from the Board Standing Counsel in terms of the S.O.394 (E) dated 29.03.89, so as to confirm the legal provision available to the Tamil Nadu Pollution Control Board to monitor the Compliances of the Environmental Clearance conditions and further issuance of the compliance certificate accordingly.

"The Board standing Counsel has opined that, *"In my considered opinion and aforesaid unambiguous legal position, the State Government may notify by way of a Government Order delegating powers to the Board to assist State Level Environment Impact Assessment Authority to monitor the compliance of conditions of Environmental Clearances issued by the Ministry of Environment, Forest and Climate Change and State Level Environment Impact Assessment Authority SEIAA."*

9. The Chairman, Tamil Nadu Pollution Control Board has therefore requested the Government to examine the said issue and pass necessary orders empowering the Tamil Nadu Pollution Control Board such a way to monitor the Compliances of the Environmental Clearance conditions and further issuance of the compliance certificate relating to Category "B" projects issued by the State Level Environment Impact Assessment Authority.

10. The Government, after careful examination, accept the proposal of the Chairman, Tamil Nadu Pollution Control Board and empower the Tamil Nadu Pollution Control Board to monitor the Compliances of the Environmental Clearance conditions and further issuance of the Compliance Certificate relating to

Category "B" projects issued by the State Level Environment Impact Assessment Authority.

(BY ORDER OF THE GOVERNOR)

SHAMBHU KALLOLIKAR
PRINCIPAL SECRETARY TO GOVERNMENT

8.11.7 Issue of Consent to Establish (CTE) to existing sugar and distillery units for the purpose of Ethanol Blended Petrol Programme

The Government Vide G.O (Ms) No. 82 Environment, Climate Change and Forest (EC.3) Department, dated 13.10.2021 issued orders as follows:

'Tamil Nadu Pollution Control Board shall give Consent to Establish to all those applicants who are intending to set up new ethanol production unit within the existing Sugar Mills / distillery units located within 1km/5km from the water bodies in relaxation of the G.O.(Ms.)No.213, Environment and Forests Department, dated 30.03.1989 and G.O.(Ms.)No.127, Environment and Forests Department, dated 08.05.1998. The above permission shall be issued with the condition that the unit shall achieve Zero Liquid Discharge with Reject management system and other conditions imposed by the Tamil Nadu Pollution Control Board".

8.11.8 Levying of Environmental Compensation against the Health Care Facilities and Common Bio-medical Waste Treatment and Disposal Facilities

The Government Vide G.O (Ms) No. 77 Environment, Climate Change and Forest (EC.2) Department, dated 28.10.2020, after careful examination have decided to accept the proposal of the Chairman, Tamil Nadu Pollution Control for levying environmental compensation against the Health Care Facilities and Common Biomedical Waste Treatment Facilities in the State for non-compliance of the Bio-Medical Waste Management Rules, based on the methodology and formula given by Central Pollution Control Board.

8.12 SITING CRITERIA AND GUIDELINES FOR INDUSTRIES

8.12.1 Norms for the location of stone crushing industries

The TNPCB vide B.P.Ms.No. 4, dated 02.07.2004, has issued the following norms for existing and new / proposed stone crushers and the air pollution control measures.

1.0 Criteria for existing stone crushing units: (as recommended by NEERI)

1.1 Distance Criteria

Sl. No	Type of clusters	Distance between crusher / cluster of crushers and habitations / NN or SH	Green belt area at the periphery
1.	Single crusher	50 mts.	10 mts.
2.	10 crushers	150 mts.	30 mts.
3.	25 crushers	250 mts.	50 mts.
4.	50 crushers	300 mts.	100 mts.

Note :-

(a) For single crusher, the distance is to be measured from crusher boundary.

(b) In the case of cluster of crushers the distance is to be measured from the last crusher boundary.

(c) The crusher boundary implies the line joining all the emission sources in the crushing unit such as jaw crusher, conveyer belt, head, rotary screen etc.

1.2 If the distance between two existing crushers is more than 100 metres, it will be considered as a single crusher. If the distance between the existing crusher boundaries is less than 100 metres, it will be considered as a cluster.

1.3 Existing crushers, which are near the National or State highways and not meeting the distance criteria should provide a 15 to 20 feet wall on all the three sides (parallel to National / State highways and both sides) and upto the length to be stipulated on the alignment of road and boundary of the crusher in addition to the air pollution control measures.

Explanation

Existing stone crushing units are those which have valid licenses on the date of Supreme Court order namely 10.05.1999.

2.0 Criteria for new / proposed stone crushing units

2.1 No new / proposed stone crushers should be located within 500 metres from any National highways or State highways or 'inhabited site' or places of public and religious importance.

Note :-

'Inhabited site' shall mean a village site or town site or a house site as referred to in the revenue records or a house site or layout approved by a Local Body or Town or Country or Metropolitan Planning Authority, where the said Body or Authority is created under a statue and empowered to approve such an area as a house site or layout area (as desired in Rule 35 of Tamilnadu Minor Minerals Concession Rules, 1959).

2.2 The minimum distance between new / proposed stone crushers should be 1 km to avoid dust pollutional influence of one over the other.

2.3 Green belt development:

The stone – crushing unit shall provide adequate green belt cover around the periphery as suggested by the Board depending on site and meteorological conditions.

3.0 Air pollution control measures

The existing and new / proposed stone crushing units should provide dust containment and dust suppression systems suggested by National Productivity Council as furnished in Annexure – I and should also adhere to the recommendations furnished in NEERI Report (vide Annexure – II).

The above consolidated proposal of earlier B.P.Ms.No.609, dated 9.12.1992 and B.P.Ms.No.48, dated 9.9.98 is contemplated to make clear the decisions of the Board regarding the siting criteria of the existing and new / proposed stone crushing units and hence this proposal may take effect from 10.5.1999, the date of Supreme Court order defining existing stone crushing units.

The above proposal was placed before the Board at its meeting held on 22.6.2004. The Board in its Resolution No.204-1-25, dated 22.6.2004 decided to approve the siting criteria of the existing and new proposed stone crushing units with date of effect from 10.5.99, the date of the Hon'ble Supreme Court order, defining the existing stone crushing units.

ANNEXURE – I

Recommended dust containment and dust suppression system by National Productivity Council

Dust containment system

Dust containment system comprises of building enclosures over the major dust emission sources so as to contain the dust emission sources so as to contain the dust within the housing. Only rotary screen is considered for dust containment enclosures. It is not recommended to enclose the jaw crusher as frequent manual intervention and attention is required.

Salient features of dust containment system

- Enclosures to be constructed of G.I. sheets (1.66 mm and 1.25 mm thick) and supported on angle structures so that it can withstand strong wind.
- Roof to be given a gradual slope / curvature so as to prevent accumulation of water.
- Material transfer point such as hopper bottom / product unloading conveyor to be covered suitably to prevent dust release into the atmosphere.
- Locations where complete enclosures are not possible such as openings in jaw crushers side and bottom, are to be covered suitably (GI sheets / rubber flap or any other material) to prevent dust release into the atmosphere.
- Telescopic chutes are to be provided at product unloading conveyor to prevent dust release into the atmosphere during free fall off material from height. These chutes can be adjusted in length according to size of the heap.
- Openings in the enclosures over shaft motor driver conveyor belts etc., are to be covered with rubber flaps (wherever possible) to prevent release of dust.
- Openings fitted with doors are to be provided for inspection and access in the enclosures.

Dust suppression system

Effective housing at location such as material transfer points cannot be constructed because of resultant obstruction to material flow. Since dust generation from these points are quite substantial, dust suppression system, comprising of spraying of fine water mist through special nozzles, should be carried out over the dust generation sources to suppress the dust cloud.

There are two types of water spray systems (a) water spray on the generated dust cloud and (b) water spray directly on the material. The quantity of water spray should be sufficient to suppress dust without affecting the quality of the product. Too much water spray on the material will wet the dust completely and result in zero emission but the wet material is difficult to screen and has not market acceptance.

A water pump is required to spray the water at a minimum pressure of 2 to 4 kg/cm^2. The water consumption depends on type of nozzle chosen for application.

The various application points are :

- At raw stones unloading site (optional)
- At feed point of raw stones into jaw crusher
- At discharge of the screened stone fractions from rotary screens into respective conveyor belief.
- Stone dust discharge from conveyor on stock pile (optional).

ANNEXURE – II

Recommendations in NEERI's final report on "assessment of dust emission from stone crushing industry" in June 1998

1. Periodical cleaning of water spray nozzles should be carried out to avoid choking.
2. Fine dust accumulated in the crushing area should be periodically cleaned and the dumps should be covered with tarpaulins to arrest erosion by wind.
3. The drop height of the processed material should be kept at a minimum during loading and unloading.
4. Conveyor chutes should be provided at the discharge points.
5. There should be bilane road system to approach the crushers.
6. The approach road should be properly laid with tar and concrete and should be sprayed with water. Similarly, the approach roads to individual crusher should be made in good condition and watered.
7. Within the crusher, a minimum distance of 20 metres should be made for roads.
8. The green belt will restrict the spread of particulate matter and trees should be evergreen high foliage type like neem, tarmarind, gold mohar, fire of the forest and any other local varieties are recommended. Cash crops like cashew nut, mango, lemon and sapota may be encouraged to get back financial benefits.
9. If two or more crushers are located within 100 metres, they may be considered to have a common green belt if they are border cases. The graph prepared from NEERI Reports if furnished in Annexure – III to fix the distance and green belt for any number of crushers in a cluster, limited to a maximum of 50 (Ex. For 5 crushers in a cluster, total area 100 m, green belt 20 m).
10. Ornamental trees like Asoka along the roads on both sides leading to crushing area should be encouraged to improve the aesthetics of the working environment.
11. As an occupational safety, all the workers should be provided with nose masks.

8.12.2 Siting Criteria and Guidelines for M-Sand unit

The TNPCB vide B.P.No. 26, dated 30.07.2018 has issued the following siting criteria guidelines for M-Sand units.

1) All M-sand units can be established as an extended facility of existing stone crusher or newly establishing as an integrated facility of stone crusher or stand-alone M-sand units.
2) Based on pollution index M-Sand units with or without stone crushers shall be treated as **"Orange"** category.
3) Existing stone crushers, manufacturing M-Sand within the consented quantity shall not be treated as expansion activities. Due to process modification, these units shall apply and obtain fresh consents of Board under Water and Air Acts, to include M-sand as one of the products in the

consent.

4) All consented stand alone M-Sand units shall be verified and ensured to carry out its activities only with vertical shaft impactor (VSI) crusher machine. No primary crusher like jaw crusher, secondary crusher and cone crusher shall exist in the consented premises.

5) As in PWD circulars dated 30.08.2012, 14.09.2017 etc on the instructions to M-sand units inter alia, the following shall be complied.

- Vertical shaft impactor (VSI) crusher is the best machine for making M-sand and this type of machinery alone should be permitted.
- Crushed stone (M-sand) should comply with all provisions in the BIS codes.
- Product approval certificate from PWD assessment committee.
- Quality test report from the Government laboratories such as National Test House, or MSME Laboratories and Laboratories of Government Academic Institutions such as IIT, IIT Incubator Laboratories, Anna University, etc., are to be obtained to fulfill notified BIS standards.

6) As there is a practice of producing M-Sand by washing the stone dust generated from stone crushers, which will not satisfy the quality criteria prescribed by PWD for M-Sand, such units should not be allowed to set up.

7) All existing consented M-Sand units operating with Horizontal shaft impactor (HSI) crushers shall change over to vertical shaft impactor (VSI) crusher machine by 31.12.2018.

8) M-Sand units shall have adequate land area within the premises for storage of waste sediments till disposal for beneficial use.

9) M-Sand units shall ensure complete recycling of wastewater generated.

10) All M-Sand units shall with the vertical shaft impactor (VSI) and vibratory screen shall be provided with adequate dust suction and collection arrangement with closed storage for the stone dust collection.

11) Siting criteria for M-Sand Units:

A. Distance Criteria:

I. Stand-alone M-Sand Units

a) The boundary of the Standalone M-Sand units shall be located at 300 meters away from the approved habitations.
b) Stand-alone M-Sand units shall be located 100 metres away from the boundary of NH/SH.
c) There will be no distance criteria between the standalone M-sand units.

II. Standalone M-Sand Units located within Stone crushers shall adopt the Criteria under B.P Ms. No. 4, dt. 02.07.2004 and the B.P. Ms.No. 55, dt. 06.10.2005.

B. Air Pollution Control Measures:

Air pollution control measures for M-Sand units with or without stone crushers shall be as below:

I. Recommended Dust Containment and Dust Suppression System

a). Dust Containment System:

Dust containment system comprises of building enclosures over the major dust emission sources such as crusher and sieve so as to contain the dust emission within the housing.

Salient Features of Dust Containment System:

- Enclosures to be constructed of G.I sheets (1.66 mm and 1.25 mm thick) and supported on angle structure so that it can with stand strong wind.
- Roof to be given a gradual slope / curvature so as to prevent accumulation of water. Material transfer point such as hopper bottom / product unloading conveyor to be covered suitably to prevent dust release into the atmosphere.
- Locations where complete enclosures are not possible such as openings in vertical shaft impactor (VSI) side and bottom are to be covered suitably (GI sheet / rubber flap or any other material) to prevent dust release into the atmosphere.
- Openings fitted with doors are to be provided for inspection and access in the enclosures.

b). Dust Suppression System:

Since dust generation from transfer points are quite substantial, dust suppression system, comprising of spraying of fine water mist through special nozzles should be carried out over the dust generation sources to suppress the dust cloud.

c). Construction of Compound Wall:

All M-Sand units shall construct compound wall to a height of 10 feet all around its boundary and shall erect wind net /metal sheet of 5 feet height to prevent dust carryover to the nearby areas.

d). Green Belt:

Green belt of 5 metre width shall be provided all around the inner periphery of the unit premises.

II. General Conditions:

1. Periodical cleaning of water spray nozzles should be carried out to avoid choking.
2. Fine dust accumulated in the unit should be periodically cleaned and the dumps should be covered with tarpaulins to arrest erosion by wind.
3. The drop height of the processed material should be kept at a minimum during loading and unloading.
4. Conveyor chutes should be provided at the discharge points.
5. There should be bilane road system to approach the crusher.
6. The approach road should be properly laid with tar and concrete and should be sprayed with water. Similarly, the approach roads to individual crusher should be made in good condition and watered.
7. Within the unit, a minimum distance of 20 metres shall be made for roads.
8. The green belt will restrict the spread of particulate matter and trees should

be evergreen high foliage type like neem, tarmarind, gold mohar, fire of the forest and any other local varieties are recommended.

9. Ornamental trees like Asoka along the roads on both sides leading to crushing area should be encouraged to improve the aesthetics of the working environment.
10. As an occupational safety, all the workers should be provided with personal protective equipments.

8.12.3 Guidelines for the existing consented stone crushing units to go for expansion along with M-sand unit

The TNPCB vide B.P.No. 08, dated 05.03.2019 has issued the following guidelines for the existing consented stone crushing units to go for expansion along with M Sand unit.

1. The existing consented stone crushing units shall be permitted to increase their production along with or without M-sand production unit, such units shall comply with all the norms as prescribed in B.P. Ms. No. 4 dated 02.07.2004 (read with B.P. Ms. No. 55 dated 06.10.2005) except 1 KM distance criteria from crusher to crusher.
2. The stone crushing units shall meet Ambient Air Quality standards at all times. The suspended particulate matter (measured between three metres and ten metres from any process equipment of stone crushing unit shall not exceed 600 microgram per cubic metre) from a controlled isolated as well as from a unit located in a cluster should be less than 600µg/Nm^3.
3. The Standalone M-Sand units (within / outside stone crushing unit) shall comply with all the norms as prescribed in B.P. No. 26 dated 30.07.2018 except the distance criteria as prescribed under A-II of said B.P.
4. The stone crushing units & M-Sand units shall not store raw materials & products more than one month capacity and all the open storage should be properly covered with Tarpaulin to avoid dust emanation due to wind action.

8.12.4 Siting Criteria for Sewage Treatment Plants *(Source: Circular Memo No. T16/25323/STP/Orange/2007-4, dated 23.10.2008)*

1 The STP site should be at least 250 metres away from any lake or pond preferably in the downstream side of lake or pond so that the sewage shall not reach the water bodies.

2 The STP site should be located more than at least 250 metres away from river or stream and shall ensure that the treated / untreated sewage should not reach the above water sources.

3 The STP site should be located at least 500 metres away from a notified habitated area and zone of 100 metres around STP site boundary should be declared as no-development zone so that green belt can be developed in that area.

4 The STP site should be at least 500 metres away from a public utility area such as park, temple, educational institution etc.,

5 The site of STP should be selected on dry lands and the treated sewage shall

be utilized on land for irrigation.

6 The local body shall also ensure that the land availability and consent from the land owners for the disposal of treated sewage, which should be mentioned at the time of application for NOC itself.

7 In case of disposal of treated sewage into marine water bodies, the local body shall obtain CRZ clearance and this should be submitted along with NOC application.

8 The local body shall obtain appropriate land use certificate from DTCP for STP site.

9 The local body shall consider the treatment technology while selecting the site in respect of extent of land. Advanced treatment technology will require less footprint area in order to meet the inland surface water standards prescribed of the TNPCB.

10 A preliminary assessment of public / nearby residents opinion neighboring the location of STP site is essential.

8.12.5 STP & ETP above Ground Level (Source: Memo No. TNPCB/Compl/ F.No. 23405/2017, Date: 21.09.2017)

TNPCB has decided not to encourage the construction of Sewage Treatment Plant (STP) and Effluent Treatment Plants in the basement floor in view of health hazard and safety aspects. Hence the Board vide memo No. TNPCB/Compl/F.No. 23405/2017, Date: 21.09.2017instructed all the DEEs/JCEE(M) not to encourage the industries for construction of STP/ETP in basement floor.

8.12.6 Precautions during cleaning / maintenance of the ETP components and their accessories.*(Source: Circular Memo No.TNPCB/ P&D/F.16032/2010/ Dated 21.3.2014)*

1. The cleaning of ETP tanks have to be carried out by mechanized methods such as jetter machine instead of manual.
2. The maintenance of ETP accessories like pumps, machineries etc., have to be carried out in the presence of Safety Officer taking all safety measures.
3. The ETP accessories like pumps, machineries etc., have to provide with valves & to ensure the valve is closed either side before carrying maintenance on pumps etc.,
4. The submersible pump have to be used in the ETP tanks seated at bottom slope leading to a pit of 1 feet by 1 feet depth and the submersible pump to be placed in the pit.
5. The workers involved in the cleaning/ maintenance operations have to obtain “work permit system” issued by the competent authority who possess required educational qualification, experience in safety/protection aspects.
6. Before cleaning/maintaining the ETP tank, the inlet and the outlet of the tank have to be closed by tightening the valve, thus isolate such ETP tank.
7. Before cleaning the tank, the air blow to be carried out by using the blower in the ETP tank so as to release the hazardous gas present in the tank.

8. Thereafter gas analyzer have to be used to find out the hazardous gas presence and their concentration level so as to ensure 100% no hazardous gas is present.
9. The persons involved in the cleaning/maintenance of the ETP tank has to take the following safety measures.
   - At all times, wear protective clothing and equipment that cover the hands, face and as much skin as possible, including;
   - Safety goggles or glasses with side splash protection
   - Dust mask that fits over the nose and mouth (to protect from aerosols like nose spray)
   - Disposable rubber gloves
   - Use Life jacket and oxygen cylinder with air respirators
   - Dedicated work cloths, such as coveralls or raingear or old clothing that can be discarded afterwards
   - Work boots.
10. Necessary safety equipment's, testing kits (to measure H_2S, CH_4, NH_4, CO and other hazardous gases), goggles, aprons, gloves, masks, gas detectors etc., shall be made available in all units and CETPs and the same shall be used properly while carrying out the cleaning operations.
11. The CETPs and IETPs shall dispose their sludge within ninety days so as to ensure that the unit shall not accumulate sludge for long time.
12. The CETPs and IETPs shall intimate the exact date of cleaning tanks/removal sludge etc., to the officials of the Fire and Rescue Service Department and to carryout cleaning operation in their presence.
13. The workers shall be trained periodically on the necessity to use, Personal carrying out desludging, dewatering, cleaning operations and other maintenance operations.
14. The units / CETP shall prepare safety manual and training manual for training of workers in the ETP and APC measures.
15. In the event of any unpleasant incident/accident, the proprietor/parent/ Director of the unit as well as the CETP Company shall be held responsible for the incident and appropriate severe action will be initiated.
16. The above instructions are to be followed scrupulously by the CETPs and the units operating IETPs.

8.12.7 Guidelines for Hot Mix Plant

Guidelines for Hot Mix Plant in Tamilnadu issued by TNPCB in compliance with NGT order dated 17.02.2016 in Application No.10 of 2016.

A. Proposed Hot Mix Plants

I. Siting Criteria

a. No hot mix plant shall be allowed within 500meters from approved habitation/approved layouts.

b. Hot mix plant shall be allowed 200 meters away from national/state

highways and distance shall be measured from edge of the metaled road to the physical/administrative boundary of the hot mix plant.

c. In respect of wild life sanctuary/reserve forest/national monuments/air ports/ air strips, hot mix plant shall be established five kilometer away (or) buffer zone declared for the same.

d. Hot mix plants shall have a minimum land requirement of one acre for better operating conditions.

e. There should be at least 250 meters distance between the two hot mix plants boundaries.

II. Air Pollution Control Measures

a Hot Mix plant should discharge flue gases after the dust control system through a stack with minimum height of 6m (from ground level) with necessary platform and port holes for periodic collection of stack emission samples.

b It is preferable to have dry dust collection system of bag filter arrangement with air pulse jet cleaning system. Trained technical persons should be employed to handle pollution control systems.

c The aggregates loading into hopper bin area shall be closed on three sides with metal sheets and the access side shall have plastic air curtains/ multi sheet rubber flaps so as to arrest the emission generated during loading.

d Conveyor belts shall be fully covered (top and sides).

III. Fugitive Emission Control

a. Aggregates of various sizes shall be stored in such a manner that the fine aggregates are stored in between the coarser aggregates to control dust emanation.

b. All aggregates stored within the premises shall not be stacked beyond the height of 3m from ground level.

c. Compound wall shall be provided on all four sides of the unit using RR or brick masonry to the height of 4m from ground level, above which wind fence (made up of steel structures)/panels/nets to be provided for further height of 2m.

d. Water sprinkling system shall be provided in all possible dust emanating area for suppression.

e. All roads/vehicular movement areas at site of hot mix plant should be well paved and cleaned regularly to mitigate dust.

IV. Standards For Hot mix Plant

a. Emission standard - Particulate matter - Not more than 150mg/Nm^3.

b. National Ambient Air Quality Standards – CPCB Notification No.- B-29016/20/90/PCI-I Dated 18.11.2009 to be followed.

c. The Noise Pollution (regulation and Control) Rules,2000 as Notified by MoEF S.O.123(E) dated 14.02.2000 to be followed.

V. Green Belt Development

The industry should plant three rows of spreading crown &fast growing varieties of evergreen thick foliage tall trees all along the boundary.

VI. Other Requirements

a. All hot mix plants shall use diesel/LDO only, in no case fuels such as

solvents, industrial wastes, fire wood shall be used.

b. A dedicated energy meter to be provided for the motor attached to the dust control system and reading to be recorded on daily basis.

c. Stack/AAQ/ANL survey to be periodically (once in a year) conducted and reports should be furnished to TNPCB.

d. Maintain good housekeeping practices wherever possible within the unit premises to control fugitive dust emission.

e. Wherever possible, day time operation is to be preferred rather than night time operation to take advantage of favourable metrological condition prevailing during day time.

f. Adequate measures of safety for workers working in hot mix plant shall be taken. Personal protective devices such as goggles, mask, helmet and safety shoes shall be provided to workers.

g. All machineries (pumps and blowers) details to be displayed along with their capacity (HP) and power consumption (kW) in addition to the total power consumption in the hot mix plant for inspection purpose.

B. Existing Hot Mix Plants

I. Siting Criteria

All existing hot mix plants shall not undertake expansion activity without prior consent of the Board. If the unit applies for expansion, it is to be considered as a proposed industry and recommended siting criteria to be adhered with.

II. Air Pollution Control Measures

a. Hot Mix plant should discharge flue gases after the dust control system through a stack with minimum height of 6m (from ground level) with necessary platform and port holes for periodic collection of stack emission samples. And adequate stack height shall be provided for bitumen heating system.

b. It is preferable to have dry dust collection system of bag filter arrangement with air pulse jet cleaning system. However if the unit already has wet scrubber dust control system, necessary waste water treatment plant should be installed meeting the surface water discharge standards. The sludge should be used within the plant or for brick manufacture. Trained technical persons should be employed to handle pollution control systems.

c. The aggregates loading into hopper bin area shall be closed on three sides with metal sheets and the access side shall have plastic air curtains/ multisheet rubber flaps so as to arrest the emission generated during loading.

d. Conveyor belts shall be fully covered (top and sides).

III. Fugitive Emission Control

a. Aggregates of various sizes shall be stored in such a manner that the fine aggregates are stored in between the coarser aggregates and also wherever possible fine aggregates should be stored within the plant away from residential areas.

b. All aggregates stored within the premises shall not be stacked beyond the height of 3m from ground level.

c. Compound wall shall be provided on all four sides of the unit using RR or brick masonry to the height of 4m from ground level, above which wind fence (made up of steel structures)/panels/nets to be provided for further height of 2m.
d. Water sprinkling system shall be provided in all possible dust emanating area for suppression.
e. All roads/vehicular movement areas at site of hot mix plant should be well paved and cleaned regularly to mitigate dust.

IV. Standards for Hot mix Plant

a. Emission standard - Particulate matter - Not more than 150mg/Nm^3.
b. National Ambient Air Quality Standards – CPCB Notification No.- B-29016/20/90/PCI-I Dated 18.11.2009 to be followed.
c. The Noise Pollution (regulation and Control) Rules,2000 as Notified by MoEF S.O.123(E) dated 14.02.2000 to be followed.

V. Green Belt Development

The industry should plant three rows of spreading crown &fast growing varieties of evergreen thick foliage tall trees all along the boundary

VI. Other Requirements

a. All hot mix plants shall use diesel/LDO only, in no case fuels such as solvents, industrial wastes, fire wood shall be used.
b. The unit shall provide separate water flow meter and maintain log book for the water consumed for the industrial activity each day, if the wet system of Pollution Control devices is installed.
c. A dedicated energy meter to be provided for the motor attached to the dust control system and reading to be recorded on daily basis.
d. Stack/AAQ/ANL survey to be periodically (once in a year) conducted and reports should be furnished to TNPCB.
e. Maintain good housekeeping practices wherever possible within the unit premises to control fugitive dust emission.
f. Wherever possible, day time operation is to be preferred rather than night time operation to take advantage of favourable metrological condition prevailing during day time.
g. Adequate measures of safety for workers working in hot mix plant shall be taken. Personal protective devices such as goggles, mask, helmet and safety shoes shall be provided to workers.
h. All machineries (pumps and blowers) details to be displayed along with their capacity (HP) and power consumption (kW) in addition to the total power consumption in the hot mix plant for inspection purpose.

Note: The existing hot mix plant shall comply with the above recommendations within a period of four months.

8.12.8 Guidelines for Solid/Hollow Block Manufacturing Units on environmental aspects

(i) No new units shall be located in a residential area as classified by the competent authorities and also the industries shall not be located within a distance of 100 metres around hospitals, educational institutions and courts

which has been declared as silence area / zone under the Noise Pollution (Regulation and Control) Rules, 2000.

(ii) It shall be a pre-requisite for all proposed units to obtain Building Plan approval, water supply etc. for commercial usage from the competent authorities of local bodies in town panchayat, panchayat union, municipalities and corporation.

(iii) Noise and Particulate Matter levels at the site have to be monitored periodically and reported in accordance with the Noise Pollution (Regulation and Control) Rules, 2000 and revised National Ambient Air Quality Standards of Central Pollution Control Board Notification dated: 18.11.2009 respectively.

(iv) Raw materials of stone dust, fly ash, cement etc shall not be stored in open but stored in enclosed, well lined shed.

(v) The raw material/concrete mixture machine shall be operated within an enclosed shed to contain noise and dust emissions.

(vi) If diesel generators are used, incorporation of acoustic measures and all standard norms for stack height have to be adopted.

(vii) A suitable enclosure to be provided around the mobile vibrating/ compacting machine to control noise and dust.

(viii) Raw materials are to be wetted with water frequently to avoid flying of fine dust.

(ix) Workers in the unit shall be provided with protective devices such as earplugs, masks etc to address occupational health safety.

(x) Compound wall of not more than 5 feet high to be provided on all sides of the unit. Also no stacking of solid/hollow blocks shall be more than the height of the compound wall.

(xi) The unit site shall have proper landscaping and ensure that rainwater from the premises drains into well connected storm water drains without stagnation. Strainers should be placed to prevent cement and fine aggregates from reaching the storm water drains.

(xii) Green belt of not less than 3 metre width of thick canopy to be provided in all directions at the periphery of the unit to attenuate noise and air pollutions.

8.12.9 Guidelines for Ready Mix Concrete Plants *(Source: TNPCB report w.r.t NGT order dated 30.03.2017 in Application No.24 of 2017)*

The Ready Mix Concrete plant is placed under Green category as per CPCB Pollution Index irrespective of the size of the plant (3037-Ready Mix Concrete Plant)

A. Proposed Ready Mix Concrete Plants:

I. Siting criteria

(i) No RMC plant shall be permitted within 250 metre from the nearby residential area, layouts NH/SH, educational institutions, Religious places and human settlements with population more than 500.

(ii) No RMC plant shall be permitted within 5 kilometres radius from the wild life sanctuary/reserve forest/national monuments.

(iii) The RMC Plant for captive use should be located within the project site

(iv) The minimum land area required for a RMC plant for better operating conditions is specified as below.
   (a) Plant capacity <50m^3/hr – 1 acre
   (b) Plant capacity 50 to 100m^3/hr – 2 acre
   (c) Plant capacity >100m^3/hr – 1 hectare

(v) There should be atleast 250 metre distance between the two RMC plants.

II. Air Pollution control measures

1. Storage silos of cement & fly-ash shall be equipped with adequate capacity of dust collection system such as bag filters followed by bag house assembly for the collection, control and suppression of dust emission during loading and unloading of the silo.
2. The cement and fly ash shall be loaded into silos only using pneumatic conveyor system.
3. Handling of cement, sand, m-sand, fly ash and aggregates shall be carried out covered conveyor system.
4. Weight bins and hoppers shall be covered on three sides and top where front end loader is used.
5. Raw materials are to be wetted with water frequently to avoid flying of fine dust.
6. The raw materials like quarry dust shall be stored in an enclosed shed / containment.
7. Aggregates of various sizes shall be stored in such a manner that the fine aggregates are stored in between the coarser aggregates to control dust emanation.
8. All aggregates stored within the premises shall not be stacked beyond the height of 3 metre from ground level.
9. Water sprinkling systems shall be provided in all possible dust emanating area for suppression.
10. All roads/vehicular movement areas at site of RMC should be well paved and cleaned regularly to mitigate dust.
11. National Ambient Air Quality Standards - CPCB Notification No. B-29016/90/PCI-I Dated 18.11.2009 to be followed.
12. The industry should plant green belt not less than 3 metre width of thick canopy in all direction at the periphery of the unit to attenuate noise and dust pollution.
13. The Noise Pollution (Regulation and Control) Rules, 2000 as Notified by MOEF S.O.123 (E) dated 14.02.2000 to be followed.

III. Water Pollution Control

1. The RMC plant shall ensure that the water required for its process is obtained from the sources as approved by the Competent Authority and

as per the standing Rules. (Hint: Water required for 1 m^3 of concrete is 200 litre and weight of 1 m^3 of concrete is 2.4MT)

2. An adequate capacity of collection cum setting tank shall be provided to collect the wastewater generated from the machine washing, truck washing etc.
3. Garland drains with appropriate bunds shall be provided connecting all potential sources of wastewater and rainwater and the same shall be directed to a collection cum settling tank.
4. The waste water generated from the sources like Batching Plant washing, Transit Mixer washing, Vehicle tyre washing and floor washing area shall be collected in the collection tank and the same shall be treated by providing comprehensive treatment system so as to meet the disposal standards.
5. The treated water shall be recycled for wetting the raw materials so as to conserve water.

IV. Solid Waste Management

1. Solid waste generated from transit mixture washing, debris/sludge/waste or rejected concrete generated from RMC shall either be reused through recovery/ Reclaiming system or disposed off at a designated approved site by local body for debris construction waste.

V. Other Requirements

1. Maintain good housekeeping practices wherever possible within the unit premises to control fugitive dust emission.
2. Wherever possible, day time operation is to be preferred rather than night time operation to take advantage of favorable metrological condition prevailing during day time.
3. Adequate measures of safely for workers working in RMC plant shall be taken. Personal protective devices such as goggles, mask, helmet and safety shoes shall be provided to workers.

B. Existing Ready Mix Concrete Plants

I. Siting criteria

1. All existing RMC plants shall not undertake expansion activity without prior consent of the Board. If the unit apply for consent of the Board for expansion activity, it is to be considered as a proposed industry and recommended siting criteria to be adhered with.
2. The existing RMC plants which are not meeting the siting criteria shall provide a compound wall / Tin sheet coverage / Barricades to a height of 20 feet all around the periphery of the unit premises.

II. Air Pollution control measures

1. Storage silos of cement & fly-ash shall be equipped with adequate capacity of dust Collection system such as bag filters followed by bag house assembly for the collection, control and suppression of dust emission during loading and unloading of the silo.

2. The cement and fly ash shall be loaded into silos only using pneumatic conveyor system.
3. Handling of cement, sand, m-sand, fly ash and aggregates shall be carried out covered conveyor system.
4. Weigh bins and hoppers shall be covered on three sides and top where front end loader is used.
5. Raw materials are to be wetted with water frequently to avoid flying of fine dust.
6. The raw materials like quarry dust shall be stored in an enclosed shed / containment.
7. Aggregates of various sizes shall be stored in such a manner that the fine aggregates are stored in between the coarser aggregates to control dust emanation.
8. All aggregates stored within the premises shall not be stacked beyond the height of 3 metre from ground level.
9. Water sprinkling systems shall be provided in all possible dust emanating area for suppression.
10. All roads/vehicular movement areas at site of RMC should be well paved and cleaned regularly to mitigate dust.
11. National Ambient Air Quality Standards - CPCB Notification No. B-29016/90/PCI-I Dated 18.11.2009 to be followed.
12. The industry should plant green belt not less than 3 metre width of thick canopy in all direction at the periphery of the unit to attenuate noise and dust pollution.
13. The Noise Pollution (Regulation and Control) Rules, 2000 as Notified by MOEF S.O.123 (E) dated 14.02.2000 to be followed.

III. Water Pollution Control

1. The RMC plant shall ensure that the water required for its process is obtained from the sources as approved by the Competent Authority and as per the standing Rules. (Hint: Water required for 1 m^3 of concrete is 200 litre and weight of 1 m^3 of concrete is 2.4MT)
2. An adequate capacity of collection cum setting tank shall be provided to collect the wastewater generated from the machine washing, truck washing etc.
3. Garland drains with appropriate bunds shall be provided connecting all potential sources of wastewater and rainwater and the same shall be directed to a collection cum settling tank.
4. The waste water generated from the sources like Batching Plant washing, Transit Mixer washing, Vehicle tyre washing and floor washing area shall be collected in the collection tank and the same shall be treated by providing comprehensive treatment system so as to meet the disposal standards.
5. The treated water shall be recycled for wetting the raw materials so as to conserve water.

IV. Solid Waste Management

1. Solid waste generated from transit mixture washing, debris/sludge/waste or rejected concrete generated from RMC shall either be reused through recovery/ Reclaiming system or disposed off at a designated approved site by local body for debris construction waste.

V. Other Requirements

1. Maintain good housekeeping practices wherever possible within the unit premises to control fugitive dust emission.
2. Wherever possible, day time operation is to be preferred rather than night time operation to take advantage of favorable metrological condition prevailing during day time.
3. Adequate measures of safely for workers working in RMC plant shall be taken. Personal protective devices such as goggles, mask, helmet and safety shoes shall be provided to workers.

8.12.10 Design and Guidelines for Charcoal Units *(Source: B.P No. 65 dated 22.08.2022*

I. For Existing (i.e, prior to the Hon'ble NGT(SZ) order dated 20.11.2020 passed in O.A.No.17, 24 etc., of 2013) Charcoal industries

All the existing consented units, (i.e). prior to the Hon'ble NGT(SZ) order dated 20.11.2020 passed in O.A.No.17, 24 etc., of 2013, shall install pilot plant to produce coconut shell charcoal from Coconut Shell as raw material subject to the following conditions.

1. The pilot plant shall be constructed and adopted as per the Anna University vetted report on 'Design and guidelines prepared for Charcoal units by TNPCB Joint committee'
2. The unit shall ensure that the charcoal production plant shall have an elevated Charcoal pit with its bottom 1000 mm above the ground level and the water quenching tank with its bottom 500 mm above ground level.
3. The charcoal pit/pits firing chamber, oil mist eliminator and venturi wet scrubber shall have pressure releasing valves.
4. Suitable non return valves to be provided in the system to prevent back fire.
5. Ash tray is to be provided beneath the chimney to collect ash generated.
6. An ID fan attached to chimney is provided with damper valve.
7. Platform with port hold arrangement in the chimney to monitor process emission.
8. Refinements, if any, in the design may be considered based on the performance of the pilot plant. The project proponents may be permitted to develop and improvise their own design adopting all the modifications and general guidelines given by TNPCB and incorporating features of easy operation, higher safety, high efficiency, energy saving and environment protection
9. The modifications under taken in the plant shall be inspected and certified as

authorized process by safety consultant for the same and efficient working.

10. The unit shall adopt guidelines of TNPCB joint committee developed for siting criteria, APC measures & fugitive control measures, emission standards for charcoal unit, Hazardous and non-hazardous waste management, green belt development and other requirements as vetted by the Anna University.
11. The ash generated if any from the process shall be utilized for agriculture activities or any other beneficial purposes.
12. The entire process area flooring shall be made impervious.
13. Closed shed shall be provided for the process area.
14. Oily/tarry waste collected from the oil mist eliminator shall be reused for beneficial purposes such as tar production, oil for medicinal purpose etc. or disposed scientifically such as Co-processing, incineration through Common TSDF etc.
15. The pilot plant to be installed shall be operated only for the purpose of said consented unit to manufacture coconut shell charcoal.
16. The unit shall apply and obtain valid consent from Board before the commencement of operation of the plant.

II. For proposed Charcoal (i.e., after the Hon'ble NGT(SZ) order dated 20.11.2020 passed in O.A.No.17, 24 etc., of 2013) industries:

The proposed and non-consented and proposed charcoal industries i.e., after the Hon'ble NGT(SZ) order dated 20.11.2020 passed in O.A.No.17, 24 etc., of 2013, shall adopt **continuous process** by following the guidelines mentioned in the TNPCB Joint Committee Report vetted by Anna University as follows:

1) Siting Criteria

a). No charcoal manufacturing unit shall be allowed within 1 km from approved habitation/approved lay outs.

b). Charcoal unit shall be allowed 500 meters away from National/State Highways and distance shall be measured from the edge of the metaled road to the physical/administrative boundary of the charcoal manufacturing unit.

c). No charcoal units shall be located in declared wild life Sanctuaries/ reserve forests and its buffer zones declared for the same.

d). There should be at least 1 km distance between two charcoal manufacturing units from its physical/administrative boundaries.

2) Air Pollution Control Measures

a). Flue gas arising from the continuous process shall have water scrubber arrangement attach to a stack of minimum height of 10 meters (from ground level) with necessary platform and port holes for periodic collection of stack emission samples.

b). It is preferable to use the waste heat energy of the flue gas for drying of raw materials and for other purposes.

c). The assembly of continuous process method shall be housed within a closed shed with suitable access.

d). Loading of raw materials and unloading of finished products shall be mechanized.

3) Fugitive Emission Control

a) Compound wall shall be provided on all sides of the unit to a minimum height of 4 meters from the ground level.

b) Raw materials within the premises shall not be stacked beyond a height of 3 meters from the ground level.

4) Standards for charcoal units

a). Emission standards — particulate matter not more than 150 mg/Nm3

b). National Ambient Air Quality standards-CPCB Notification No.B-29016/20/90/PCH/dt.18.11.2009.

c). The Noise Pollution (Regulation and Control) Rules 2000 as notified by MoEF, S.No.123(E) dated:12.2.2000.

5) Green Belt Development

The industry should plant three rows of spreading crown & fast growing of evergreen thick foliage tall trees all along the boundary

6) Other requirements

a) Stack/Ambient Air Quality/Ambient Noise Level surveys to be periodically conducted and reports should be furnished to TNPC Board.

b) Maintain good housekeeping practices where ever possible within the unit premises to control fugitive dust emission.

c) Buffer stock of raw materials [coconut shells and other biomass] of not more than 10 days requirement shall be stored within the unit premises.

d) Raw materials and finished products shall be stored separately and all steps shall be taken to comply with the fire safety procedures enacted in law.

e) Adequate measures of safety for workers working in the charcoal units shall be taken. Personal protective devices such as mask, helmet, safety shoes, etc. shall be provided to workers.

f) Local body clearance for the establishment and operation of the unit with other statutes.

As the practice of continuous process for charcoal manufacture is limited in Tamilnadu, the proposed industries may construct a pilot unit and operate as per the guidelines of TNPCB. Refinements, if any, in the design may be considered based on the performance of the pilot plant. The project proponents may be permitted to develop and improvise their own design adopting all the modifications and general guidelines given by TNPCB and incorporating features of easy operation, higher safety, high efficiency, energy saving and environment protection. The modifications under taken in the plant shall be inspected and certified by an authorised process and safety consultant for the same and efficient working.

Further, in case of the existing charcoal industries going for expansion activity, they shall adopt the continuous process, by following the guidelines mentioned in the TNPCB Joint Committee Report vetted by Anna University as mentioned above.

In case of existing activated Carbon manufacturing units undertaking backward integration of Charcoal manufacturing (By adopting continuous process)

will not be insisted for siting criteria, however air pollution control measures, fugitive emission control, standard for Charcoal units, green belt development and other requirements shall be full filled.

8.12.11 Environmental Guidelines for Poultry Farms (*Source: Guidelines issued by CPCB in January 2022)*

Following are the revised guidelines addressing environmental issues of Poultry farms.

1. Gaseous emission (NH_3 & H_2S) and Feed Mill Dust

(i) Minimization of odour/gaseous pollution

- Proper ventilation and free flow of air over manure collection points to keep it dry shall be ensured.
- Manure should be protected from Run-off water and from unwanted pests/insects.
- Well-designed storage facilities should be provided to contain manure /litter.
- Carcasses of dead birds shall be promptly collected on regular basis and disposed appropriately without damaging the environment as per the prescribed methods under section 6.2 (iii) of the guidelines.

(ii) Dust from Feed Mills

- Feed mill and Go-down should be located on a well elevated ground preferably near the entrance of the farm and isolated from other poultry sheds.
- Dust collector system should be installed to control emissions from mixing and grinding section of the feed mill.
- Workers in the feed mill shall be provided with dust masks to protect them from dust.
- Provision for vehicle tyre dip shall be made at the entrance to remove impurities/dust carried by vehicle tyres;
- Floor of the feed mill and Go-down shall be concrete and raised above the ground level by a minimum of 2 feet.

2. Management of solid wastes (Solid Wastes contains Manure/litter, Hatchery Debris and Dead Birds)

(i) Manure handling and disposal

- Proper ventilation and free flow of air over manure collection points to keep it dry (by blowing dry air over it or by conveying ventilation air through the manure pit) shall be ensured to prevent obnoxious odour in the area.
- Poultry housing shall be ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases such as methane, carbon dioxide, ammonia, etc.
- Excreta shall be scratched at least once in two days as needed for mixing of litter and to keep bedding material (rice husk, saw dust, wood shavings etc.) dry in case of deep litter houses the waste material. This waste shall be utilised for composting after completion of the cycle.

- Manure collected under cages on high raised platforms shall be stored for further processing and utilized by using following options:

Sl. No.	Poultry Farms	Methods for Disposal/Utilization of manure
1.	Small Poultry Farms	14 Composting
2.	Medium & Large Poultry Farms	15 Composting or Biogas production for disposal/utilization of manure/litter 16 Combination of any of the methods for disposal/utilization of manure/litter
3.	Poultry Farms in Cluster	16 Common facilities for Biogas production or Composting or their combination

- Land application of manure to the nutritional requirements of soil and crop shall be balanced.
- The litter / manure storage facilities shall be minimum 2 m above the water table and of adequate size based on type and number of birds handled. Its base should be constructed with stone slabs or concrete or impermeable compacted clay.
- Manure shall be protected from run off water and cover it to avoid dust and odours in storage pits. The dry manure dump shall be covered with permanent roof or with plastic / similar material to prevent air emissions and the precipitation falling on it.
- Mortalities on farm by proper animal care and disease prevention program shall be reduced.
- Proper facilities (Burial Pit/Composting/Incineration) shall be provided for Collection, storage, transport and disposal of dead birds
- Domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.) shall be disposed as per provisions of "Solid Waste Management Rules, 2016".

Composting *of Manure*:

- Proper mixing the waste with a carbon rich material (e.g., paddy straw / husk, wood shavings) should be done in the pits. Carbon to nitrogen ratios of 20-25:1 is usually recommended. Pure manure can also be composted following the procedure and monitoring all parameters. The composting facilities may be designed through expert institutions in the field as per the size of poultry farms.
- Periodic stirring of compost material should be done for its proper mixing.
- Moisture levels should be maintained between 35 to 50%.
- Temperature monitoring should be done to determine composting conditions.

(ii) Hatchery Waste

- Efforts shall be made in converting the shells to animal feed to supply as a source of calcium, especially for poultry feeds.
- Extrusion with soya bean meal can be used to make a shell/hatchery meal.
- Un-hatched eggs shall be disposed of by composting or rendering.

(iii) Dead Birds Disposal

- The dead birds arising from day to day farm activity shall be separated from other live birds promptly and stored in closed containers and disposed off within 24 hours by following any of the disposal methods.

A) Burial Method

- The dead birds arising from day to day farm activity should be separated from other live birds promptly and should be stored in closed containers \ disposed off within 24 hours
- The dead bird burial pit shall be of minimum 3 to 4 m in depth and 0.8 to 1.2 m diameter and this size may vary as per the capacity of poultry farm and shall be located above minimum 3 m from the ground water table.
- The dead bird burial pit shall be provided with a vermin/fly proof cover made up of wooden / metal / concrete having a central operable lid of proper size for day to day dropping of carcasses.
- Carcasses shall be covered by a thin layer of soil (at least 40 cm deep) along with calcium hydroxide.
- When the pit is full, a compacted soil cover of 0.5 m shall be provided with the top of the covered soil well above the ground level.
- The distance between any two burial pits should not be less than 1 m.

B) Composting

- The composting facility shall not be located within 300 m from the nearest dwelling and 100 m from any well or water course.
- The capacity of the composting facility shall be sufficient to handle the average mortalities on the farm.
- The roof of the composting facility shall be permanent with concrete bottom.
- The composting facility shall be secured with link mesh all around raised to a height of 1.5 m above the ground level to avoid the predation by straw dogs etc.
- A proper mixture of smaller and larger particle sizes to obtain an optimum air exchange within the mixture and build-up of temperature.
- Moisture content of the composting pile shall be approximately 60%. More than this may result in odour problems and less than this will reduce the efficiency of the composting process.
- Carbon and nitrogen are vital nutrients for the growth and reproduction of bacteria and fungi. The carbon-to-nitrogen ratio shall be in the range of 20:1 and 25:1 for proper composting. This is obtained by carefully balancing the dead bird and carbon sources.
- The optimum temperature for composting is 54 to 66oC which pasteurizes the compost. If temperature falls below 49oC after a week or so, the material should be moved to the secondary stage unit. To facilitate the easy transfer of the first stage material to the secondary stage, the proper designing of the primary stage (first stage) facility is desirable as illustrated in figure 5.5.

Failure to do so will result into poor compost. The temperature in the secondary stage unit will begin to raise as beneficial bacterial activity begins and will peak in 5 to 10 days.

3. Waste water Management

- The waste water generated from the cleaning operations (after each batch removal) shall be collected in appropriate holding tank and put to use in the green belt. Efforts may be made for dry cleaning of the sheds with use of disinfectant so as to avoid use of water.
- Water use and spills from drinking devices shall be reduced by preventing overflow or leakages and using calibrated, well-maintained self-watering devices;
- Improve drainage, reduce standing water and water ditches to control mosquitoes and flies
- Use of pressure pumps, hot water or steam in cleaning activities instead of cold water and plain water scrubs may be encouraged to improve sanitation and reduce the quantities of wash water.

4. Other issues

- Control of Flies: Proper treatment and disposal of manure, ventilation of sheds, control of temperature, good sanitation, swift repairs of leaks, avoidance of feed spills, prompt removal of broken eggs and dead birds shall be ensured for control of flies in the poultry farms. The farm should have provisions of wire nettings, traps, fly-repellents, insecticides etc.
- Control of Rodents: Methods for the control of rodents may include: i) Exclusion ii) Trapping Glue boards iii) Tracking powder iv) rodent proof doors and windows to eliminate rodents/pest infestation.
- As per Bureau of Indian Standards 1374: 2007, on poultry feed specifies that the use of antibiotic growth promoters is not recommended in poultry feed, hence use of antibiotics should not be mixed with feed or administered for non-therapeutic purposes without prescription for diseased birds. Regulation for use of antibiotics shall be regulated as per the advisory/directions issued by Department of Animal Husbandry, Dairying and Fisheries and Ministry of Health and the Drug Controller General of India.

5. Siting Criteria

New Poultry Farms (Set up after issuance of Guidelines) should preferably be established

- 500 m from residential zone in order to avoid nuisance caused due to odour& flies
- 100 m from major water course like River, Lakes, canals and drinking water source like wells, summer storage tanks, in order to avoid contamination due to leakages/spillages, if any.
- 100 m from national Highway (NH) and 50 m from State Highway (SH)in order to avoid nuisance caused due to odour& flies.

- 10-15 m from rural roads/internal roads/village pagdandis
- The Poultry sheds should not be located within 10 m from farm boundary for cross ventilation and odour dispersion

6. Regulatory/ Monitoring Mechanism for Poultry Farms

- SPCBs/PCCs shall upload Environmental Guidelines on their website.
- Guidelines shall be applicable to all the category of Poultry Farms.
- Poultry Farms handling birds above 25,000 at single location will have to obtain consent to establish (CTE) and consent for operate (CTO) under the Water Act, 1974 & Air Act 1981 from State Pollution Control Board/Pollution Control Committee.
- As per the directions of Hon'ble NGT dated 10.12.2021 (O.A. No. 320/2021: Gauri Maulekhi Vs. Union of India & Ors, poultry farms handling above 5,000 birds at single location shall also obtain consent to establish (CTE) and consent for operate (CTO) under the Water Act, 1974 & Air Act 1981 from State Pollution Control Board/Pollution Control Committee w.e.f. 01.01.2023
- The Poultry Farms are categorized under "Green" Category, therefore validity of consent will be 15 yrs.
- Animal Husbandry Department of the State/Districts to assist the poultry farms for implementation of Guidelines.

8.12.12 Guidelines for Individual Establishments and the Area/Cluster of Restaurants/Hotels/Motels/Banquets *(Source: CPCB report as per Hon'ble NGT order dated 19.09.2019 in OA No. 400/2017)*

Mechanism/Guidelines/Mitigation

The mechanisms and options for control of pollution and enforcement of environmental laws with particular focus on the common environmental issues symptomatic to such establishments are outlined below.

Water Pollution

(i) Effluent Treatment Plant

a). The units shall provide effluent/sewage treatment plant. Entire waste water generated from kitchen, laundry and domestic sewage should be treated in ETP.

b). EP Rules specify effluent discharge norms for (A) Eateries/ restaurants along roadside having minimum seating capacity of 36 numbers & (B) Hotels. Details of same are as given below:

A). Eateries/ restaurants along roadside having minimum seating capacity of 36 numbers.

A restaurant with minimum seating capacity of 36 shall install ETP and treated effluent water from ETP installed should meet existing Environmental Standard notified by the MoEF&CC vide GSR 794(E) dated 04.11.2009 and reproduced as under. The standard may be made stringent by concerned SPCB/PCCS.

Parameters	Effluent Standards (Limiting concentration in mg/l, except pH)	
	Inland surface water	On land for irrigation

pH	5.5-9.0	5.5-9.0
BOD3days, 27°C	100	100
Total Suspended Solids	100	100
Oil & Grease	10	10

B). Effluent discharge norms for hotels

Hotel type	Parameters	Effluent Standards (Limiting concentration in mg/l, except pH)	
		Inland surface water	On land for irrigation
Hotel with at least 20 bedrooms	pH	5.5-9.0	5.5-9.0
	BOD 3 days, 27°C	30	100
	Total Suspended Solids	50	100
	Oil & Grease	10	10
	Phosphate as P	1.0	-
Hotel with less than20 bed rooms or a Banquet hall with minimum floor area of 100 m2 or a restaurant with minimum seating capacity of 36	pH	5.5-9.0	5.5-9.0
	BOD 3 days, 27°C	100	100
	Total Suspended Solids	100	100
	Oil & Grease	10	10

c). Effluent from the unit shall comply with the above norms as applicable

d). The units shall provide effluent treatment plant as proposed and maximize reuse of treated sewage in toilet flushing, floor washing, gardening and other non-potable purposes.

e). The unit shall install water meters to record the daily consumption of water and separate electromagnetic flow meter at the inlet and outlet of effluent treatment plant to record actual flows on a daily basis.

f). The unit shall install separate energy meters also to record the daily energy consumption of the effluent treatment plant on daily basis prior to completion of the project.

g). The treated water has to be discharged as per conditions specified by the SPCBs/PCCs

h). The quality of treated sewage and trade effluent should be analyzed regularly once in a month and report shall be furnished to SPCB/PCC. Moreover, SPCBs/PCCs are required to carry out surprise cross-checks.

i). In case of bigger halls/star hotels with the capacity of hosting more than 500 people/guests, the halls shall install water meters to record daily consumption of water along with separate electromagnetic flow meters at the inlet and outlet of effluent treatment plants to record actual flows during events. The units having capacity of hosting less than 500 people/guests are required to install water meters only for recording consumption.

j). Provisions/arrangements for utilizing treated wastewater for gardening and

non- potable uses need to be done in case of all such units (smaller & bigger).

k). The local authorities to ensure that necessary arrangement for collection and treatment of waste water generated from these units

(ii) Ground water extraction

a). Necessary permissions should be obtained from concerned Authorities for extraction of groundwater.

b). SPCB/ PCC to take action against units for unauthorized or illegal ground water extraction without proper permissions from concerned Authorities.

c). Groundwater extraction pits/points should have required meters for recording flow/quantity of water extraction and the same shall be within the limit/quantity approved by the concerned Authority.

(iii) Water Conservation Measures

a). Maximize reuse of treated water for non-potable purpose/gardening, etc.

b). All the units shall furnish quarterly reports to the concerned SPCBs/PCCs showing quantity of water consumption (month-wise) and quality of treated water.

c). Rain water harvesting systems must be installed by all units in consultation with the concerned Agency. Bigger hotels/halls need to make arrangements for both roof-top and ground-based harvesting of rain water. In case roof-top harvesting is not possible/viable, the smaller halls/venues having hosting capacity of less than 500 persons/guests should then go for ground-based/artificial storage systems, storage tanks and other similar arrangements.

d). Along with bigger hotels, all marriage halls/venues need to use efficient fixtures such as low flow shower heads, bath, sink faucet aerators, low flow toilets etc.

2. Air Pollution

(i) Gensets and Fuel

a). Units to use approved fuel (e.g. LPG, PNG, Charcoal for tandoor, boiler, etc.). Preference should be given to cleaner fuels in such cases

b). The units shall properly channelize the fugitive emissions including emissions from cooking & kitchen operations by providing proper ducting / hood arrangement and proper exhaust system and emissions

c). Only Gensets having necessary Type Approval for emissions/ Noise level from the concerned agencies to be installed at the premises

d). The unit shall provide stack for the emissions from the generator as well as acoustic enclosure for Gensets as per the specified norms

(ii) Energy Conservation Measures

a). Application of solar energy in various areas such as illumination, water heating should be promoted

b). Use of inverters instead of Diesel Generator Sets to be encouraged

c). Use of LED bulbs should be adopted

(iii) Consent to establish and Consent to operate

a). As per the Water Act 1974 and Air Act 1981units obtain Consent to Establish (NOC) before commencement of the construction activities and Consent to Operate (CTO) before starting operation of the Units (individual establishments and the area/ cluster of restaurants/ hotels/ motels/ banquets etc.) from the concerned SPCB/PCC.

b). Further, the SPCB/PCC to direct the defaulting units for paying environmental compensation for damaging the environment considering their operations despite being non-compliant.

c). The SPCB/PCC may workout and assess the amount of environmental compensation in-line with the mechanism for charging environmental compensation as evolved by the CPCB.

(iv) Solid Waste Management

a). The units shall properly handle, manage and dispose the solid waste generated and comply with the provisions of the Solid Waste Management Rules, 2016.

b). As per clause 3 (8) of the Solid Waste Management Rules, 2016, marriage halls generating waste of more than 100 kg/day fall under the category of 'Bulk Waste Generator' and should ensure compliance with the provisions of the Rules,and in specific the following::

- 13(1)(d)Store horticulture waste and garden waste generated from such premises separately in within the own premises and
- 13 (2)No waste generator shall throw, burn or burry the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.
- 13 (8)All hotels and restaurants shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

(c) The segregated food waste from the solid waste generated in the unit shall be treated in organic waste converter and the treated compost shall be used as manure.

(d) The unit shall ensure that the hazardous waste (used oil, used batteries) generated in the premises are collected property and disposed only to authorized recyclers registered with MoEF&CC/CPCB and valid operating license of SPCB/PCC.

(e) The unit shall minimize use of disposable plastic on its premises and ensure its disposal through recyclers registered with SPCB/PCC for recycling plastic waste

(f) The concerned local authorities shall make necessary arrangement for collection and processing of waste from these units in accordance with

provisions of SWM Rules

4. Noise pollution

a). The unit shall obtain permission from designated authorities as per provisions of Noise Pollution (Regulation & Control) Rules, 2000.
b). The unit shall comply with provision of Noise Rules specifically Rule 5 and Rule 6 of the Noise Rules.
c). DJ Set, if used should be operated within the premises till 10 PMonly.No loudspeakers and bands should be permitted beyond 10 PM.
d). D.G. sets shall comply with the provisions of Noise Pollutioncontrol limits.
e). Use of only green crackers to be permitted upto 10 PM as perHon'ble Supreme Court Guidelines.

5. Infrastructure issues& Other Requirements

(a) Infrastructure requirement

The units come up in a cluster leading to severe stress on basic infrastructure including traffic management, parking as well as pose a fire hazard etc. Accordingly the following to be complied with:

(i) Parking facilities

- Adequate infrastructure arrangements may be made w.r.t parkingin the area by Local Authorities.The parking capacity to be in line with the hosting capacity of such units.
- In areas where public parking is not commonly possible, banqueting area may be restricted and provision for parking to be made within the units' premises. Alternatively, the units may outsource parking to authorized parking lots subject to satisfaction of traffic authorities. Valet parking facilities may be provided in such areas

(ii) Traffic movement

- The local authorities to ensure adequate space for movement of vehicles
- Since it has been observed that due to the use of horse drawn carriages during Barat Processions the traffic crawls due to narrowing of the Right of Way(ROW), to ban the use of such carriages should be banned in areas not having adequate space for movement of vehicles
- The use of DG sets kept on trucks/trollies during the Barat Processions also causes air and noise pollution, apart from creating traffic congestion; hence, the use of DG sets during such processions needs to be prohibited in not having adequate space for movement of vehicles.
- Prior permission for such processions to be taken from local authorities

(iii) Fire safety

The units to make adequate arrangements for fire safety and obtain fire safety certificate from the respective State Government agencies

The units to take permission from the local authorities for the hosting capacity of such units ; which is to be commensurate with the facilities provided within the unit as well as the common infrastructure facilities of the area. Local Authorities to ensure adequacy of infrastructure facilities. for existing units before granting necessary permissions. In case it is not possible to provide these facilities required for existing units, such units may be shifted out of the area. Fresh approval to new units to be considered based on the adequacy of these facilities

a). Building plans to be approved by concerned authorities. Local Authorities to ensure that these units are operating in compliance with approved building plans and without any parking & traffic issues.

b). Bigger units/star hotels shall develop green belt on its premises and shall furnish the green belt development plan while applying for consent to operate

5. Conclusion

a). Individual units to provide necessary facilities for control of air, water & noise pollution, solid waste management, etc as enumerated in the previous sections.

b). Individual units to take necessary approvals from the concerned authorities as listed below:

- Consent to Establish under Air/Water Act
- Consent to operate under Air/Water Act
- Permission for concerned Authorities in accordance with provisions of Noise Rules
- Permission for Ground Water Extraction from
- concerned Authorities , if required
- Building Plan Approval from concerned Authorities
- Fire Safety Certificate/NoC from concerned Authorities

c). Local Authorities to ensure provision of adequate common facilities for water pollution, solid waste management, parking etc

d). The State Board to have robust monitoring mechanism to evaluate compliance with norms of such units atleast twice a year. As per NGT Directions, SPCBs/PCCs are required to submit compliance report to CPCB as per the enclosed format (Annexure I)

8.12.13 Guidelines for Utilisation of Treated Effluent in Irrigation *(Source: Guidelines issued by CPCB in September 2019 as per the Hon'ble NGT order dated 24.05.2019 in O.A. No. 348/2017)*

(i). The industry should engage an agricultural scientist or tie-up with an agricultural university or institute for advice on the utilization or the rate of application of the effluent for irrigation considering the agro-climatic conditions.

(ii). As seasons and the sowing periods of the crops put restrictions on the utilization of effluent for irrigation, the industry should prepare a comprehensive Irrigation Management Plan (IMP), which should include the following, in consultation with the agricultural scientist or agriculture university / institute and submit to SPCBs / PCCs which should verify the same while issuing Consent to the industry:

a. Areas to be covered under irrigation
b. Survey / plot (khasra) numbers of land and their area covered in the scheme.
c. Written agreement with the farmers to bring their land under the scheme.
d. The quantity of effluent to be used in different periods of the year and crop-wise.
e. The treated effluent distribution system and arrangement for low /no

demand period.

f. Agronomic plan for effective utilization land.

(iii) The treated effluent should meet the norms prescribed for irrigation under Environment (Protection) Rules, 1986 / Consent. The effluent should also conform to Total Dissolved Solid (TDS) - 2100 mg/I and Sodium Adsorption Ratio (SAR) - preferably less than 18 but not more than 26, depending on soil/ crop type, besides meeting any other parameters suggested by agricultural scientist or agricultural university / institute in the IMP.

(iv) Meeting the prescribed norms shall not be the only criteria for use of treated waste water in irrigation, the requirement of water for irrigation will also be a limiting condition and this depends upon various factors, as follow:

a. **Crop:** This is the main subject determining the water requirement, such as, paddy crops (in general) need more water than trees.

b. **Climate:** In tropical and subtropical climate especially in arid regions, irrigation frequency is higher. However, in slightly moist conditions the frequency decreases.

c. **Irrigation Type:** There are various irrigation types, namely, flood irrigation, sprinkler, rain gun, drip irrigation, etc., which influences the water requirement for irrigation.

d. **Soil condition:** The various soil types, such as loam, clay, sandy, clay loam, sandy loam etc., determine the crop types and also alters the irrigation system thus determining the water requirement.

e. **Soil permeability:** The soil permeability, which is also known as water conductivity of the soil, determines the water retention capacity. This determines the cultivable corps, which in turn determines the water requirement for irrigation.

f. **Total Salt Concentration:** Total salt concentration (for all practical purposes, the total dissolved solids) is one of the most important agricultural water quality parameters. The plant growth, crop yield and quality of produce are affected by the total dissolved salts in the irrigation water.

(v). The command area for effluent utilization should be as near as feasible to the industry in order to facilitate easy monitoring and effective control. The industry should construct a distribution network of impervious conduits to cover the irrigated area.

(vi). The industry should construct impervious lined storage tank of minimum 15 days capacity for storage of treated effluent during low / no demand, based on the Irrigation Management Plan.

(vii). The treated effluent should be analysed regularly, say after every 15 days. The effluent samples should be taken at the point from where the effluent is discharged for irrigation.

(viii). The physic-chemical characteristics of the soil under irrigation with treated effluent, should be monitored twice in a year to assess conditions in summer and post monsoon seasons, in order to determine the deterioration of soil quality.

(ix). Similarly, the groundwater quality should also be monitored twice in a year. Samples should be collected from the first water bearing strata from existing hand pumps or by installing the same for sampling purpose only. The sampling points should be uniformly spread in the command area and near effluent storage area.

(x). The industry should carry out the analysis of various prescribed effluent / soil / ground water quality parameters from the NABL / EPA / SPCBs / PCCs recognized / accredited laboratories.

(xi). Reports regarding compliance of effluent quality standards and status of soil and ground water quality shall be submitted to SPCBs / PCCs twice in a year, in first week of January and July.

In case of observation of any deterioration of the soil and groundwater quality parameters in the assessment by agricultural scientist or agricultural university / institute, the application of effluent should be stopped immediately and the industry should inform the SPCB, accordingly. The industry shall be solely responsible for reclaiming the soil and water quality at their cost in the affected area.

8.13 IMPORTANT ORDERS ISSUED THROUGH BOARD PROCEEDINGS (B.Ps.)

1). B.P.No. 58, dated 04.09.2013

The Board approved that the Chairman, TNPCB is generally empowered to authorize jurisdictional DEEs/AEEs to make complaint under Section 19(a) of the Environment (Protection) Act, 1986, and for launching prosecution on behalf of the Board against the occupier of the erring units under Section 19(a) of the Environment (Protection) Act, 1986, (Central Act, 29 of 1986) for violation and punishable under Section 15 of the Environment (Protection) Act, 1986.

2). B.P. No. 10, dated 30.03.2017

The Board approved the proposal of collecting the existing fees (Rs.25,000/- for the Project cost less than Rs. 5 crores, Rs. 70,000/- for the Project cost Rs. 5 crores and above) towards conducting public hearing as per the B.P.No. 31 dated 21.05.1998 and additionally collect the actual advertisement charges incurred.

3). B.P. No. 32, dated 30.07.2018

The Board has issued various guidelines to the Textile & Tannery Units *interalia* the following guidelines w.r.t disposal of chemical sludge.

1. Textile Bleaching & Dyeing units having IETPs and CETPs shall dispose the chemical sludge to the Cement industries for co-processing with valid authorization from TNPCB. They should not dispose the waste in the onsite SLF.
2. Tannery units having IETPs and CETPs are permitted to fill the existing on-site landfill facility to a desirable level to achieve a profile so as to cap the same. (i.e) They are permitted to fill the balance portion of SLF till it achieves a profile so as to carryout the capping and then switch over to dispose the sludge to cement industry for co-processing. It should be done within one year

or till the profile to carryout the capping is achieved whichever is earlier.

3. In case of no off take by the Cement Industries, the units may be allowed to dispose the sludge in common TSDF at Gummidipoondi & Virudhunagar.
4. In future, onsite SLF shall be permitted by TNPCB for Tanneries and Textile bleaching and dyeing industries only after a detailed study on a case to case basis.

4). B.P. No. 44, dated 18.12.2018

The Board has issued the following guidelines for transfer of shares among the CETP members, clarification on applicability of G.O relaxation and Environmental Clearance while granting consent for increase in production within the consented trade effluent quantity to the Textile dyeing and Tannery units.

Textile bleaching & Dyeing, Tannery CETP member units

1. Name transfer, partition of the unit will be allowed subject to a condition that the production and effluent share shall be within the permitted capacity at the existing location.
2. If the unit has become sick or any other reason, desire to sell its shares to other units, who are also members in the CETPs, it will be allowed. The buyer unit shall get fresh consent of the Board for increase in production and effluent generation by furnishing a letter of acceptance from the CETP. In case their location attracts G.O 213 E&F Dept 30.03.1989 and G.O. 127 E&F Dept dated 08.05.1998, they shall not be insisted for G.O relaxation. Similarly, the buyer (in case of Tannery) shall not be insisted to furnish environmental clearance for the above increase in production and effluent generation.
3. If a sick unit is purchased by a new proponent (not an existing member in CETP), it will be permitted. In such case, he should provide membership acceptance letter from CETP. He should operate the plant only to the permitted CETP share capacity.
4. If a member unit has to change its location for some reasons within in the vicinity of CETP and continue to be a member in the CETP, it will be permitted. They should get consent for the new location. They shall not be insisted for relaxation from G.O 213 E&F Dept and G.O 127 E&F Dept dated 08.05.1998. In case of Tannery unit, it shall not be insisted to furnish environmental clearance for issue of consent.
5. While permitting the transfer of effluent share quantity to other member units, shifting of the member unit to a new location, the CETP should ensure the conveying pipeline and pumping capacities are adequate to take the additional load.
6. If a Textile CETP member unit who is carrying out bleaching activity desires to go for dyeing activity, it will be permitted with a condition that they should maintain effluent generation within the permitted share quantity and furnish no objection letter from the CETP Company. These units will not be insisted to get G.O relaxation since there is no increase in effluent quantity.
7. It is to be ensured by the CETP Company and all the member units that at

any point of time, the overall quantity of effluent received by the CETP shall not exceed the original DPR quantity for which the consent to operate has been issued by TNPCB. In the case of CETP's overall treatment capacity has to be increased, they should obtain prior environmental clearance under the EIA Notification, 2006.

8. The above provisions are facilitated by the Board only for the long term sustainability of the CETP. Therefore at no point of time, the member units shall be permitted to withdraw the membership from the CETP and go for individual ETP and stake claim for the above norms.

All Textile Dyeing Units (including CETP member units & IETP units)

9. The units applying for fresh consent for increase in production in view of installing modern machineries which consumes less water (less liquor ratio) and without increase in effluent generation shall not be insisted for G.O relaxation.

5). B.P. No. 46, dated 18.12.2018

The Board has issued the following orders in connection with disposal of bio-medical waste and establishment of common biomedical waste treatment facility.

The Biomedical waste generated from health care facilities situated anywhere in Tamil Nadu can be taken for treatment and disposal within 48 hours by a common biomedical waste treatment facility situated anywhere in Tamil Nadu and there is no restriction for establishment of another common biomedical waste treatment facility within a radial distance of 75 Kms.

6). B.P. No. 61, Dated 26.11.2019

The Board resolved that once the Consent to Operate (CTO) is issued to the National Highways Authority of India (NHAI) and the road is opened to traffic, the CTO issued under Sl. No. 2052 (Category Type code) will no longer apply and consequently, the respective Toll Ways (NHAI/Toll Contractor) shall be required to apply for fresh CTO under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981. The Gross Fixed Assests (GFA) for the above consents shall include the cost of facilities like rest rooms, drinking water, toilet, eateries, DG sets, tree plantations for the length of highway which comes under the control (Toll to Toll). The Toll Ways shall get the consent to operate and there after get the renewal of consent periodically.

7). B.P. No. 63, dated 26.11.2019

The Board has extended the time granted in B.P.No.31 dated 30.07.2018, B.P.No.01 dated: 22.01.2019 and B.P.No.13 dated 22.04.2019to switch over to Mechanical Evaporator followed by Agitated Thin Film Dryer for disposal of the final RO rejects on or before 31.03.2020 by all the IETPs/CETPs Textile Processing units (Bleaching, Dyeing and Printing) and the Tannery units. The existing solar evaporation pans shall be dismantled completely after commissioning of the Mechanical Evaporator followed by Agitated Thin Film Dryer. The Board has also resolved that no more further extension will be considered beyond 31.03.2020.

8). B.P. No. 65, dated 27.11.2019

The Board has issued the following orders in connection with the Residential Construction Projects.

Once the project is completed and handed over to the Owners/Residential Welfare Association, the CTO granted under Sl.No. 1063 and 2021 is no longer applicable since the project is already completed, and hence, they (Owner/Association) shall be required to apply for fresh consent to operate for the common utilities which includes Sewage Treatment Plant, DG sets, Organic Waste Convertor etc., under the Water (P&CP)Act, 1974 and the Air(P&CP)Act, 1981. Since the O&M cost, payment of consent fee etc., are to be borne by the residents, the Board resolved that the direct CTO shall be issued for a period of five years on receipt of single fee each under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981 for first time. Thereafter, they should apply for renewal of consent once in five years along with the consent fees.

9). B.P. No. 01, dated 13.01.2020

1. The Green category industries as per B.P. No.6 dated 02.08.2016 need not obtain Consent to Establish (CTE) if the industry located in Industrial use zone/Industrial Estate as classified by the DTCP/CMDA/LPA. They will have to get Consent to Operate (CTO) from the TNPCB before commencement of the production.
2. After availing the above concession under Green category, subsequent change of categories to Orange / Red will not be permitted.
3. The Green category industries shall remit the Consent fees for CTE along with CTO fee while applying for CTO-direct under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981.

10). B.P. No. 14, dated 18.02.2020

The Board has delegated the powers to the District Environmental Engineers for issue of Registration Certificates under the Batteries (Management and Handling) Amendment Rules, 2010 to the lead acid battery dealers.

11). B.P. No. 15, dated 07.05.2021

The Board has approved that

1. The components for the calculation of the consent fees under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981 shall continue to be the Gross Fixed Assets value as in practice without any change.
2. All the units that have not applied so far but are operating without Consent to Operate (CTO) shall apply for consents under the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981 and remit the consent fee as follows:

   Lower of, 6 times the consent fee (5 arrear + 1 current) as per the GFA on the date of application **(OR)** the consent fee applicable from the date of commissioning (as ascertained by EB Connection or VAT registration or GST registration date or Building Plan approval date). If no evidence for the date of commissioning is produced then a flat rate of 6 times fee (5 arrear + 1 current) shall be payable.

12). B.P. No. 3, dated 13.04.2022

The Board has delegated the powers to DLCCC to decide on issue of CTE/CTO for mining of minor minerals under B2 & B1 Category projects (From 0 – 25 ha . including cluster area under R/S category) which are granted with environmental clearance by the SEIAA.

13). B.P. No. 4, dated 18.04.2022

The Board has approved to issue onetime 'Consent to Operate-Direct' to the mining of minor mineral projects with validity period on par with the Environmental Clearance issued by the competent authority fulfilling the following norms & conditions:-

1. The Minor Mineral Mining projects that have obtained Environmental Clearance may be permitted to apply for 'Consent to Operate-Direct' by paying consent fees for the entire validity period of the mining lease granted. If the unit satisfies all the Environmental and Pollution control norms, CTO-Direct will be granted for a period on par with the Environmental Clearance / mining lease deed validity. This will ensure spread of mining over the entire lease period for sustainable mining with least pollution impacts and will also avoid revenue loss to the Board and will also have valid consent renewal till the end of mining lease.
2. However on expiry of the CTO-Direct, if the unit still intends to continue the mining activity/operation, the unit shall apply for CTO-Direct as fresh along with a fresh Environmental Clearance and fresh mining lease issued by the competent authorities.
3. This will ensure that the unit will not carry out the mining activity without valid consent to operate of the Board and avoid revenue loss to the Board.

8.14 SUPREME COURT DIRECTION FOR AQUACULTURE

Restriction on Aquaculture Farms by Aquaculture Authority Constituted by Government of India as per Supreme Court Direction:

(1) No shrimp culture pond can be set up in the Coastal Regulation Zone as defined in CRZ Notification, 2011 which is applicable to all seas, bays, estuaries, creek, river and back water. This direction shall not apply to traditional and improved traditional type of technologies practiced in low lying areas.

(2) Agriculture lands, salt pans, mangroves, wet lands, forest lands, land for village common purpose shall not be used / converted for construction of shrimp culture ponds.

(3) No aquaculture pond shall be constructed/set up within 1000 metres of Pulicat lake.

(4) Farm outside the CRZ notification are not affected by the Supreme Court order.

Guidelines for ETPs (As per the decision taken by Aquaculture Authority)

Farms upto 5 Hectares	No ETP required
Between 5 – 10 Hectares	Waste Stabilization Pond (WSP) (10% area to be earmarked for WSP)
Between 10 - 40 Hectares	Environmental Monitoring and Management Plan
Above 40 hectares	Environment Impact Assessment.

Fresh water Aquaculture is not covered by Aquaculture Authority

1. Hatcheries fall within the purview of permitted activity under CRZ Notification, 1991. Hence no approval is required from the Aquaculture Authority.
2. Improved technology to be adopted as per the prescribed norms with regard to productivity level. (1000 to 1500Kg/Hectare/crop) and the stocking density (4 to 6 Nos./sq. m) and application of inorganic fertilizer like urea, phosphate etc.

CHAPTER 9

MISCELLANEOUS

9.1 SCHEDULE OF SAMPLING AND ANALYSIS CHARGES FOR ENVIRONMENTAL SAMPLES IN TNPCB LABORATORIES

Source:

***1**. G.O (2D).No.76, Environment, Climate Change and Forest (EC – 4) Department Dated: 21.08.2024.,*

***2**. G.O (2D).No.77, Environment, Climate Change and Forest (EC – 1) Department Dated: 21.08.2024.)*

A. Sampling Charges

I. Sampling charges for Ambient Air/ Fugitive emission samples

Sl. No.	Type of Sampling	Charges in Rupees
1.	**Air Monitoring**	
	a) Sampling (upto each 8 hours) for suspended particulate matter and gaseous pollutants.	3500
	b) Sampling (24 hours) for suspended particulate matter and gaseous pollutants.	10500
	c) Sampling of Volatile Organic Compounds (VOCs)/ Benzene Toluene Xylene (BTX)	4800
	d) Sampling of Polycyclic Aromatic Hydrocarbon (PAHs)	8600
	e) Sampling (24 hrs using PUF HVS) of Ambient Air for Dioxin-Furan (17 congeners of PCDDs-PCDFs))	20500

Note:

i. Transportation charges will be separate as per actual basis.

ii. Sample analysis charges of respective parameters are separate as per list.

II Source Emission Monitoring/ sampling charges

Sl. No.	Type of Sampling	Charges in Rupees
1	**Source Emission Monitoring**	
(a)	Sampling / measurement of velocity, flow rate, temperature and molecular weight of Flue Gas (each specific location/ each sample in duplicate for the mentioned parameter)	13000
(b)	Sampling of SO_2/ NO_2	4800
(c)	Sampling of Volatile Organic Compounds (VOCs)/Benzene Toluene Xylene (BTX)	7200
(d)	Sampling of PAHs	12000
(e)	Sampling of emission from stationary source for Dioxin – Furan (17 congeners of PCDDs – PCDFs) using Manual sampling kit	25000

(f)	Sampling of emission from stationary source for halides and hydrogen fluoride (HCL & HF) using manual sampling kit (Duplicate sample)	10000
(g)	Sampling of emission from stationary sources for TOC using instrumental method	5000

Note:

i. Transportation charges will be separate as per actual basis.

ii. Sample analysis charges of respective parameters are separates as per list.

III Noise Monitoring

Sl.No.	Type of Sampling	Charges in Rupees
1.	First Monitoring (5 stations)	7000
2	Each Subsequent Monitoring within same premises for premises for each station	3500
3.	For 08 hours Continuous Monitoring or more	18000

Note:

i Transportation charges will be separate as per actual basis.

ii Sample analysis charges of respective parameters are separates as per list.

IV Sampling charges for Water & Waste water samples

Sl. No.	Type of Sampling	Charges in Rupees
1	**GRAB SAMPLING**	
	a) Grab sampling/ sample/place	1050
	b) For every additional Grab sampling/same point	500
2	**COMPOSITE SAMPLING**	
	(a) - Composite sampling /source/ place upto 8hours	2000
	- Composite sampling /source/ place upto 16hours	4000
	- Composite sampling /source/ place upto 24hours	5300
	(b). - For every additional composite sampling/same place but different source upto 8 hours.	1050
	(b) For every additional composite sampling/same place but different source upto 16 hours	2200
	(c) For every additional composite sampling/same place but different source upto 24 hours	3000
3	Flow rate measurement/ Source	
	a) Once	850
	b) Every additional	300

Note:

(i) Transportation charges will be separate as per actual basis.

(ii) Sample analysis charges of respective parameters are separate as per list.

V Sampling charges for soil samples

Sl. No.	Type of Sampling	Charges in Rupees
1	Grab sampling/sample place	1150
2	For additional Grab sampling /same place	600

Note:

(i) Transportation charges will be separate as per actual basis.

(ii)Sample analysis charges of respective parameters will be extra as per list.

VI Hazardous Waste Sample collection charges at the premises of Industry/Import site/ Disposal site

Sl. No.	Type of Sampling	Charges in Rupees
1	Integrated sample collection charges	2000

Note:

(i) Sample analysis charges of respective parameters are separate as per list.

(B) Analysis Charges

(1) Analysis charges of Ambient Air/ Fugitive Emission Samples.

Sl. No.	Parameters	Charges in Rupees
1	Ammonia	1450
2	Analysis using dragger (per tube)	950
3	Benzene Toluene Xylene (BTX)	2450
4	Carbon Monoxide	1450
5	Chlorine	1450
6	Fluoride (gaseous)	1450
7	Fluoride (Particulate)	1450
8	Hydrogen chloride	1450
9	Hydrogen sulphide	1450
10	Lead & other metals (per metal)	As mentioned in respective group at clauses 5.0
11	NO_2	1450
12	Ozone	2450
13	Polycyclic Aromatic Hydrocarbon (PAHs)	As mentioned in respective group at clauses 5.0
14	Suspended Particulate Matter (SPM)	1120
15	Particulate Matter ($PM_{2.5}$)	1900
16	Respirable suspended Particulate Matter(PM_{10})	1120
17	Sulphur dioxide	1120

18	Volatile Organics carbon	4750
19	Trace Metals on air filter paper using EDXRF. Aluminum, Antimony, Arsenic, Barium, Bromine, Cadmium, Calcium, Cesium, Chlorine, Chromium, Cobalt, Copper, Gallium, Germanium, Gold, Iodine, Iron, Lanthanum, Lead, Magnesium, Manganese, Molybdenum, Nickel, Palladium, Phosphorous, Potassium, Rubidium, Rutherfordium, Selenium, Silicon, Silver, Sodium, Strontium, Sulphur, Tellurium, Tin, Titanium, Tungsten, Vanadium, Ytterbium and Zinc	6000 Per filter papers
20	Water Extractable ions in Air Particulate Matter using Ion Chromatograph (IC)	
	(i) Processing/ Pretreatment charge per Sample (Filter Paper)	560
	(ii) Cations (Na^+,NH_4^+ K^+, Ca^{+2}& Mg^{+2}) and Anions (F^-, Br^-,Cl^-,NO_3^-,NO_2^-,SO_4^{-2} & PO_4^{-3})	3500(for 12 ions)
21	Organic and Elemental Carbon (OC/EC) on quartz filter paper	4800
22	Sample processing and analysis for Dioxin-Furan (PCDDs PCDFs 17 congeners) (Isotope Dilution method using GC-HRMS)	75000

(2) Analysis charges for Source Emission Parameters

Sl. No	Parameters	Charges in Rupees
1	Acid Mist	1450
2	Ammonia	1450
3	Benzene Toluene Xylene (BTX)	3700
4	Carbon Monoxide	1450
5	Chlorine	1450
6	Fluoride (gaseous)	1450
7	Fluoride (Particulate)	1450
8	Hydrogen Chloride	1450
9	Hydrogen Sulphide	1450
10	Lead & other metals (per metal)	As mentioned in respective group at clause 5.0
11	Oxides of Nitrogen	1450
12	Oxygen	1200
3	Polycyclic Aromatic Hydrocarbon (PAHs) (Particulate)	As mentioned in respective group at clause

		5.0
14	Sulphur Dioxide	1450
15	Suspended Particulate Matter	1450
16	Volatile Organic compounds	7250
17	Processing and analysis of halides and hydrogen fluoride (HCL & HF) IC method	1575
18	Analysis of carbon di sulfide	1120

(3) Ambient Air Quality Monitoring using on-line monitoring instruments by Mobile Van.

Sl. No	Parameters	Charges in Rupees
1	PM_{10}, $PM_{2.5}$, SO_2, NO_x, SPM, CO, along with Meteorological data. viz Wind speed, Temperature, Humidity, Wind direction	Rs. 6200/hour (minimum charges Rs. 15000/-) + Rs. 50/Km run of the van for 24 hours monitoring.

(4) Auto Exhaust Monitoring – One time checking of vehicular exhaust.

Sl. No	Parameters	Charges in Rupees
1	**Standard of Smoke or the levels of other pollutants or both**	
	a) Motor cycle or Light Motor Vehicle (Three Wheelers)	30
	b) For Light Motor Vehicle (Four Wheelers)	50
	c) Medium & Heavy vehicle (Both Passenger and Goods vehicle)	100
1	Carbon Monoxide %	As per rate notified by Transport Department
2	Hydrocarbon, PPM	
3	Smoke Density, HSU	

(5) AQC Participation Fees: To be charged by TNPCB from respective SPCBs/PCCs or Recognized Laboratory for Analytical Quality Control exercise (AQC) samples.

Sl. No	Parameters	Charges in Rupees
1	**Laboratories of Govt. / Semi Govt./Public Sector Undertaken/Autonomous bodies.**	**20000**
2	**Private Sector Laboratories.**	**30000**

Note: The existing charges as per G.O. M.S. No. 674 Home (Transport V) Dept. Dated: 3.6.1998. The Revision of rates shall be applicable as and when amended by the Government of Tamil Nadu.

(6) Analysis charges of Water and Waste Water Samples

Sl. No	Parameters	Charges in Rupees
i)	**Physical Parameters**	
1	Conductivity	150
2	Odour	150
3	Sludge Volume Index (SVI)	500
4	Solids (Dissolved)	250
5	Solids (Fixed)	350
6	Solids (Volatile)	350
7	Suspended Solids	250
8	Temperature	150
9	Total Solids	250
10	Turbidity	150
11	Velocity of flow (Current meter)	500
12	Velocity of flow (Others)	1200
ii)	**Chemical Parameters**	
	Inorganic	
1	Acidity	250
2	Alkalinity	250
3	Ammoniacal Nitrogen	500
4	Bi Carbonates	250
5	Bio-Chemical Oxygen Demand (BOD)	1500
6	Bromide	250
7	Calcium (Titrimetric)	250
8	Carbon di oxide	250
9	Carbonates	250
10	Chloride	250
11	Chlorine Demand	500
12	Chlorine Residual	250
13	Chemical Oxygen Demand (COD)	850
14	Cyanide	850
15	Detergents	500
16	Dissolved Oxygen	250
17	Fluoride	500
18	H-acid	850
19	Hardness (Calcium)	250
20	Hardness (Total)	250
21	Iodide	250
22	Nitrate Nitrogen	500
23	Nitrite Nitrogen	500
24	Percent Sodium	1500
25	Permanganate value	500
26	pH	50

27	Phosphate (Ortho)	500
28	Phosphate (Total)	850
29	Salinity	250
30	Sodium absorption ratio (SAR)	1500
31	Settleable solids	250
32	Silica	500
33	Sulphate	350
34	Sulphide	500
35	Total Kjeldahl Nitrogen	850
36	Urea Nitrogen	850
37	Cations (Na^+,$NH4^+$,K^+,Ca^{+2}& Mg^{+2}) and Anions (F^-, Br^-,Cl^-,NO_3^-,NO_2^-,SO_4^{--}& PO_4^{---}) in surface & ground water samples using Ion Chromatograph	3500 (for 12 ions)
iii)	**Metal Analysis**	
	Processing / pre treatment charges per samples	1450
1	Aluminium	530
2	Antimony	530
3	Arsenic	530
4	Barium	530
5	Beryllium	530
6	Boron	530
7	Cadmium	530
8	Chromium Hexavalent	500
9	Chromium Total	530
10	Cobalt	530
11	Copper	530
12	Iron (Total)	530
13	Lead	530
14	Magnesium	500
15	Manganese	530
16	Mercury (processing and Analysis)	2200
17	Molybdenum	530
18	Nickel	530
19	Potassium	500
20	Selenium	530
21	Silver	650
22	Sodium	500
23	Strontium	530
24	Tin	530
25	Vanadium	530
26	Zinc	530
	Organics	
iv)	**Organo Chlorine Pesticides (OCPs)**	
	Processing/Pretreatment Charge per Sample	1800

1	Aldrin	700
2	Dicofol	700
3	Dieldrin	700
4	Endosulfan-I	700
5	Endosulfan-II	700
6	Endosulfan sulfate	700
7	Heptachlor	700
8	Hexachlorobenzene (HCB)	700
9	Methoxy chlor	700
10	o,p-DDT	700
11	p,p'-DDD	700
12	p,p'-DDE	700
13	p,p'-DDT	700
14	Alpha-HCH	700
15	Beta-HCH	700
16	Gamma-HCH	700
17	Delta-HCH	700
v)	**Organo Phosphorous Pesticides (OPPs)**	
	Processing/Pretreatment Charge per sample	1800
18	Chlorpyriphos	700
19	Dimethoate	700
20	Ethion	700
21	Malathion	700
22	Monocrotophos	700
23	Parathion-methyl	700
24	Phorate	700
25	Phosphamidon	700
26	Profenophos	700
27	Quinalphos	700
28	Anilophos	700
vi)	**Synthetic Pyrethroids (SPs)**	
	Processing/Pretreatment charge per samples	1800
29	Deltamethrin	700
30	Fenpropethrin	700
31	Fenvalerate	700
32	Alpha-cypermethrin	700
33	Bet-cyflutrin	700
34	Gamma-cyhalothrin	700
Vii)	**Herbicides**	
	Processing/Pretreatment charge per samples	1800

35	Alachlor	700
36	Butachlor	700
37	Fluchloralin	700
38	Pendimethalin	700
39	2,4-D	700
40	**Atrazine**	700
viii)	**Polycyclic Aromatic Hydro carbon (PAH)**	
	Processing/Pretreatment charge per samples	1800
41	Acenaphthene	700
42	Acenaphthylene	700
43	Anthracene	700
44	Benz(a)anthracene	700
45	Benzo(a)pyrene	700
46	Benzo(b)fluroanthene	700
47	Benzo(e)pyrene	700
48	Benzo(g,h,i)perylene	700
49	Benzo(k)fluoranthene	700
50	Chrysene	700
51	Dibenzo(a,h)anthracene	700
52	Fluoranthene	700
53	Fluorene	700
54	Indeno (1,2,3-cd)pyrene	700
55	Naphthalene	700
56	Perylene	700
57	Phenanthrene	700
58	Pyrene	700
ix)	**Polychlorinated Biphenyls (PCBs)**	
	Processing/Pretreatment charge per samples	1800
59	Aroclor 1221	700
60	Aroclor 1016	700
61	Aroclor 1232	700
62	Aroclor 1242	700
63	Aroclor 1248	700
64	Aroclor 1254	700
65	Aroclor 1260	700
x)	**Tri Halo Methane (THM)**	
	Processing/Pretreatment charge per samples	1400
66	Bromo dichloromethane	700
67	Bromoform	700
68	Choloroform	700

69	Dibromo chloromethane	700
xi)	**Other Organic Parameters**	
70	Adsorbable Organic Halides (AOX)	3500
71	Oil and Grease	500
72	Total Phenol (by distillation)	500
73	Tannin/Lignin	620
74	Total Organic Carbon (TOC)	1000
75	Volatile Organic acids	620
	Polychlorinated Biphenyls (PCBs) as Enviro-Indicator	
	Processing/pre-treatment Charge per sample	1800
76	2,4,4'-trichlorobiphenyl (PCB-28)	700
77	2,2',5,5'-tetrachlorobiphenyl (PCB-52)	700
78	2,2',4,5,5'-pentachlorobiphenyl (PCB-101)	700
79	2,3,4,4',5-pentachlorobiphenyl (PCB-118)	700
80	2,2',3,4,4',5'-hexachlorobiphenyl (PCB-138)	700
81	2,2',4,4,5,5'-hexachlorobiphenyl (PCB-153)	700
82	2,2,3,4,4,5,5'-heptachlorobiphenyl (PCB-180)	700
	Phenolic Compounds	
	Processing/pre-treatment Charge per Sample	1800
83	Phenol	700
84	4-nitrophenol	700
85	2,4-dinitrophenol	700
86	2-nitrophenol	700
87	2-chlorophenol	700
88	2,4-dimethylphenol	700
89	2-methyl,4,6-dinitrophenol	700
90	4-chloro,3-methylphenol	700
91	2,4-dichlorophenol	700
92	2,4,6-trichlorophenol	700
93	Pentachlorophenol	700
	Carbamate Pesticides	
	Processing/pre-treatment Charge per Sample	1800
94	Carbaryl	700
95	Carbofuran	700
96	Aldicarb	700
97	Aldicarb Sulphone	700
98	Propoxur	700
99	Oxamyl	700
	Chlorobenzenes	
	Processing/pre-treatment Charge per Sample	1800
100	1,4-Dichlorobenzene	700
101	1,3-Dichlorobenzene	700

102	1,2,3-Trichlorobenzene	700
103	1,2,4-Trichlorobenzene	700
104	1,2,3,5-Tetrachlorobenzene	700
105	Pentachlorobenzene	700
106	Hexachlorobenzene	700
xii)	**Biological Test**	
1	Bacteriological Samples collection	500
2	Benthos organism identification & count (each sample)	1250
3	Benthos organism sample collection	2200
4	Chlorophyll estimation	1250
5	E-Coliform (MFT Technique)	1300
6	E-Coliform (MPN Technique)	1200
7	Faecal Coliform (MFT Technique)	1300
8	Faecal Coliform (MPN Technique)	1200
9	FaecalSteptococci (MFT Technique)	1450
10	FaecalSteptococci (MPN Technique)	1200
11	Plankton Sample collection	500
12	Plankton (Phyto plankton count)	1200
13	Plankton (zoo plankton count)	1200
14	Standard Plate count	550
15	Total Coliform MFT Technique	1300
16	Total Coliform MPN Technique	1200
17	Total Plate count	500
18	Toxicological Bio assay (LC 50)	6000
19	Toxicological Dimension less toxicity test	3500

Note:

i. Sampling charges for water and waste water samples are separate as specified in clause A(IV), but subject to minimum of Rs. 700/- irrespective of number of samples.

ii. Transportation charges are separate on actual basis

(7) Analysis charges of Soil samples/Sludge/Sediments/Solid Waste Samples

Sl. No	Soil Parameters	Charges in Rupees
1	Ammonia	850
2	Bicarbonate	500
3	Boron	900
4	Calcium	350
5	Calcium Carbonate	850
6	Cation Exchange Capacity (CEC)	900
7	Chloride	350
8	Colour	250
9	Electrical Conductivity (EC)	250
10	Exchangeable sodium Percentage (ESP)	1250

11	Gypsum requirement	850
12	H-Acid	950
13	Heavy Metal	As mentioned in respective group at clause 5.0
	Trace Metals using ED - XRF	
	Aluminium, Antimony, Arsenic, Barium, Bromine, Cadmium, Calcium, Cesium, Chlorine, Chromium, Cobalt, Copper, Gallium, Germanium, Gold, Iodine, Iron, Lanthanum, Lead, Magnesium, Manganese, Molybdenum, Nickel, Palldium, Phoshorous, Potassium, Rubidium, Rutherfordium, Selenium, Silicon, Silver, Sodium, Strontium, Sulphur, Tellurium, Tin, Titanium, Tungsten, Vanadium, Ytterbium and Zinc per sample	9500
14	Magnesium	850
15	Mechanical soil analysis (Soil texture)	350
16	Nitrate	850
17	Nitrite	850
18	Nitrogen available	950
19	Organic carbon/Matter (chemical method)	950
20	Polycyclic Aromatic Hydrocarbon (PAHs)	As mentioned in respective group at clause 5.0
21	Polychlorinated Biphenyls (PCBs)	As mentioned in respective group at clause 5.0
22	Pesticides	As mentioned in respective group at clause 5.0
23	pH	240
24	Phosphorous (available)	980
25	Phosphate (Ortho)	720
26	Phosphate(Total)	980
27	Potash available	500
28	Potassium	750
29	Sodium Absorption Ratio (SAR) in soil extract	1650
30	Sodium	750
31	Soil Moisture	250
32	Sulphate	450
33	Sulphur	800
34	Total Kjeldahi Nitrogen	950
35	Total Organic Carbon (TOC)	1350
36	Total water soluble salts	500
37	Water holding capacity	250
38	Sample processing and analysis for Dioxin-Furan (PCDDs PCDFs 17 congeners) (IsotopeDilution method using GC-HRMS)	75000

(8) Analysis charges for Hazardous waste Samples

Sl.No	Parameters	Charges in Rupees
1.	Preparation of Leachate (TCLP Extract/Water Extract)	2400
2.	Determination of various parameters in leachate	As mentioned in respective group at clause 5.0
3.	Flash point/Ignitibility	1100
4.	Reactivity	1100
5.	Corrosivity	1100
6.	Measurement of Toxicity	
	- LC_{50}	6000
	- Dimensionless Toxicity	3500
7.	Total Organic Carbon (TOC)	1250
8.	Absorbable Organic Halides (AOX)	5000

9.2 SEIAA ENVIRONMENTAL CLEARANCE PROCESSING FEE

The Government vide G.O.(Ms) No. 13 Environment. Climate Change and Forest (EC.3) Department Dated 18.01.2024 have ordered that, the scrutiny / processing fee to be collected for processing the proposals from Project Proponent for Environmental Clearance / Terms of Reference by the State Level Environment Impact Assessment Authority – Tamil Nadu is enhanced and the fee fixed for amendments/Extension of Validity of the EC/ TOR as detailed below:-

Table - 1 : Other than minor minerals (except Granite)

No.	Total Project Cost (other than minor minerals) (except Granite)	Existing Fee	Revised Fee
1	Upto 5 Crores	1 lakhs	2.00 lakhs
2	More than 5 Crores and upto 25 Crores	2 lakhs	4.00 lakhs
3	More than 25 Crores and upto 100 Crores	3 lakhs	6.00 lakhs
4	More than 100 Crores	5 lakhs	10.00 lakhs

Table - 2 : For Minor Minerals (except Granites)

Sl.No.	Total area of Mining	Existing Fee (Rs.)	Revised Fee (Rs.)
1	For area less than 2 hectares	10,000.00	20,000.00
2	For area more than 2 hectares but less than 5 hectares	20,000.00	40,000.00
3	For area more than 5 hectares but less than 25 hectares	1,00,000.00	2,00,000.00
4	For area more than 25 hectares but less than 50 hectares	2,00,000.00	4,00,000.00

Table -3 : For Granites

Sl.No.	Total area of Mining	Existing Fee (Rs.)	Revised Fee (Rs.)

1	For area less than 1 Ha	1,00,000.00	2,00,000.00
2	Above 1 Ha to upto 3 Ha	1,00,000.00	2,50,000.00
3	Above 3 Ha to upto 5 Ha	1,00,000.00	3,00,000.00
4	More than 5 Hectares	1,00,000.00	3,50,000.00

Table-4 : For Amendments

Sl.No.	Particulars	Existing Fee	Fee to be fixed (Rs.)
1	For all amendments in Environmental Clearance / Term of reference (except Name change)	Nil	10,000.00
2	EC/ToR Extension for Industries / infrastructures for Validity Extension, Rough stone & Granite (balance quantity)	Nil	25,000.00
3	EC Extension for Rough stone & Granite (new scheme of mining)	Nil	**Rough stone** - applicable revised fee as per Table-2 **Granite** - applicable revised fee as per Table-3

The Member Secretary, State Level Environment Impact Assessment Authority/ Director, Department of Environment and Climate Change is permitted to collect the enhanced Scrutiny / Processing Fee fixed above from the Project Proponent with effect from the date of issue of this order.

9.3 CARE AIR CENTRE

TNPCB established Care Air Centre at Corporate Office, Chennai. This centre monitors the ambient air quality and source emissions of the industries in the State on 24x7 basis through online. PM_{10}, $PM_{2.5}$, NO, NO_2, NO_x and other industry specific parameters are monitored on continuous basis. The 17 category highly polluting industries, Red-large industries, Common Effluent Treatment plants, common hazardous waste incinerator facilities, common bio-medical waste treatment facilities are connected to this centre.

9.4 WATER QUALITY WATCH CENTRE

TNPCB has established Water Quality Watch Centre at Corporate Office. In order to monitor the quality of treated effluent at the outlet of the treatment plant on continuous 24x7 basis through online. The parameters monitored are Flow, TDS, pH, BOD, COD, TSS and other industry specific parameters. The 17 category highly polluting industries, Red-large industries and Common Effluent Treatment plants are connected to this centre.

9.5 GREENERY DEVELOPMENT IN INDUSTRIES

Industrial and Highways margin greenbelt development call for careful planning for an admixture of plant species in the midst of huge industrial

infrastructures and linear developments. In the spatial domain, the sites might be able to accommodate vegetation only as 'filler' in such lands. In industrial sites, tree components could be established in three ways depending upon the existing development intensity and availability of suitable vacant site.

- avenue trees/shrubs in the strips of road margins, roundabouts at road junctions and centre median of roads within the premises
- scattered trees in the space allocated for lawns, gardens and parks and
- composite plantations in bits and blocks of vacant sites

Such developments will need careful selection of site- specific mixture of plant species and require special skills in nursery and planting. Usually, site suitability is governed by many geo-physical attributes that will determine the planting design, choice of species and the planting density. Central Pollution Control Board had prepared a set of guidelines for development of green belt in industrial areas (Publication of CPCB viz., Guidelines for Developing Greenbelts Programme Objective Series: PAOBES/75/1999-2000, March 2000 may be consulted).

Identification of potential sites

With our understanding of the physical and spatial spread of infrastructure over the road/ industrial landscape, the land forms than can possibly absorb the addition of new greenery can be summarized as under:

Land category	Normal dimensions	Possible plantable width (ft)/area (ha)	Pattern of greenery	Type of vegetation
Industrial sites				
Industrial blocks	0.1 ha to 100 ha	0.1 ha and above	B	Tall Trees
Industrial boundaries	400m to few km	400 m to few km	L/S	Grass lawns and tall trees
Industrial roads	200 m to few km	200 m to few km	L/S	Short, Medium trees and grass lawns
Roads				
4-6 lane NH and Bye-passes with service roads	Above 200 feet	Up to 20 feet	L/S	Tall trees
Centre medians in roads above 100 feet width	2 to 5 feet	2 to 5 feet	L	Herbs and shrubs
Intersections or roundabouts at road junctions	10 to 30 feet dia	10 to 30 feet dia	M	Short trees, Grass lawns, herbs and shrubs

* L-Linear alignment; S- Narrow Strip; B-Block; M-Mosaic

There is an imperative need for drawing a Perspective Tree Management Plan for any of the site, which should include assessment of site characteristics, specific

planting design, raising of planting stock in nursery, techniques for site preparation, planting and follow-up maintenance care and techniques, besides incorporating post- planting monitoring mechanism for the survival of planted vegetation, their establishment and growth.

Choice of species

As vegetation in any landscape is the result of the geo-climate governed by topography, soil, rainfall and seasonality, the choice of plant species is critical, if our greening effort has to be appropriate and sustainable. Trees are naturally the first choice as a well-grown tree can create newer microhabitats for other organisms including small plants. However, dense planting of trees can be ecologically unsafe.

Need to understand the vegetation relating to the agro-climatic zones

Based on rainfall, irrigation pattern, soil characteristics, cropping pattern and other physical, ecological and social characteristics, Tamil Nadu is classified into seven distinct zones.

S. No	Zone	Districts	Altitude (m)	Soil type	Annual rainfall (mm)
1	North Eastern	Kancheepuram, Vellore, Villupuram, Cuddalore, Tiruvallur, Tiruvannamalai	100-200	Red sandy loam, Clay loam, Saline coastal alluvium	1105
2	North Western	Salem, Dharmapuri, Krishnagiri, Namakkal	200-600	Non-calcareous red, non-calcareous black, calcareous black	875
3	Western	Erode, Coimbatore, Karur (part), Dindigul (part), Namakkal (part) Theni (part)	200-600	Red loamy, Black	715
4	Cauvery delta	Thanjavur, Nagapattinam, Tiruvarur, Trichy, Perambalur, Pudukkottai (part), Cuddalore (part)	100-200	Red loamy, Alluvium	985
5	Southern	Madurai, Sivagangai, Ramad, Virudhunagar, Thoothukudi, Tirunelveli	100-600	Coastal alluvium, Black, Red sandy, Deep red	857
6	High rainfall	Kanniyakumari	100-2000	Saline coastal, alluvium, deep red loam	1420

7	Hilly	Nilgiris, Dindigul (part)	2000	Lateritic	2124

Each area supports good establishment and growth of different tree species, depending upon the soil type, rainfall quantity and distribution pattern. Forest department maintains such a list of most suited species for each agro-climatic zone, some of which may be ideal for more than a zone.

Choice of species in response to geo-physical and climatic conditions

Growth characteristic and forms of trees are a function of the locality. Therefore, the choice of species will be based on various site- specific considerations that are a) geophysical conditions i.e., latitude, longitude and topography like altitude, aspect, gradient etc, b) climatic conditions that are expressed in form of temperature, sun light, rainfall, wind etc., and c) the edaphic conditions, which connote the site and the soil physical-chemical characteristics. This combined attribute of the geographical position of the site, climatic and edaphic variations render the placement of particular region/area to one or the other agro-climatic zones of the country and the State.

Performance of a species will be at its best only in its ideal or comfort zone. Suitability of diverse species to such site variations has more relevance with regard to propagating native species of plants in preference to the exotic ones, as the indigenous species are bound to excel well in their home range. Our attempt to match the requirements of the plant to the site conditions increases the plant's survivability, performance, and productivity.

Tolerance to some of the critical site- related conditions like drought, salinity etc help us to decide on the species selection.

- Drought resistant plant species include *Butea monosperma, Acacia* spp*., Azadhirachta indica, Albizia lebbeck, Lagerstromea speciosa, Holoptelia integrifolia, Pterocarpus marsupium, Pterocarpus santalinus, Borassus flabellifer*, *Phoenix sylvestris, Thevitia peruviana, Wrightia tinctoria* etc.
- Some of the salt resistant trees are *Azadirachta indica, Acacia spp., Butea monosperma, Bassia latifolia, Phoenix dactylofera, Salvadora perisca, Calophylluminophyllum, Emblica officinalis* etc.

Choice of species as a response to spatial limitations

Industrial greenbelt development could take the form of block planting, linear planting and mosaic planting, which is a mix of narrow strips and blocks, depending upon the spatial considerations. Usually industrial landscape is characterized by scramble for land surface, which itself often turns into a serious limiting factor in promoting greenery development. Based on morphology, communities of plants in tropical regions consist of grasses, herbs, shrubs, woody climbers (lianas), palms and trees. Despite the herbs, shrubs, lianas and palms lacking the stately morphology of trees, they provide multitude of ecosystem services, as much as trees. As per availability of space, trees of various height classes can be chosen for planting.

Tree size	Average height range (M)	Species
Dwarf and medium	3-10 m	*Adenantherapavonina, Albizia lebbeck, Bauhinia purpurea, Bauhinia racemosa, Bauhinia tomentosa, Bauhinia variegata, Bauhinia vahilii, Butea monosperma, Calophylluminophyllum, Cassia fistula, Ficus racemosa, Morinda pubescens, Melia azadirach, Phoenix sylvestris, Phyllanthus emblica, Pongamia pinnata, Saracainidica, Thespesia populnea, Thevitia peruviana, Wrightia tinctoria*
Tall	>10 m	*Adina cordifolia, Aegle marmelos, Alstoniascholaris, Anthocephalus camamba, Azadirachta indica, Bombax malabaricum, Borassus flabellifer, Ceiba pentandra, Lagerstroemia speciosa, Limoniaacidissima, Bassia latifolia, Mangifera indica, Millingtonia hortensis, Mimusopselengi, Schleichera oleosa, Swietenia mahagoni, Syzygiumcumini, Tamarindus indica, Tectona grandis, Terminalia arjuna, Terminalia catappa, Toona ciliata*
Giant	Tall and vast	*Ficus bengalensis, Ficus religiosa, Bombax ceiba*

Choice of species in response to intended function of abating Pollution

Plant leaves function as efficient gas exchange systems and their internal structure allows rapid diffusion of water-soluble gases. Besides CO_2, plants absorb many other obnoxious gaseous pollutants present in the urban atmosphere and intercept the SPM, hanging in air and adsorb them on their surface.

The plant characteristics like vegetation type, vegetation form, crown density, leaf type, leaf arrangement, leaf character and vegetation structure determine the tree's pollution abatement potential. Trees with dense crown and evergreen foliage perform outstanding service in respect of urban and industrial pollution abatement and noise attenuation. While pollution reduction is a service rendered by vegetation, trees, being biological organisms display some level of susceptibility or tolerance to dust and smoke. Research and observations over long periods suggest that species like *Acacia auriculiformis, Aegle marmelos, Anthocephalus cadamba, Albizia lebbeck, Alstoniascholaris, Artocarpus heterophyllus, Butea monosperma, Dalbergia latifolia, Ficus benjamina, F. benghalensis, F. racemosa, F. religiosa, Bassia latifolia, Mangifera indica, Mimisopselengi, Pongamia pinnata, Syzygiumcumini, Tectona grandis, Terminalia arjuna, T.catappa, Thespesia populnea, Bombax ceiba* are tolerant to dust and gaseous pollutants.

The other environmental services like water cycle regulation, erosion control and soil conservation and societal values like aesthetics also play crucial role in selection of species.

Aesthetics and recreational value

Different trees display astoundingly a vast array of colours in their flowers. It could be white (*Alstoniascholaris, Magnolia pterocarpa, Millingtoniahorternsis,*

Plumeria acuminaata), yellow (*Cassia fistula, Bauhinia tomentosa, Saraca indica, Peltophorumpterocarpum, Tabebuia spectabilis*), red (*Bombax ceiba, Cassia roxburghii*), scarlet (*Barningtoniamonandra, Cassia pavarnica*), purple (*Lagerstroemia speciosa, Bauhinia purpurea, Melia azadirach, Tabebuia rosea*), orange, red, crimson, scarlet (*Butea monosperma, Spathodeacampanulata*), blue, mauve, violet (*Jacaranda mimosifolia*) creamy white or yellow (*Michelia champaca, Bassia latifolia, Magnolia grandiflora, Terminalia arjuna*) and so on.

The season of blooming that vastly varies among species is one of the attributes in designing planting: ever blooming (*Callisetemon lanceolatus, Mimusopselengi, Plumenia acuminate, Thespesia populnea*), winter blooming (*Bauhinia purpurea, Butea monrosperama*), spring blooming (*Tabebuia*spp*, Bombax ceiba, Saraca indica, Spathodea*sp), summer blooming (*Erythrina indica, Cassia fistula, Jacaranda, Lagerstroemia* spp), rainy season blooming (*Plumeria alba, Plumeria rubra, Anthocephalus cadamba, Barringtonia raccemosa, Cassia roxburghii*).

The success of landscape design with plants depends on how to choose the appropriate plants for a particular situation. Thoughtful selection of a combination of trees, shrubs, climbers, bulbs, foliage plants, grass, ground cover and aquatic plants transform the barren land mass into an attractive and meaningful landscape. Efforts should be made to select an appropriate plant material for the given situation based on one or more of the above criteria. *Thumb rule should be that native and indigenous species is preferred over the exotic or introduced species.*

9.6 ENVIRONMENTAL TRAINING INSTITUTE

Environmental Training Institute (ETI) is an organizational wing of TNPCB, which was established in 1994 with Danish assistance. It is functioning in the 3rd floor of its corporate office of TNPCB. The main objective of the Training institute is to impart training to staff of the Pollution Control Board, Industrial representatives, Executives of Municipalities and Corporations, Line agencies and non-governmental organizations on the following aspects.

(i) Improve awareness at all levels.
(ii) Introduce the holistic approach to environment & sustainable development
(iii) Introduce the basic theories, concepts and methodologies of integrated environmental planning and management aiming a sustainable development
(iv) Promote public awareness and motivation to preserve and protect the environment through NGOs.
(v) Create Cross - media awareness in industry, urban sector and the public on Environmental Hazards and adverse impact on quality of life.
(vi) Pollution Control at source by cleaner technology and improved processes of materials and products. This includes conservation of non-renewable resources, resource recovery, refuse recycling and disposal of minimum waste to the environment.
(vii) Improve environment management capacity in the sector of industry and urban development.
(viii) Develop the ability among professionals to communicate effectively.

9.7 LIBRARY

The TNPCB Library was established in November 1989. At present library has a collection of above 11,092 Books and Reports. The collection comprises of documents to the field of Environmental Protection, Air Pollution, Vehicular Pollution, Water Pollution, Noise Pollution, Wastewater Treatment, Municipal Waste Management, Hazardous Waste Management, Biomedical Waste, Environmental Engineering, Industrial pollution, Chemical Technology, Disasters, Soil, Energy, Pesticides, Biotechnology, Environmental Health, Environmental Economics, Environmental Chemistry, Environmental Impact Assessment, Environmental Education, Sustainable Development, Women and Environment, Environmental Law, Forestry. Library subscribes for 76 Journals 9 Newspapers, 16 Magazines. Besides this Annual Reports, Newsletters, Bulletins and Reports are received from different Institutions (Indian & foreign). Back volumes of the journals are bound and kept for reference in the Periodical Section.

Membership Fee: For Students: Monthly Rs.30/-, Annual Rs.75/- For others: - Annual Fee Rs.100/-

9.8 GUIDELINES FOR IMPOSITION OF ENVIRONMENTAL COMPENSATION CHARGES AGAINST HEALTHCARE FACILITIES AND COMMON BIOMEDICAL WASTE TREATMENT FACILITIES

As per Hon'ble National Green Tribunal's Order dated 12.03.2019 in the matter of O.A. 710 of 2017, the CPCB issued Guidelines for Imposition of Environmental Compensation Charges against Healthcare Facilities and Common Biomedical Waste Treatment Facilities

I. Environmental Compensation for Healthcare Facilities (HCFs):

Following cases will be considered for taking cognizance of non-compliance and fit for levying Environmental Compensation:

i) No Authorization under BMWM Rules, 2016.

ii) No arrangement with CBWTF for disposal of biomedical waste.

iii) Improper Segregation of generated biomedical waste as per color coded system prescribed under BMWM Rules, 2016.

iv) No facility for pre-treatment of yellow (h) category waste (microbiology, biotechnology and other clinical laboratory waste).

v) Storage facility not provided for segregated biomedical waste (applicable for bedded hospitals).

vi) Not provided Effluent Treatment Plant for treatment of wastewater, in case when city sewerage network in not connected to terminal STP; and

vii) Non-compliance to other responsibilities as stipulated for Healthcare Facilities under BMWM Rules, 2016.

Environmental Compensation for HCFs = HR x T x S x R x N

Where; HR – Health Risk factor, T- Type of Healthcare Facility, S – Size of Health Care Facility, R – Environmental Compensation factor, N – Number of days of Violation, HR Health Risk (HR) is a number from 0 to 100 and increasing HR value denotes the increasing degree of health risk due to improper handling of BMW in healthcare facility.

	No arrangement for disposal of BMW with CBWTF (1)	Not Applied for Authorization (2)	Improper Segregation of BMW (3)	No pre-Treatment (4)	On-site storage not provided or not adequate (5)	No ETP Despite requirement (6)	Score for each of Other Violations of BMW Rules, 2016 (7)
Heath Risk Score (HR)	30	10	20	10	10	15	5

Note: Score of 5 to be added for each of other violations at column (7), with sum of HR limited to 100

HR is sum of (1) + (2) + (3) + (4) + (5) + (6) + (7) [restricted to 100]

T is a factor for type of healthcare facility, as given below:

Type of Healthcare Facility	T Factor
Bedded Hospitals	1
Bedded Ayush Hospitals	0.5
Non-bedded (veterinary hospital, pathological laboratory, blood bank)	1
Non-bedded (clinic, dispensary, and clinical establishment)	0.5
Animal Test Houses	1

S is a factor for size of Healthcare Facility (HCFs) based on number of beds of the Healthcare Facility, as given below:

Size of Healthcare Facility (HCFs)	S factor
Non-bedded (clinic, dispensary, and clinical establishment)	0.15
Non-bedded (veterinary institution, pathological laboratory, blood bank, R&D institutions)	
i) MSI/SSI	0.2
ii) LSI	0.5
1 to 10 bedded HCFs	0.20
10 to 50 bedded HCFs	0.30
50 to 100 bedded HCFs	0.50
100 to 200 bedded HCFs	1.00
200 to 500 bedded HCFs	1.50
500 and more bedded HCFs	2.00
Animal Test House	1.00

N Number of days for which violation took place is the period between the days of violation observed /due date of implementation as per BMWM Rules, 2016/due date of compliance of directions and the day of compliance verified by CPCB/SPCB/PCC.

R is a factor in Rupees, taken as 250 0

Further, in any case minimum Environmental Compensation in respect to Healthcare Facility shall not be less than Rs.1200/- per day.

Deterrent Factor for Healthcare Facilities

In order to make scale of environmental compensation deterrent in rendering violation of Rules to be non-profitable, a deterrent factor has been introduced in

case of recurrent violations. ECC charges may increase by multiple times when;

- Healthcare facility fails to comply with action points within stipulated time as may be directed by CPCB/SPCB/PCC; or

- Fails to comply during re-inspections

Incremental effect on Environmental compensation charges are given below:

Scenario	Applicable ECC
Up to 15 days from target date	Original ECC
Between 15 to 30 days beyond target date	Two times
Fails to comply in 2nd inspections including new violations if any	Two times
Between 30 to 45 days beyond target date	Four times
Fails to comply in 3rd inspections including new violations if any	Four times
Beyond 60 days from target date	Closure of HCF
Fails to comply in 4th consecutive inspection	Closure of HCF

II. Environmental Compensation for Common Biomedical Waste Treatment Facility (CBWTF)

Following cases will be considered for taking cognizance of non-compliance and fit for levying Environmental Compensation:

a) Incinerator emissions not complying with standards notified under BMWM Rules, 2016;
b) Treated wastewater not complying with standards prescribed under BMWM Rules, 2016;
c) Not complying with standards of autoclave/microwave prescribed under BMWM Rules, 2016;
d) Not collecting the biomedical waste from all the member HCFs timely; and
e) Other violations to the conditions stipulated under BMWM Rules, 2016 / CPCB guidelines

Environmental Compensation for CBWTFs = PI x S x R x N

Where; PI– Pollution Index, S – Size of Operation, R – Environmental Compensation factor, N – Number of days of Violation, PI is a number from 0 to 100 and increasing value of PI denotes the increasing degree of pollution hazard from CBWTF.

Cases	Incinerator emissions not complying with standards notified under BMWM Rules, 2016 (1)	Treated wastewater not complying with standards notified under BMWM Rules, 2016 (2)	Not complying with standards of autoclave/microwave notified under BMWM Rules, 2016 (3)	Biomedical waste not collected and disposed off within 48 hours (4)	Each of Other violations to BMWM Rules, 2016 / CPCB Guidelines (5)
PI	20	15	15	10	10

Note: Score of 10 can be added at column (5) for each of other violations, provided sum of PI is limited to 100 PI = (1) + (2) + (3) + (4) [Restricted to 100]

S Scale of operation for CBWTFs will be taken from following Table;

Authorized Treatment Capacity (Based on Incinerator size)	Scale Factor
Up to 100 Kg/hour	0.25
100 to 250 Kg/hour	0.50

250 to 500 Kg/hour	1.00
> 500 Kg/ hour	1.50

R is a factor in Rupees, which is taken as 250.

N Number of days for which violation took place is the period between the day of violation observed/due date of implementation as per BMWM Rules, 2016/due date of compliance of directions and the day of compliance verified by CPCB/SPCB/PCC.

Further, in any case minimum Environmental Compensation in respect to Common Biomedical Waste Treatment Facility shall not be less than Rs. 3,000/- per day.

For Healthcare facilities having their own treatment and disposal facility, the environmental compensation shall be calculated as in the case of CBWTFs.

Deterrent Factor for Common Biomedical Waste Treatment Facilities

In order to make scale of environmental compensation deterrent for CBWTFs to make non-compliance as not profitable, a deterrent factor has been introduced for repeated violations. ECC charges may increase by multiple times when;

- CBWTF fails to comply with action points within stipulated time as may be directed by CPCB/SPCB/PCC; or

- Fails to comply during re-inspections

Incremental effect on Environmental compensation charges are given below:

Scenario	Applicable ECC
Up to 30 days from target date	Original ECC
Between 30 to 60 days beyond target date	Two times
Fails to comply in 2nd inspection including new violations if any	Two times
Between 60 to 90 days beyond target date	Four times
Beyond 90 days	Closure of CBWTF
Fails to comply in 3rd consecutive inspection	Closure of CBWTF

9.9 ENVIRONMENTAL COMPENSATION TO BE LEVIED ON INDUSTRIES

The CPCB Committee has considered the following cases for levying Environmental Compensation on the industries for the damages to the environment.

a) Discharges in violation of consent conditions, mainly prescribed standards / consent limits.
b) Not complying with the directions issued, such as direction for closure due to non-installation of OCEMS, non-adherence to the action plans submitted etc.
c) Intentional avoidance of data submission or data manipulation by tampering the Online Continuous Emission / Effluent Monitoring systems.
d) Accidental discharges lasting for short durations resulting into damage to the environment.
e) Intentional discharges to the environment -- land, water and air resulting into acute injury or damage to the environment.
f) Injection of treated/partially treated/ untreated effluents to ground water.

After considering various factors including the policy implementation issues, Committee has come up with following formula for levying the Environmental Compensation in instances as mentioned at a, b and c including non-compliance of the environmental standards / violation of directions.

The Environmental Compensation shall be based on the following formula:

$$EC = PIxNxRxSxLF$$

Where,

EC is Environmental Compensation in Rs.

PI = Pollution Index of Industrial Cluster (As per the guidelines issued by CPCB for categorization of industries – Lr No. B-29012/ESS (CPA)/2015-16, dt. 7.3.2016).

N = Number of days of violation took place

R = A factor in Rupees (Rs.) for EC

S = Factor for scale of operation

LF=Location factor.

The formula incorporates the anticipated severity of environmental pollution in terms of Pollution Index, duration of violation in terms of number of days, scale of operation in terms of micro & small/medium/large industry and location in terms of proximity to the large habitations.

Note:

a. The industrial sectors have been categorized into Red, Orange and Green, based on their Pollution Index in the range of 60 to 100, 41 to 59 and 21 to 40, respectively. It was suggested that the average pollution index of 80, 50 and 30 may be taken for calculating the Environmental Compensation for Red, Orange and Green categories of industries, respectively.

b. N, number of days for which violation took place is the period between the day of violation observed/due date of direction's compliance and the day of compliance verified by CPCB/SPCB/PCC.

c. R is a factor in Rupees, which may be a minimum of 100 and maximum of 500. It is suggested to consider R as 250, as the Environmental Compensation in cases of violation.

d. S could be based on small/medium/large industry categorization, which may be 0.5 for micro or small, 1.0 for medium and 1.5 for large units.

e. LF**,** could be based on population of the city/town and location of the industrial unit. For the industrial unit located within municipal boundary or up to 10 km distance from the municipal boundary of the city/town, following factors (LF) may be used:

Location Factor Values

S.No.	Population * (million)	Location Factor# (LF)
1	1 to <5	1.25
2	5 to <10	1.5
3	10 and above	2.0

** Population of the city/town as per the latest Census of India*

LF will be 1.0 in case unit is located >10km from municipal boundary

LF is presumed as 1 for city/town having population less than one million.

For notified Ecologically Sensitive areas, for beginning, LF may be assumed as 2.0. However, for critically Polluted Areas, LF may be explored in future.

f. In any case, minimum Environmental Compensation shall be ₹ 5000/day.

g. In order to include deterrent effect for repeated violations, EC may be increased on exponential basis, i.e. by 2 times on 1st repetition, 4 times on 2nd repetition and 8 times on further repetitions.

h. If the operations of the industry are inevitable and violator continues its operations beyond 3 months then for deterrent compensation, EC may be increased by 2, 4 and 8 times for 2nd, 3rd and 4th quarter, respectively. Even if the operations are inevitable beyond 12 months, violator will not be allowed to operate.

i. Besides EC, industry may be prosecuted or closure directions may be issued, whenever required.

The Committee has also stated that, in other instances (i.e). *d, e and f*, the environmental compensation may contain two parts – one requires providing immediate relief and other long-term measures such as remediation. In all these cases, detailed investigations are required from expert institutions/organizations based on which environmental compensation will be decided. CPCB shall list the expert institutions for this purpose.

In such cases, comprehensive plan for remediation of environmental pollution may be prepared and executed under the supervision of a committee with representatives of SPCB, CPCB and expert institutions/organizations.

Note: *The Environmental Compensation levied by TNPCB shall be remitted through Demand Draft drawn in favour of '**TNPCB-Environmental Compensation Fund**', payable at Chennai. (Source: Circular No. TNPCB/Accs/AC5/039977/2014, dt. 09.09.2019)*

9.10 ENVIRONMENT RELATED ORGANISATIONS

Sl.No.	Name and Address of the Organization
1	Ministry of Environment, Forests & Climate Change, Government of India, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi – 110 003. web site: www.moef.gov.in
2	Ministry of Environment, Forests & Climate Change, Government of India, Integrated Regional Office, 1st and 2nd Floor, HEPC Building, No.34 Cathidral Garden Road, Nungambakkam, Chennai – 600 034. Tel: 044-28222041 e.mail ro.moefcc@gov.in
3	Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110 032. Tel: 011-22307233, Fax: 011-22304948, e-mail: ccb.cpcb@nic.in Web site : www.cpcb.nic.in
4	Regional Director, Central Pollution Control Board 2nd Floor O/o Tamil Nadu Pollution Control Board, 77-A, South Avenue Road, Ambattur Industrial Estate, Chennai - 600 058.
5	National Green Tribunal - Principal Bench Faridkot House, Near India Gate, Copernicus Marg, New Delhi – 110 022.

	Tel: 011-23043528, Fax: 011-2307793, Web site: www.greentribunal.gov.in
6	National Green Tribunal - Southern Zone Kalas Mahal, Kamarajar Salai, PWD Estate, Chepauk, Chennai – 600 005. Tel: 044-28592060
7	CSIR-National Environmental Engineering Research Institute, Nehru Marg, Nagpur 440 020. EPABX lines: +91-712-2249885- 88/2249970-72. Director office: +91-712-2249999/66 Fax (Director office): +91-712-2249900.
8	CSIR-National Environmental Engineering Research Institute, CSIR Madras Complex, Taramani, Chennai - 600 113 Telephone: +91-2254 4665, Fax: +91-2254 1964 e.mail: chzl[at]neeri[dot]res[dot]in,mt_arasu[at]neeri[dot]res[dot]in Web Page: www.neeri.res.in, www.csirmadrascomplex.gov.in
9	CSIR - Central Leather Research Institute Adyar, Chennai-600 020.Fax: +91-44-24912150 E-mail: director@clri.res.in, directorclri@gmail.com Tel: 044-24910897, 24910846 Website: www.clri.org
10	CSIR-National Geophysical Research Institute Uppal Road, Hyderabad-500007.e.mail: director[at]ngri[dot]res[dot]in F: +91 40 27171564, P: +91 40 2701 2000
11	CSIR-Central Electrochemical Research Institute Karaikudi – 630003. Ph: 04565-241241 / 227778 Fax: 04565-227779, e.mail: director@cecri.res.in
12	CSIR - National Institute of Oceanography Dona Paula - 403 004, Goa. EPABX : +91 8322450500, Fax : +91 832 - 2450602 / 2450603, e.mail : tmarihal@nio.org
13	CSIR-Indian Toxicology Research Institute Toxicology Building, 31, Mahatma Gandhi Marg, Lucknow - 226 001, Uttar Pradesh. Phone: + 91-522-2217497, Fax: + 91-522-2628227 Email: director [at] iitrindia [dot] org
14	CSIR-Indian Institute of Chemical Technology, Uppal Road, Tarnaka, Hyderabad - 500 007. EPABX: 914027191234, e.mail: director@iict.res.in
15	Central Salt & Marine Chemicals Research Institute Gijubhai Badheka Marg, Bhavnagar-364002, Gujarat (INDIA). Phone: 0278-2567760/ 2568923/ 2565106 Fax. No: 0278-2567562 / 2566970, e.mail: director[at]csmcri.res.in
16	Central Pulp & Paper Research Institute Post Box 174, Paper Mill Road, Himmat Nagar,Saharanpur - 247001, U.P. Phone: 0132 - 2714050, 2714059, 2714061, 2714062, Fax: 0132-2714052 e.mail: director.cppri@gmail.com
17	National Metallurgical Laboratory Jamshedpur-831007. Tel: +91-657-2345000-001, 2345028, 2345205 Fax: 91-6572345213, 2345153 , e.mail: director@nmlindia.org
18	Central Ground Water Board, E-Wing, G-Block, Rajaji Bhavan, CGO Complex, Besant Nagar, Chennai – 600 090. Tel: 044-24914334, 24912941. Fax: 044-24914334. e.mail: rdsecr-cgwb@nic.in, Web site: www.cgwb.gov.in
19	National Centre for Coastal Research (NCCR) NIOT Campus, Velacherry-Tambaram Main Road, Pallikaranai, Chennai – 600100. Ph: +91 44 66783599, Fax: +91 44 66783487. e.mail: nccr(at)nccr(dot)gov(dot)in

20	Environment, Climate Change and Forest Department, Government of Tamil Nadu, 7th Floor, Namakkal KavignarMaligai, Secretariat, Fort St George, Chennai- 600 009. Tel: 044-25671511, Fax: 044-25670560, e.mail: forsec@tn.gov.in, web site: www.tn.gov.in
21	State Environmental Impact Assessment Authority, Tamil Nadu Third Floor, Panagal Building, No.1, Jeenis Road, Saidapet, Chennai – 600 015. Tel: 044-2435 9971, e.mail: msecytnseiaa@yahoo.com Web site: www.seiaa.tn.gov.in
22	The Appellate Authority Tamil Nadu Pollution Control Board, "Chateau D Ampa", 37, Nelson Manickam Road, Aminjikarai, Chennai - 600 029. Tel: 044-26610119 e.mail: appellate@tnpcb.gov.in
23	Department of Environment and Climate Change, Ground Floor, Panagal Building, No.1, Jeenis Road, Saidapet, Chennai – 600 015. Tel: 044-2433 6421, 2433 6928, Fax: 044-24336594 e.mail: tndoe@tn.nic.in
24	State Groundwater and Surface Water Resources Data Centre, Water Resources Organisation, Public Works Department, Tharamani, Chennai – 600 113. Tel: 044-22541526, 22541527. Fax: 044-22541368. e.mail: cegwchn@gmail.com web site: www.groundwaterpwd.org.in
25	Chennai Metropolitan Development Authority, Thalamuthu Natarajan Building, 1, Gandhi Irwin Road, Egmore, Chennai- 600 008. Tel: 044-28414855. Fax: 044-28548416. Web site: www.cmdachennai.gov.in
26	Directorate of Town and Country Planning, 2nd, 3rd & 4th Floor, C & E Market Road, Koyambedu, Chennai - 600 107 e.mail: ctcptn[at]tn[dot]gov[dot]in Tel: 044 - 2958 5161, 044-2958 5229, 044-29585247 Web site: https://www.tcp.tn.gov.in/home
27	Tamil Nadu Industrial Guidance Prestige Polygon Towers, 11th Floor No.471, Anna Salai, Rathna Nagar, Teynampet, Chennai-600 035. e.mail: helpdesk@investtn.in guidance@tn.gov.in Tel No. +91 44 24346725, 18002583878 Website: https://investingintamilnadu.com
28	Directorate of Industrial Safety & Health, T.S. No. 47/1, SIDCO Industrial Estate (Near MetrowaterRoundtana), Guindy, Chennai- 600 032. Ph: 044-22502103.
29	Environmental and Water Resources Engineering Department of Civil Engineering Indian Institute of Technology Madras, Chennai – 600036. Phone No: 044 – 2257 4250.e.mail: cehead@iitm.ac.in
30	Centre for Environmental Studies, Department of Civil Engineering, College of Engineering Guindy Anna University, Chennai - 600 025. Phone : 91-44-2235 4296/2235 3083, 91-44-2235 9009/ 9027
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34	Centre for Urbanization Buildings and Environment (CUBE) Module No.6C, 6th Floor, Phase II Building, IIT Madras Research Park, Kanagam Road, Taramani, Chennai 600 113. Phone Office: 044- 6121 0901, 044 - 6121 0915 e.mail: office@cubeiitm.org
35	National Centre for Sustainable Coastal Management Ministry of Environment, Forest and Climate Change (MoEF&CC) Anna University Campus, Chennai – 600025. Ph: [91]-44-22200600 / 22200900. Fax:[91]-44-2220-0700, e.mails : hr@ncscm.res.in
36	National Productivity Council Dr. Ambedkar Institute of Productivity, 6,Aavin Dairy Road, Ambattur Industrial Estate (North), Ambattur, Chennai – 600 050. Ph: 044-26254904, 26251808, Fax: 044-26254904 e.mail: npcaipchn@gmail.com, Website: www.aipnpc.in
37	The South India Textile Research Association 13/37, Avinashi Road, Coimbatore Aerodrome Post, Coimbatore – 641 014. Phone: 0422-2574367-9, 4215333. Fax: 0422-2571896, 4215300, e-Mail: info@sitra.org.in Website: www.sitra.org.in
38	M S Swaminathan Research Foundation 3rd Cross Street, Institutional Area, Taramani. Chennai 600 113. Tel: +91 (44) 22541229, +91 (44) 22541698
39	Madras School of Economics, Gandhi Mandapam Road, Behind Anna Centenary Library, Kottur, Chennai – 600 025. EPBAX Lines – (91) 044 – 22300304, 22300307, 22352157
40	Madras School of Social Work, An Autonomous Institution affiliated to the University of Madras), 32, Casa Major Road, Egmore, Chennai-600008. Phone : 044 28192824, 044 28195126, Fax : 044-2819 2712 College Website : www.mssw.in, e.mail : ao@mssw.in
41	C.P.R. Environmental Education Centre The C.P. Ramaswami Aiyar Foundation, No. 1, Eldams Road, Alwarpet, Chennai - 600 018. Ph. 91-44-2434 1778, 2434 6526, Fax: 91-44-2432 0756 e.mail: cpreec@envis.nic.in, cpreec@gmail.com.
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