Contents

1. Introduction

Environment protection has emerged as a biggest challenge to the human society in the recent times, where, industrialization is the answer to the ever-increasing needs of growing population for the survival of human race. At the same time, preservation of the natural resources & control of pollution are the need of hour. Sustainable development in harmony with the nature is the 'mantra' to be followed today. Reduce, Reuse, Recycling and Recirculation are the necessities to reduce waste and minimize environmental pollution.

There were provisions already existing in various enactments such as the Indian Penal Code, the Criminal Procedure Code, the Indian Forest Act etc. for regulation and legal action for specific environmental issues. However, with emerging environmental scenario, these legislations were found inadequate to check the degradation of environment. Thus, it was considered to have uniform laws to handle different environmental issues all over the Country. Accordingly, Parliament of India has promulgated various environmental laws.

1.1 Environmental Laws

Important enactments for the protection of the environment for compliance by the entrepreneurs are:

- Water (Prevention & Control of Pollution) Act, 1974
- Air (Prevention & Control of Pollution) Act, 1981
- Environment (Protection) Act, 1986
  - ✓ Hazardous and Other Wastes (Management, Handling & Trans-boundary Movement) Rules, 2016
  - ✓ Plastic Waste Management Rules, 2016
  - ✓ E-Waste (Management) Rules, 2016
  - ✓ Bio-Medical Waste Management Rules, 2016
  - ✓ Solid Waste Management Rules, 2016
  - ✓ Construction & Demolition Waste Management Rules, 2016
  - ✓ Batteries (Management & Handling) Rules, 2001
  - ✓ Noise (Regulation & Control) Rules, 2000
- Environment Impact Assessment Notification, 2006

Besides above, Ministry of Environment, Forest & Climate Change (MoEF&CC) has notified some other rules which are applicable on the selective entrepreneurs.

1.2 Constitution of the Board

Government of Punjab constituted 'Punjab State Board for the Prevention and Control of Water Pollution' on 30/07/1975 under the Water (Prevention and Control of Pollution) Act, 1974. Subsequently, the Board was given the responsibility of implementing the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 and rules made there under. Later on, as per the Water (Prevention and Control of Pollution) Amendment Act, 1988, the name of the Board was changed to Punjab Pollution Control Board (here in after referred to as PPCB or Board).

1.3 Functions of the Board

- For prevention, control or abatement of pollution
  - ✓ Plan a comprehensive programme
  - ✓ Advise the State Government including the locational criteria
  - ✓ Collect and disseminate information
  - ✓ Encourage, conduct and participate investigations and research
  - ✓ Collaborate with the Central Board in organizing the training of persons engaged or to be engaged in programmes and organize mass education programmes
- Inspect industrial plants, manufacturing process, sources of pollution & its control equipment's and disposal arrangements etc.
- Plan lay down, modify or annul effluent / emission standards
- Evolve economical and reliable methods of treatment
- Evolve methods of utilization and disposal of effluents
- Establish or recognize laboratories

1.4 Vision, Mission & Goals of the Board

PPCB's functions have become multi-dimensional over the years. PPCB has been implementing and regulating the compliance of water, air and environmental laws and rules that are intended to ensure sustainable development of society with least impact on the environment. The Board recognizes that its role goes beyond enforcement of the laws and regulating the implementation of the Rules. Keeping in view that approach, the Board has prescribed its vision, mission & goals.

1.4.1 Vision

Clean & healthy environment and quality life to all the inhabitants of the State.

1.4.2 Mission

Sustainable development model by adopting 5-R Principles: Refuse, Reduce, Reuse, Recycle & Repurpose.

1.4.3 Goals

- Better Water Quality; Clean Rivers; Rejuvenation of water bodies
  - ✓ Setting up / upgradation of common treatment facilities for major industrial clusters
  - ✓ Sewage treatment plants for all the cities and towns
  - ✓ Reuse of treated wastewater and wastewater minimization
  - ✓ Conservation of water
- Better Ambient Air Quality
  - ✓ Replacement of conventional air polluting fuels with the green fuels like PNG / CNG
  - ✓ Improvement of infrastructure to control nonpoint pollution sources
  - ✓ Reduction in stubble burning
- Scientific collection, treatment, reuse and disposal of Solid Waste
- Resource management and pollution control through new / green technologies
- Monitoring and data dissemination

1.5 Administrative Setup

1.5.1 Administrative Department: Science, Technology & Environment, Govt. of Punjab

Designation	Name
Minister In-charge	Sh. Bhagwant Mann, Chief Minister, Punjab
Secretary	Sh. Rahul Tiwari, IAS

1.5.2 Organization in the Board

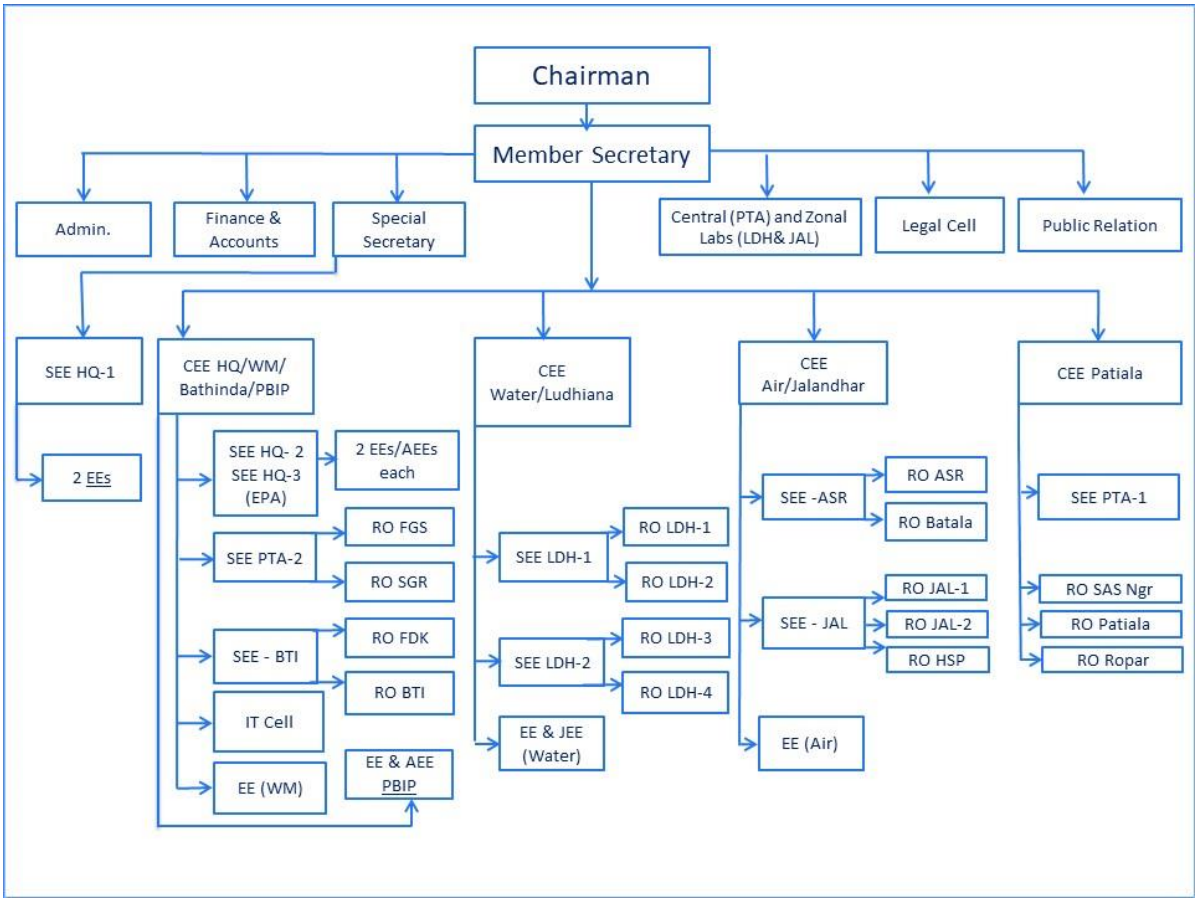
Designation	Name
Chairman	Prof. (Dr.) Adarsh Pal Vig
Member Secretary	Er. Krunesh Garg

1.5.3 Constitution of the Board [1]

Chairman, Punjab Pollution Control Board, Patiala	Chairman
Director of Industries & Commerce, Punjab	Member
State Transport Commissioner, Punjab	Member
Special/Additional/Joint Secretary to Govt. of Punjab, Department of Science, Technology, and Environment	Member
Principal Chief Conservative of Forests, Punjab/ Special Secretary to Govt. of Punjab, Forest Department	Member
Director of Local Government, Punjab	Member
Commissioner, Municipal Corporation, Ludhiana	Member
Commissioner, Municipal Corporation, Amritsar	Member
Commissioner, Municipal Corporation, Jalandhar	Member
Managing Director, Punjab Health Systems Corporation, Chandigarh	Member
Secretary/CMD, Punjab State Power Corporation Limited, Patiala	Member
Sh. Rajinder Gupta, Chairman, Trident Group, Head Quarter, Ludhiana	Member
Sh. Pankaj Sharma, General Secretary, CICU, c/o Osha Tools Pvt. Ltd. Ludhiana	Member
Sh. Lalit Bansal, Managing Director, Saraswati Group of Companies, SAS Nagar	Member
Member Secretary, Punjab Pollution Control Board, Patiala	Member

[1] *Pb. Govt. Deptt. of STE notification No.1/12/96-STE(5)/11 dated 06.01.2022*

1.5.4 Organization Chart of the Board



1.5.5 Sub-committee to discuss various policy issues and other important issues relating to prevention and control of pollution [2]

Chairman, Punjab Pollution Control Board	Chairman
Member Secretary, Punjab Pollution Control Board	Member
Special/Additional/Joint Secretary to Govt. of Punjab, Department of Science, Technology & Environment	Member
Director of Local Government, Punjab	Member
Secretary, Punjab State Power Corporation Ltd., Patiala, CMD/PSPCL	Member
Sh. Pankaj Sharma, s/o Sh. O.P. Sharma, #41-B, Udham Singh Nagar, Ludhiana	Member
Sh. Lalit Bansal, Managing Director, Saraswati Group of Companies, Village-Nimbua, Tehsil Dera Bassi, Distt. SAS Nagar	Member

Note:

- ✓ *Chief Environmental Engineer (HQ), PPCB will be the Convener of this Sub-Committee.*
- ✓ *Sub-Committee shall meet quarterly or as per the requirement to discuss various policy matter and other important issues related to PPCB.*
- ✓ *Sub-Committee may invite any other officer as per the requirement with the approval of Chairman PPCB.*

[2] *PPCB Office Order No. 123 dated 26.04.2022*

1.5.6 Industrial Advisory Committee to address various issues of the industries [3]

An Industrial Advisory Committee headed by Chairman PPCB and comprising of members from industries/industrial associations is constituted to address the various issues of the industries. Domain expert(s) or representatives from the industrial associations pertaining to the specific issue can be invited for the meeting as a special invitee. The Committee is to meet once every quarter.

1.5.7 Field Offices Network

Chief Environmental Engineer	Senior Environmental Engineer	Regional Office	Area of Jurisdiction
Chief Environmental Engineer Patiala	Zonal Office-1 Patiala	Mohali	Distt. SAS Nagar (Mohali)
		Patiala	Distt. Patiala
		Rupnagar	Distt. Rupnagar, Tehsil Balachaur (Distt. Hoshiarpur)
Chief Environmental Engineer, Ludhiana	Zonal Office-1 Ludhiana	Regional Office-1	• Area on the RHS of G.T. Road starting from Dhandari Bridge moving toward Sherpur Chowk to Samrala Chowk & then RHS of Ludhiana-Chandigarh Road before Tehsil Samrala including Phase-1 to 5 of Focal Point (excluding Phase-6-8, Focal Point & its adjoining areas falling in the jurisdiction of Regional Office-4, Ludhiana) • Area between the LHS of Ludhiana-Chandigarh Road and RHS of Ludhiana-Tajpur Road outside the Municipal limits including Kohara & Machiwara but excluding any other pocket of Tehsil Samrala • Area on the RHS of old G.T. Road starting from Sherpur Chowk towards Jagraon Bridge, Jalandhar Bye-pass Chowk to Samrala Chowk and then back upto Sherpur Chowk • Area of Tehsil Payal beyond Sidhwan Canal and on the RHS of G.T. Road when moving towards Khanna
		Regional Office-2	• Area between LHS of Gill Road and old G.T. Road starting from Vishwakarma Chowk upto Sidhwan Canal on the Gill road leading upto Doraha and back to Vishwakarama Chowk, except Tehsil Payal • Area between Chandigarh Road outside Municipal limits and LHS of G.T. Road starting from Dhandari Bridge upto Doraha (but excludes Focal Point Phase-6 to 8 and its adjoining areas falling in the jurisdiction of Regional Office-4, Ludhiana) • Area on RHS of G.T. Road starting from Sidhwan Canal upto Khanna except Tehsil Payal • Tehsil Samrala (excluding Kohara and Machhiwara Block)

[3] *PPCB Office Order No. SEE(HQ-2)/2021/151 dated 20.03.2021*

	Zonal Office-2 Ludhiana	Regional Office-3	• Area between LHS of Ludhiana - Chandigarh Road and RHS of Ludhiana-Tajpur Road upto M.C. Limits • RHS of Ludhiana- Ferozepur Road via Jagraon Bridge which includes Tajpur Road, Rahon Road, Bahadurke Road, G.T. Road, Jalandhar Bye pass, Haibowal Road, Hambran etc. (irrespective of M.C. Limits) • Tehsil Jagraon • Area on the RHS of old Ludhiana-Delhi G.T. Road starting from Jagraon Bridge to Vishwakarma Chowk and RHS of Gill Road upto Sidhwan Canal and moving along Canal upto Ludhiana-Ferozepur Road and back to Jagraon Bridge
		Regional Office-4	• Focal point phase-6 to 8 and adjoining areas / extensions of these Focal Points, mainly falling between Sua Road (leading towards phase 7) and Gobindgarh-Nichi Mangli Road (leading towards Chandigarh Road) • Tehsil Payal & Raikot • Area outside Sidhwan Canal confined between LHS of Ludhiana- Ferozepur Road and RHS of G.T. Road (Ludhiana-Delhi Side) excluding Tehsil Payal (In this pocket, the industries pertaining to Tehsil Payal fall under the Jurisdiction of Regional Offie-1 and of Ludhiana Tehsil or Sub Tehsil Dehlon fall under the jurisdiction of Regional Office-4, Ludhiana)
Chief Environmental Engineer, Jalandhar	Zonal Office Jalandhar	Jalandhar -1	• Area within the Municipal Corporation limits of Jalandhar (RHS of Old G.T Road leading from Jalandhar to Amritsar) • Tehsil/Blocks: Bhogpur, Kartarpur & Adampur of Jalandhar District
		Jalandhar-2	• Distt. Kapurthala • Area outside the Municipal Corporation limits of Jalandhar (Except Tehsil/Blocks: Bhogpur, Kartarpur & Adampur of Jalandhar District) • Area within the Municipal Corporation limits of Jalandhar (LHS of Old G.T Road leading from Jalandhar to Amritsar)
		Hoshiarpur	Distt. Hoshiarpur & SBS Nagar
	Zonal Office Amritsar	Amritsar	Distt. Amritsar & Tarn Taran
		Batala	Distt. Gurdaspur & Pathankot
Chief Environmental Engineer, Bathinda/ Head Quarter, Patiala	Zonal Office-2 Patiala	Sangrur	Distt. Sangrur, Barnala and Malerkotla
		Fatehgarh Sahib	Distt. Fatehgarh Sahib & Tehsil Khanna
	Zonal Office, Bathinda	Bathinda	Distt. Bathinda , Mansa & Sri Muktsar Sahib
		Faridkot	Distt. Faridkot, Ferozepur, Fazilka & Moga

1.5.8 Contact details: Offices of the Board

Officers: Head Office Complex at Patiala				
Chairman	Vatavaran Bhawan, Nabha Road, Patiala.	0175-2215793	chairmanppcb@yahoo.co.in	chairman.ptl.ppcb@punjab.gov.in
Member Secretary	Vatavaran Bhawan, Nabha Road, Patiala.	0175-2215802	msppcb@gmail.com	ms.ppcb@punjab.gov.in
CEE HQ	Vatavaran Bhawan, Nabha Road, Patiala.	0175-2309997	ceehopatiala@gmail.com	ceehq.ppcb@punjab.gov.in
SEE HQ-I	Vatavaran Bhawan, Nabha Road, Patiala.	--	seehq1ppcb@yahoo.com	seehq1.ppcb@punjab.gov.in
SEE HQ-II	Vatavaran Bhawan, Nabha Road, Patiala.	0175-2300446	hq2see@yahoo.com	seehq2.ppcb@punjab.gov.in
SEEHQ-III/ EPA	Vatavaran Bhawan, Nabha Road, Patiala.	0175-2200282	epappcb@gmail.com	eeepa.ppcb@punjab.gov.in
Officers: Punjab Bureau of Investment Promotion (PBIP)				
CEE(PBIP)	Udyog Bhawan, Sector-17, Chandigarh	0172-2776006	cee.ppcb@investpunjab.gov.in	cee.ppcb@investpunjab.gov.in
EE(PBIP)	Udyog Bhawan, Sector-17, Chandigarh	0172-2776035	contact.guneetsethi@gmail.com	--
Chief Environmental Engineers (Chief Offices)				
Patiala	Vatavaran Bhawan, Nabha Road, Patiala	0175-2307717	ceepatiala@gmail.com	ceepta.ppcb@punjab.gov.in
Bathinda	Vatavaran Bhawan, Nabha Road, Patiala	0175-2309997	ceehopatiala@gmail.com	ceebti.ppcb@punjab.gov.in
Ludhiana	E-648-B, Phase-5, Focal Point, Ludhiana	0161-2673353	ceeludhiana@yahoo.com	ceeldh.ppcb@punjab.gov.in
Jalandhar	C-1, Indl. Focal Point, Jalandhar	0181-2604885	ceejalandhar@yahoo.com	ceejal.ppcb@punjab.gov.in
Senior Environmental Engineers (Zonal Offices)				
Patiala-1	Vatavaran Bhawan, Nabha Road, Patiala	0175-2301182	ppcbseezp1@yahoo.com	seezopta1.ppcb@punjab.gov.in
Patiala-2	Vatavaran Bhawan, Nabha Road, Patiala	0175-2306222	ppcbzop2@ymail.com	seezopta2.ppcb@punjab.gov.in
Ludhiana-1	E-648-B, Phase-V, Focal Point, Ludhiana	0161-4673789	ppcbzo1ldh@gmail.com	seezoldh1.ppcb@punjab.gov.in
Ludhiana-2	E-648-B, Phase-V, Focal Point, Ludhiana	0161-2670141	seezo2ldhppcb@yahoo.com	seezoldh2.ppcb@punjab.gov.in
Bathinda	St. No.12, Power House Road, Bathinda	----	seezobti@gmail.com	seezobti.ppcb@punjab.gov.in
Jalandhar	C-1, Indl. Focal Point, Jalandhar	0181-2601612	seeppcbjal@gmail.com	seezojal.ppcb@punjab.gov.in
Amritsar	Plot No.164, Focal Point Mehta Road, Amritsar	0183-2582790	seezoasr@yahoo.com	seezoasr.ppcb@punjab.gov.in

Environmental Engineer (Regional Offices)				
Patiala	Vatavaran Bhawan, Nabha Road, Patiala	0175-2228132	eero_patiala@yahoo.com	eeropta.ppcb@punjab.gov.in
Sangrur	Ind. Focal Point, Sunam Road, Sangrur	01672-233475	eerosangrur@gmail.com	eerosgr.ppcb@punjab.gov.in
Bathinda	Distt. Administrative Complex, Room No. 401E, 406E 418E, 3rd floor, Bathinda	0164-2212827	eerobti@yahoo.in	eerobti.ppcb@punjab.gov.in
Faridkot	Ferozpur Road, Near Dhara Singh Colony, St No.2, Faridkot	--	ppcbfdk@yahoo.com	eerofdk.ppcb@punjab.gov.in
Batala	66, Industrial Focal Point, Batala.	01871-226033	ppcbbatala@gmail.com	eerobta.ppcb@punjab.gov.in
Jalandhar-1	Industrial Focal Point, Jalandhar	0181-2260079	eerojalandhar@gmail.com	eerojal.ppcb@punjab.gov.in
Jalandhar-2	Industrial Focal Point, Jalandhar	0181-2260079	eero2jalandhar@gmail.com	--
Hoshiarpur	E-18-A, Focal Point, Hoshiarpur.	01882-248020	eeppcbhoshiarpur@gmail.com	eerohsp.ppcb@punjab.gov.in
Fatehgarh Sahib	NISST Building, G.T. Road, Mandi Gobindgarh.	01765-242400	eerofgs@gmail.com	eerofgs.ppcb@punjab.gov.in
SAS Nagar	Plot No. 55, Phase 2 OPP. Bassi Theatre, SAS Nagar, Mohali	0172-5013300	eenodal@yahoo.in	eeromoh.ppcb@punjab.gov.in
RO-1, Ludhiana	E-648-B, Phase-5, Focal Point, Ludhiana	0161-4678789	ppcbro1@yahoo.com	eeroldh1.ppcb@punjab.gov.in
RO-2, Ludhiana	E-648-B, Phase-5, Focal Point, Ludhiana	--	eeroldh2@yahoo.co.in	eeroldh2.ppcb@punjab.gov.in
RO-3, Ludhiana	Savitri Complex, Dada Motors, Dholewal, Ludhiana	0161-2540450	ppcbro3@yahoo.com	eeroldh3.ppcb@punjab.gov.in
RO-4, Ludhiana	Savitri Complex, Dada Motors, Dholewal, Ludhiana	0161-2540449	eero4ldh@gmail.com	eeroldh4.ppcb@punjab.gov.in
Amritsar	164, Opp. Water Tank, Focal Point, Mehta Road, Amritsar	0183-2582790	ppcbroamritsar@gmail.com	eeroasr.ppcb@punjab.gov.in
Rupnagar	281, Giani Zail Singh Nagar, Rupnagar	01881-351001	eeroropar@gmail.com	--
PPCB Laboratories				
Central Lab, Patiala	Vatavaran Bhawan, Nabha Road, Patiala	0175-2306990	solab2010@gmail.com	ssolabwater.ppcb@punjab.gov.in
Air section		0175-2302392	ppcbairlab@gmail.com	solabair.ppcb@punjab.gov.in
Ludhiana	E-648-B, 2nd Floor, Phase V, Focal Point, Ludhiana	0161-2670141	ilabppcbldh@gmail.com	solabldh.ppcb@punjab.gov.in
Jalandhar	C-1, Industrial Focal Point, Jalandhar.	0181-2221612	zolabjalandhar@gmail.com	solabjal.ppcb@punjab.gov.in

For names of the officers, their present place of posting and contact numbers refer website of the Board (www.ppcb.punjab.gov.in).

2. Statutory Clearances Under Environmental Laws

2.1 From Punjab Pollution Control Board

- Consent to establish under the Water (Prevention & Control of Pollution) Act, 1974 & the Air (Prevention & Control of Pollution) Act, 1981.
- Consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 & the Air (Prevention & Control of Pollution) Act, 1981.
- Authorisation under the Hazardous and Other Wastes (Management, Handling & Trans-boundary Movement) Rules, 2016
- One-time authorisation for import of other wastes (Part –D of schedule III) under the Hazardous and Other Wastes (Management, Handling & Trans-boundary Movement) Rules, 2016.
- Authorisation under the Bio-Medical Waste Management Rules, 2016.
- Registration under the Plastic Waste Management Rules, 2016.
- Authorisation under the E-Waste (Management) Rules 2016.
- Registration under the Batteries (Management & Handling) Rules, 2001.
- Authorisation under the Solid Waste Management Rules, 2016.
- Authorisation under the Construction and Demolition Waste Management Rules, 2016.

2.2 From other Statutory Authorities

- Environmental Clearance (EC) as required under the EIA notification 2006 from the Ministry of Environment, Forest & Climate Change (MoEF&CC) or State Environment Impact Assessment Authority (SEIAA) – Entrepreneurs to approach Directorate of Environment & Climate Change (DECC), Punjab, Chandigarh.
- Authorisation for import or transit for trans boundary movement of hazardous and other waste (Part – A & B of Schedule III) under the Hazardous and Other Wastes (Management, Handling & Trans-boundary Movement) Rules, 2016 from the MoEF&CC.
- Registration by the facilities processing environmentally sound management practice for recycling of used lead acid batteries/primary lead under the Batteries (Management & Handling) Rules, 2001 from the MoEF&CC.
- Registration of importer of new lead acid batteries / primary lead under the Batteries (Management & Handling) Rules, 2001 from the Central Pollution Control Board (CPCB)
- Permission for manufacture, marketing and selling of Compostable carry bags under the Plastic Waste Management Rules, 2016 from the CPCB.
- Authorisation by the producer for seeking Extended Producer Responsibility under the E-Waste (Management) Rules, 2016 from the CPCB.

2.3 Sequence for obtaining statutory clearances

- Check the category of the project (Red/Orange/Green/White).
- Check the suitability of site as per the locational guidelines prescribed by the PPCB / State or Central Govt.
- Check the requirement of Environmental Clearance (EC) under EIA notification No. GSR 1533(E) dated 14.09.2006. If so, obtain the EC from concerned authority.
- Apply & obtain Consent to Establish (CTE) under the Water Act, 1974 and Air Act, 1981.
- Execution of the Project at site.

- Apply & obtain consent to operate (CTO) under the Water Act, 1974 & Air Act, 1981 before commissioning of the industry / expansion project.
- Apply & obtain authorisation / registration under Hazardous and Other Wastes Rules, 2016; Bio-Medical Waste Rules, 2016; Plastic Waste Management Rules, 2016; E-Waste Rules, 2016; Batteries Rules, 2001 and Solid Waste Management Rules, 2016 and Construction and Demolition Waste Management Rules, 2016 (whichever applicable).

2.4 List of NOCs required by PPCB for issuance of regulatory clearances [4]

Govt. of Punjab has notified the list of NOCs required by PPCB for the issuance of regulatory approvals for setting up on an enterprise in the State of Punjab as under:

Sr. No.	NOC to be issued by the other departments	Regulatory approval /Service of PPCB	Issuing Department	Remarks
1.	Environmental Clearance under EIA Notification, 2006	Consent to operate (CTO) under Water Act, 1974 and Air Act, 1981	MOEF&CC/ SEIAA, Punjab	This clearance is required only for the projects listed in the Schedule appended to EIA Notification, 2006
2.	Site Clearance (Approval of site) under The Factories Act, 1948	Consent to establish (CTE) under Water Act, 1974 and Air Act, 1981	Department of Factories/ Labour	This clearance is only required for projects listed in The First Schedule of the Factories Act, 1948. Not required in case the site falls under designated industrial area/ zone earmarked by the authority.
3.	Approved Building Plans			*Building plans prepared and duly authenticated by Chartered Architect /Chartered Engineers as may be authorized to do so under the provision of 3A of the Punjab Factory Rules, 1952 are also considered valid for grant of consent.
	For industries	CTO (for New & expansion projects)	Department of Factories/ Labour	
	For Area Development Projects & Building Construction Projects (Hospital, Educational Institution, Hotel etc.)	CTE/CTO for New & expansion projects	Department of Housing and Urban Development (HUD)/Local Govt.	
4.	NOC/CLU/ Land Use classification /permissibility certificate/ distance certificate for fulfilment of siting criteria's	CTE/CTO	HUD/Local Govt./ Revenue Authorities (DC/ADC/ SDM)	Not required in case of approved/ notified industrial estates, areas and focal points
5.	NOC for suitability of location for Godown to be used for storage of scrap/other wastes	One time authorisation for import of other waste listed in Part D of Schedule-III of HoWM Rules, 2016	HUD/Local Govt.	Not required in case of approved/ notified industrial estates, areas and focal points.
6.	Import license from Directorate General of Foreign Trade,	One time authorisation for import of other waste listed in Part D of Schedule-III of HoWM Rules, 2016	Directorate General of Foreign Trade	-
7.	Certificate of Installed capacity as per registration issued by the District Industries Centre	For Issuance of Authorisation -cum-Passbook under HoWM Rules, 2016	Department of Industries & Commerce	Only required by those industries which are engaged in the reprocessing or reuse or recycling of hazardous wastes
		Authorisation under e-Waste Rules, 2016		Only required by dismantler or recycler or refurbisher as e-waste facility
8.	Carrying capacity certificate of area (In case of Stone crushers/ screening /washing units)	CTE/CTO	Dept. of Mines & Geology / Water Resources	This Certificate is required to ensure the compliance of Hon'ble NGT orders in OA no. 57/2020.
Note: *In very few cases, apart from aforesaid NOCs, any additional clearance/NOC may be required from concerned stakeholders to prevent adverse effect on sensitive receptors.*				

[4] *Govt. of Punjab (STE) Notification No. STE-STEB010/25/2022-STE4/325110 dated 02.03.2022*

3. Categorization of Industries

3.1 Categorization based on Capital Investment of the industry

Sr. No.	Scale of Industry	Investment in Plant & Machinery
1.	Small	Not exceeding Rupees Five Crore.
2.	Medium	More than Rupees Five Crore but not exceeding Rupees Ten Crore
3.	Large	More than Rupees Ten Crore

Revised criteria for classification of MSME industries by the Govt. of India[5], is under the consideration of the Board.

3.2 Categorization on the basis of Pollution Index [6]

Sr. No.	Category	Sr. No.	Category
1.	Red	2.	Orange
3.	Green	4.	White

List of Red/Orange/Green/White category of industries is placed as **Annexure-3-A**.

Note:- *Industry not covered in the above list will be categorized by a committee headed by Member Secretary[7], in accordance with the pollution index/rating given by the Central Pollution Control Board (CPCB).[8]*

3.3 17 Categories of Highly Polluting Industries

CPCB has categorized following 17 industrial sectors as highly polluting industries:

Sr. No.	Type of industry	Sr. No.	Type of industry
1.	Aluminium Smelter	2.	Cement
3.	Chloro Alkali	4.	Copper Smelter
5.	Dyes and Dye-Intermediates	6.	Sugar (excluding Khandsari)
7.	Thermal Power Plants	8.	Zinc Smelter
9.	Distillery including Fermentation Industry	10.	Pulp & Paper (paper mfg. with or without pulping)
11.	Fertilizer (basic): excluding formulation	12.	Pharmaceutical (excluding formulation)
13.	Oil Refinery (Mineral Oil or Petro Refineries)	14.	Pesticides (Technical) (excluding formulation)
15.	Petrochemicals (Manufacture of & not merely use as raw material)	16.	Iron and Steel (involving processing from ore/Integrated Steel Plants)
17.	Tanneries		

3.4 Grossly Polluting Industries (GPI)

Industries discharging effluent into water course and a) handling hazardous chemicals as specified in Manufacturing, Import, Storage of Hazardous Chemicals Rule, 1989, or b) effluent having BOD load of 100 Kg per day or more, or c) a combination of (a) and (b).

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[5] *Ministry of Micro, Small, Medium enterprises vide its notification no. S.O. 1702(E) dated 01.06.2020*

[6] *PPCB Office Order No. SEE (HQ-2)/F-10/Vol.II)/458 dated 29.9.2016*

[7] *PPCB Office Order No. 339 dated 29.7.2016*

[8] *CPCB Directions Vide No. B-29012/ESS/2015-16/8584 dated 7.3.2016*

Annexure-3-A

List of Red, Orange, Green and White Category Industries

Red Category Industries

Sr. 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 (integrated facilities) having either one or combination 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 (MH&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 mfg. (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 (MH&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 Khandsari)
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 (MH&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, poly-chlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in Part-C of this Schedule.
16.	1016	Milk processes & dairy products (integrated project-Large & Medium) (Also Refer orange category-2024)
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 & above** (Also refer orange category-2084)
24.	1024	Asbestos and asbestos based industries
25.	1025	Basic chemicals & electro chemicals and its derivatives including mfg. 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 & above** (Also Refer orange category-2085)
31.	1031	Hotels having overall waste water generation @ 100 KLD and more (or) having rooms 100 and above (Also refer orange category-2038)
32.	1032	Industries engaged in recycling/ reprocessing/ recovery/ reuse of hazardous waste under Schedule IV of HW (MH&TBM) Rules, 2008 - items namely lead acid battery plates & other lead scrap/ ashes/ residues not covered under Batteries (M&H) 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 (MH&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, poly chlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in Part-C of this Schedule
34.	1034	Manufacturing of glue and gelatine
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 workshop/ integrated road transport workshop/ authorized service centers having waste water generation 100 KLD and above (Also refer orange category-2089)
40.	1040	Yarn/ Textile processing involving any effluent/ emission generating processes including bleaching, dyeing, printing and coloring
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 fibres 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 & 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 –mfg. 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 (Also refer orange category-2013)
62.	1062	Automobile servicing, repairing and painting (excluding only fuel dispensing) having waste water generation 100 KLD and above (Also refer orange category-2018)
63.	1063	Building and construction projects more than 20,000 sq. m built up area and having waste water generation 100 KLD and above (Also refer orange category-2021, 2099, 2111)
64.	1064	Ceramics & Refractories having coal/fuel consumption 12 MTD & more (Also refer orange category-2022)
65.	1065	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol) having waste water generation 100 KLD and above (Also refer orange category-2027)
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 (Also refer orange category-2028)
67.	1067	Industry or processes involving foundry operations having capacity of 5 MT/hr & more as such units require using coal/coke at more than 500 Kg/hr (Also refer orange category-2042).

68.	1068	Manufacturing of glass (Lead glass only) (Also refer orange category-2045)
69.	1069	Non-alcoholic beverages (soft drink) & bottling of alcohol/non-alcoholic products having waste water generation 100 KLD and above(Also refer orange category-2053)
70.	1070	Vegetable oil manufacturing including solvent extraction and refinery/ hydrogenated oils having waste water generation 100 KLD and above (Also refer orange category-2071)
71.	1071	Parboiled Rice Mills having waste water generation 100 KLD and above (or) fuel consumption 12 MTD and above (or) both (Also refer orange category-2079 and green category – 3074 along with Note 2)
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 projects
76.	1076	Common treatment and disposal facilities-Solvent/acid recovery plant
77.	1077	MSW sanitary land fill site
78.	1078	Common treatment and disposal facilities-CETP for Red category industries (Also refer orange category-2086)
79.	1079	Industrial Estate/ Park/ Complexes/ Area/ Export Processing Zone/ SEZs/ Biotech Park/ Leather Complex
80.	1080	Pharmaceutical R & D activities (for sustained release/extended release of drugs only and not for commercial purpose) (Also refer orange category-2074)
81.	1081	Sewage Treatment Plants
82.	1082	Pyrolysis Plants
83.	1083	Tyre, tube & rubber components with boiler
84.	1084	Analytical & material testing lab
85.	1085	Industrial inorganic gases namely a) Chemical gases: Acetylene, hydrogen, Chlorine, Fluorine, ammonia, Sulphur Dioxide etc. b) Hydro carbon gases: Methane, Ethane, Propane
86.	1086	Reprocessing of waste oil
87.	1087	Area/Infrastructure development projects covered under EIA notification (Also refer orange category-2091)
88.	1088	Sand mining projects of Category A & B1 under EIA notification (Refer orange category- 2090)
89.	1089	Railway Stations (wastewater generation ≥ 100 KLD) (Also refer orange category-2104)[9] i) Wastewater generating from public toilets, public-taps, platform and apron washing, coach cleaning, laundry, restaurants etc. ii) Air emissions may be generated from boilers, DG sets (>1 MVA), railway sidings etc. iii) Small amount of hazardous waste such as used oil from DG sets, Waste oil from coach cleaning etc. may be generated.

[9] *PPCB Office Order No. SEE(HQ-2)2020/585 dated 23.10.2020*

90.	1090	Steamed Rice Unit having fuel consumption ≥ 12 MTD[9] (Also refer green category – 3074 along with Note 2)
91.	1091	Compressed Biogas (CBG)/Bio-CNG plants[10] *Pollution potential from Compressed Biogas (CBG)/Bio-CNG plants may vary depending on the type of feed stock, size of operation and requirement for discharge of wastewater.* *In CBG plants, high BOD/COD wastewater is generated from anaerobic bio-digesters which is required to be treated prior to disposal or to comply with Gazette Notification No. 2051 dated 14.07.2020 & No. 1972 dated 01.06.2021 for use as Fermented Organic Manure (FOM) and/or Liquid Fermented Organic Manure (LFOM). Further, these plants may cause odour nuisance due to storage & handling of organic waste and composting. Exhausted adsorption media/ filters, used lubrication/hydraulic oils and spent solvents may also get generated as hazardous waste.* *Accordingly, the following classification is suggested:*
	1091 A	CBG plants based on Municipal Solid Waste (MSW) • The waste contains heterogeneous material. • The anaerobic biodegradation of the same may generate waste water containing high BOD and COD. • If discharge of wastewater is more than 100 KLD. (Also refer Orange Category -106 (2106-A))
	1091 B	CBG plants based on process waste (industrial/process liquid effluent & solid waste like press mud, organic sludge, molasses, etc.) • The anaerobic biodegradation of the same may generate waste water containing high BOD and COD. • If discharge of wastewater is more than 100 KLD. (Also refer Orange Category -106 (2106-B))
92.	1092	Guar Gum manufacturing from guar beans or split having waste water generation more than 100 KLD or using liquid/solid fuel more than 12 MTD (except DG set) or both[11]
93.	1093	Rubber reclaim industry with or without processes mentioned at 1 & 2 above and using peptizers (process oil & pine tar oil etc.) & reclaiming agents (disulphides) or using solid/liquid fuel as heating source or having effluent discharge from washing of tyres ≥ 100 KLD or both[11]
94.	1999	Miscellaneous (Red) – Industries / Projects not covered under specific category.

Note: *Sr. No. 61 to 80 are added to get clarity in CPCB list*

Sr. No. 81 to 88 are added based on scoring done by Committee of PPCB.

Orange Category Industries

Sr. No	Type code	Industry Sector-Types
1.	2001	Dismantling of rolling stocks (wagons/coaches)
2.	2002	Bakery and confectionery units with production capacity>1TPD (with ovens/furnaces)/units having production <1TPD with oven/furnace other than electric/gas oven

[10] *PPCB letter no. SEE (HQ-2)/2021/23407-09 dated 26.10.2021*

[11] *PPCB letter no. 65 dated 11.03.2022*

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 vegetables 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 < 100 KLD (Also refer red category -1061)
14.	2014	Thermometer manufacturing
15.	2015	Cotton spinning and weaving (medium and large scale)
16.	2016	Almirah, Grill Mfg. (dry mechanical process) with spray painting (Also refer white category-4039)
17.	2017	Aluminium & copper extraction from scrap using oil fired furnace (dry process only)
18.	2018	Automobile servicing, repairing & painting (excluding only fuel dispensing) having waste water generation less than 100 KLD (Also refer red category 1062 and white category-4081)
19.	2019	Ayurvedic and homeopathic medicine (with Boiler) (Also refer green category-3002)
20.	2020	Brickfields (excluding fly ash brick manufacturing using lime process)
21.	2021	Building and construction project more than 20,000 sq. m built up area and having waste water generation less than 100 KLD (Also refer red category -1063, orange category- 2099, 2111)
22.	2022	Ceramics & Refractories having coal /fuel consumption < 12MTD (Also refer red category -1064)
23.	2023	Coal washeries
24.	2024	Dairy and dairy products (small scale)- (Also refer red category-1016)
25.	2025	DG Set of capacity >1MVA but < 5MVA- (Also refer green category-3065 and white category - 4069)
26.	2026	Dry coal processing, mineral processing, industries involving ore sintering, palletisation, 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 (Also refer red category -1065)

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) up to 1 MT/hr. production (Also refer red category -1066)
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/ palletisation of camphor tablet, naphthalene ball from camphor/naphthalene powder
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 & < 100 rooms or having waste water generation > 10 KLD and less than 100 KLD and having a coal/ oil fired Boiler (Also refer red category -1031)
39.	2039	Ice cream
40.	2040	Industries engaged in recycling/ reprocessing/ recovery/ reuse of hazardous waste under Schedule IV of HW(MH&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(MH&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 < 5 MT/hr as such units require coal/coke at less than 500 Kg/hr (Also refer red category -1067)
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) (Also refer red category-1068)
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) (Also refer green category-3064)
52.	2052	New highway construction projects
53.	2053	Non-alcoholic beverages (soft drink) & bottling of alcohol/non-alcoholic products having waste water generation less than 100 KLD(Also refer red category 1069)
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 (Also refer green category-3040)
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
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 re-treading
71.	2071	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils having waste water generation < 100 KLD (Also refer red category-1070)
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 scaler
74.	2074	Pharmaceutical formulation and for R & D purpose (for sustained release/ extended release of drugs only and not for commercial purpose)
75.	2075	Synthetic resins
76.	2076	Synthetic rubber excluding moulding
77.	2077	Cashew nut processing
78.	2078	Coffee seed processing
79.	2079	Parboiled Rice Mills having waste water generation < 100 KLD and fuel consumption less than 12 MTD (Also refer red category-1071 and green category – 3074 along with Note 2)
80.	2080	Foam manufacturing
81.	2081	Industries engaged in recycling/ reprocessing/ recovery/ reuse of hazardous waste under Schedule IV of HW(MH&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(MH&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 & Commercial Air Strips having waste water generation < 100 KLD (Refer red category-1023)
85.	2085	Health-care Establishment (as defined in BMW Rules) without incinerator and having total waste water generation less than 100 KLD (Also refer red category-1030)
86.	2086	Common treatment and disposal facilities (CETP for Orange cat. Inds.) (Also refer red category-1078)
87.	2087	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying (Also refer green category-3028)
88.	2088	Tea processing (with boiler) (Also refer green category-3063)
89.	2089	Railway locomotive work shop/Integrated road transport workshop/Authorized service centers having waste water generation < 100 KLD (Also refer red category-1029)
90.	2090	Sand minding projects of Category B2 covered under EIA notification (Also refer red category - 1089)
91.	2091	Area/Infrastructure development project including educational institutions, community hall, IT park, theme park (not covered under EIA notification 2006) (Also refer red category - 1088)
92.	2092	Chemical mixing cum storage units
93.	2093	Pesticides formulation
94.	2094	Rice Mills (with or without dryer) > 10 TPD (Also refer green category -3039 and green category – 3074 along with Note 2)

95.	2095	Marriage Palaces		
96.	2096	Bottling of gases		
97.	2097	Infrastructure development projects not covered under EIA notification		
98.	2098	Surgical cotton including wet process		
99.	2099	Building and construction project ≤ 20,000 sq. m built up area (Also refer red category - 1063 orange category- 2021, 2111)		
100.	2100	Light Engineering & Fabrication units with spray painting		
101.	2101	Hosiery/ Garment manufacturing with washing only (without bleaching and dying) with discharge greater than or equal to 2 KLD (Also refer green category -3067)		
102.	2102	Tyre, tube and rubber components without boiler[11]		
103.	2103	Injection moulding of plastic {only from fresh(virgin) plastic granules and only large & medium scale industry} (Also refer green category -3068)		
104.	2104	Railway Stations (wastewater generation ≥ 10 KLD, but < 100 KLD) (Also refer red category-1089)[9]		
105.	2105	Scrapping centers (for end of lift of vehicles and other scrap such as plant and machineries, structural material, railway coaches & wagons etc.)[9]		
		a	Collection, de-pollution, dismantling centres and shredding centres.	i) Process will generate waste water from vehicle washing, surface washing, spillage while depolluting the vehicle ii) Emission of particulate matter iii) Residue generated during the process needs stabilization before disposal as it may contain asbestos
		b	Collection, de-pollution and dismantling centres	i) Process will generate waste water from vehicle washing, surface washing etc. ii) Fugitive emission may be generated from dismantling and other activities iii) Residue generated during the process needs stabilization before disposal as it may contain asbestos
		c	Shredding centres (can include white goods* / other scraps also)	i) Waste water may be generated from floor washing etc. ii) Residue generated may be incinerated/ landfilled iii) Emission of particular matter
		Note- ** Recycling/ dismantling of white goods are covered under E-Waste (Management & Handling) Rules, 2016, and have already been categorised in CPCB document "Classification of Industrial Sector" (Feb, 2016)*		
106.	2106	Compressed Biogas (CBG)/Bio-CNG plants [10] *Pollution potential from Compressed Biogas (CBG)/Bio-CNG plants may vary depending on the type of feed stock, size of operation and requirement for discharge of wastewater.* *In CBG plants, high BOD/COD wastewater is generated from anaerobic bio-digesters which is required to be treated prior to disposal or to comply with Gazette Notification No. 2051 dated 14.07.2020 & No. 1972 dated 01.06.2021 for use as Fermented Organic Manure (FOM) and/or*		

		Liquid Fermented Organic Manure (LFOM). Further, these plants may cause odour nuisance due to storage & handling of organic waste and composting. Exhausted adsorption media/ filters, used lubrication/hydraulic oils and spent solvents may also get generated as hazardous waste. • *Accordingly, the following classification is suggested:*
	2106 A	CBG plants based on Municipal Solid Waste (MSW)[10] • The waste contains heterogeneous material. • The anaerobic biodegradation of the same may generate waste water containing high BOD and COD. • If discharge of wastewater is less than or equal to 100 KLD. (Also refer red category-91 (1091-A))
	2106 B	CBG plants based on process waste (industrial/process liquid effluent & solid waste like press mud, organic sludge, molasses, etc) [10] • The anaerobic biodegradation of the same may generate waste water containing high BOD and COD. • If discharge of wastewater is less than equal to 100 KLD. (Also refer red category-91 (1091-B))
	2106 C	CBG plants based on crop residue (paddy straw/wheat straw/corn sweet sorghum/napier grass, etc.) [10] • If discharge is more than 100 KLD. (Also refer green category-71 (3071-A))
	2106 D	CBG plants based on animal waste (dairy farms, poultry farms, and other animal waste) [10] • If discharge is more than 100 KLD. (Also refer green category-71 (3071-B))
107.	2107	Dairy Farm[9] i. This categorization is applicable to dairy farm where mulching animals (cows/ buffalos) are housed to produce milk for distribution and supply to milk processing plants ii. Wastewater is generated from floor washing urine output and bathing/ washing of animals Wastewater contains high organic matter, however, it is non-toxic and easily biodegradable iii. Odour is generated due to dung and wastewater iv. Stand-alone or isolated dairy farm, having 15 animals & above, shall obtain CTE/ CTO under "Orange Category" v. Dairy Farm in colonies/ clusters should obtain CTE/ CTO under "Orange Category" vi. All dairy farms shall follow the "Guidelines for Environmental Management of Dairy Farms and Gaushalas" issued by CPCB
108.	2108	Gaushalas having wastewater generated 100 KLD or more[9] i. This categorization is applicable to Gaushala where weak, sick, injured, handicapped and abandoned homeless cattle/ cows are housed for rehabilitation ii. Wastewater is generated from floor washing urine output and occasional bathing of animals. Wastewater contains organic matter, however, it is non-toxic and easily biodegradable iii. Odour is generated due to dung and wastewater iv. All Gaushalas shall follow the "Guidelines for Environmental Management of Dairy farms and Gaushalas" issued by CPCB
109.	2109	Steamed Rice unit having fuel consumption < 12 MTD[9] (Also refer green category – 3074 alongwith Note 2)

110.	2110	Tiny / Small scale unit engaged in manufacturing of sewing machine parts having processes like cutting, punching, machining followed by hardening / tempering (with or without drum washing with plain water or caustic) and polishing etc.[12]
111.	2111	Building and construction projects, having built-up area up to 20,000 m^2 and wastewater generation ≥ 50 KLD (Also refer red category -1063, orange category- 2021, 2099)[13]
112.	2112	Construction and Demolition (C & D) waste processing plants[13]
113.	2113	Gold Assaying & Hallmarking centres[13]
114.	2114	Guar Gum manufacturing from guar beans or split having waste water generation less than 100 KLD or using liquid/solid fuel (except DG set) or both[11].
115.	2115 (A)	Rubber chips /crumb manufacturing from waste/ used tyres using cutter/ shredder/ de-beading facility and grinder/ pulverizer or having effluent discharge from washing of tyres 10 KLD to 100 KLD or both[11]
	2115 (B)	Rubber reclaim industry with or without processes mentioned at 1 & 2 above and using peptizers (like process oil & pine tar oil) and reclaiming agent (like disulphides) and electricity as heating source or cleaner fuel (LPG or CNG or Bio-gas) or having effluent discharge from washing of tyres 10 KLD to 100 KLD or both[11]
	2999	Miscellaneous (Orange)
	Note:	***1.*** *Sr. No.84 to 89 are added to get clarity in CPCB list and Sr. No.90 to 103 are added based on scoring done by the Committee of PPCB.* ***2.*** *Sr. no. 63 also includes[14]* *i) Products made from iron also in addition to steel using various furnaces as referred above.* *ii) Foundries based on induction furnace shall also be covered under this category of the industrial sector.*

Green Category Industries

Sr. 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) (Also refer orange category -2019)
3.	3003	Bakery/ confectionery/ sweet products (with production capacity <1 TPD (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 waste
6.	3006	Blending of melamine resins & different powder, additives by physical mixing
7.	3007	Brass & bell metal utensils mfg. from circles (dry mechanical operation without re-rolling facility)
8.	3008	Candy

[12] *PPCB Office Order No. 2457-59 dated 03.02.2021*

[13] *PPCB Office Order No. 5785-87 dated 15.03.2021*

[14] *CPCB letter No. B-29012/ESS/CPA/2016-17/19659 dated 21.11.2016*

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, afri, well ring, block/tiles etc. (should be done in closed covered shed to control fugitive emissions)
12.	3012	Ceramic colour mfg. 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 & tile mfg. 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.
25.	3025	Insulation and other coated papers (excluding paper or pipe manufacturing)
26.	3026	Leather foot wear and leather products (excluding tanning & 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) (Also refer orange category -2087)
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 handling above 25,000 birds at single location) [15] (Poultry farms handling above 5,000 birds at single location: applicable with effect from 1st Jan. 2023)[16]
34.	3034	Power looms (without dye and bleaching)

[15] *CPCB letter No. CPCB/IPC-V/NGT_OA-681/Poultry/2021/4944 dated 17.08.2021.*

[16] *CPCB letter no. CPCB/IPC-V/NGT/Poultry/2022/10270 dated 10.01.2022*

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) < 10 TPD (Also refer orange category -2094)
40.	3040	Rolling mill (gas/ electric fired) and cold rolling mill (Also refer orange category -2061)
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 re-treading (without boilers)
49.	3049	Chilling plant and ice making without using ammonia
50.	3050	CO_2 recovery
51.	3051	Distilled water (without boiler) with electricity as source of heat
52.	3052	Hotels (up to 20 rooms and without boilers) and having waste water generation < 10 KLD and no hazardous waste generation (Also refer red category – 1031 & orange category – 2038)
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	Fly ash export, transport & disposal facilities
59.	3059	Mineral stack yard/ Railway sidings
60.	3060	Oil and gas transportation pipeline contains small gas waste power plants up to 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) (Also refer orange category -2088)
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) (Also refer orange category -2051)
65.	3065	DG Sets more than 10 KVA ***Note:*** *Standalone DG sets having total capacity of 1 MVA or less provided or being provided for setting up of telecom towers are exempted.*[17] *(Also refer Orange Category – 2025 and white category – 4069)*

[17] *PPCB office letter no. 273 dated 04.05.2021*

66.	3066	Steam calendaring /zero finishing /centering etc. (without washing process)
67.	3067	Hosiery/ Garment manufacturing with washing only (without bleaching and dying) with discharge less than 2 KLD and is connected to public sewer (Also refer orange category -2101)
68.	3068	Injection moulding of plastic {only from fresh(virgin) plastic granules and only small scale industry} (Also refer orange category -2103)
69.	3069	Standalone sand/ shot blasting with inbuilt bag filter
70.	3070	Railway Stations (wastewater generation <10 KLD (Also refer red category 89 & orange category 104)[9]
71.	3071	Compressed Biogas (CBG)/Bio-CNG plants[10] Pollution potential from Compressed Biogas (CBG)/Bio-CNG plants may vary depending on the type of feed stock, size of operation and requirement for discharge of wastewater. In CBG plants, high BOD/COD wastewater is generated from anaerobic bio-digesters which is required to be treated prior to disposal or to comply with Gazette Notification No. 2051 dated 14.07.2020 & No. 1972 dated 01.06.2021 for use as Fermented Organic Manure (FOM) and/or Liquid Fermented Organic Manure (LFOM). Further, these plants may cause odour nuisance due to storage & handling of organic waste and composting. Exhausted adsorption media/ filters, used lubrication/hydraulic oils and spent solvents may also get generated as hazardous waste. Accordingly, the following classification is suggested:
	3071 A	CBG plants based on crop residue (paddy straw/wheat straw/corn sweet sorghum/napier grass, etc.) [10] • If discharge is less than or equal to 100 KLD. (Also refer orange category – 106 (2106-C))
	3071 B	CBG plants based on animal waste (dairy farms, poultry farms, and other animal waste) [10] • If discharge is less than or equal to 100 KLD. (Also refer orange category – 106 (2106-D))
72.	3072	Gaushalas having wastewater generation < 100 KLD[9]
73.	3073	Cotton Ginning Unit[9]
74.	3074	Standalone units engaged in manufacturing of fortified rice (without any trade effluent except RO Reject) – general siting criteria applicable for green category industry[18]
		Fortified rice unit to be established in the existing premises of rice mills/parboiled units. Applicable as per categorization already notified by Punjab Pollution Control Board shall remain applicable as follows: • *1071- Parboiled Rice Mills having waste water generation ≥ 100 KLD or fuel consumption ≥ 12 MTD* • *2079- Parboiled Rice Mills having waste water generation < 100 KLD and fuel consumption < 12 MTD* • *2094- Rice Mills (With or without dryer)> 10 MTD*
75.	3075	Guar Gum Manufacturing from guar beans or split without generation of any trade effluent (except RO reject) and without using any solid or liquid fuel, except DG set (with cleaner fuel like CNG, LPG, Bio-gas etc.)[11]
76.	3076	Rubber chips/crumb manufacturing from waste/ used tyres using cutter/ shredder with de-beading facility or having effluent discharge from washing of tyres less than 10 KLD or both[11]
77.	3999	Miscellaneous (Green)

[18] *PPCB letter no. 18555 -77 dated 17.08.2021*

White Categories Industries

Sr. 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 woollen hosieries 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 machines 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 gen. through solar photovoltaic cell, wind power & mini hydel power (less than 25 MW)
36.	4036	Surgical & medical product assembling only (not involving effluent/ emission generating processes)
37.	4037	Aggarbatti and cosmetic products manufactured by blending (dry process)
38.	4038	All types of toys & Doll making electrical without wet process.
39.	4039	Almirah, Grill Manufacturing (dry mechanical process) **without spray painting** (Also refer orange category -2016)
40.	4040	Aluminium, stainless steel, brass vessel marking units having only process, spinning without use of buffing, polishing and pickling, washing, hot/ cold rolling annealing furnace and anodizing processes
41.	4041	Assembling of door closer and Rings
42.	4042	Assembly of air coolers/conditioners repairing and servicing
43.	4043	Assembly of Computer, Computer peripherals and Computer Software
44.	4044	Atta Chakki and Millet grinding
45.	4045	Audio, Video and consumer electronic equipment assembly only
46.	4046	Automobile body building without wet process
47.	4047	Automobile repair workshop (without any wet process)
48.	4048	Beauty Parlour
49.	4049	Bee Keeping
50.	4050	Belt Fastener units without wet process
51.	4051	Bindi making units
52.	4052	Bio-gas
53.	4053	Biscuits, Pastries, Cakes, Confectionery, Bread, Bakery upto 100 kg/day
54.	4054	Black Smithy Shop
55.	4055	Printing, Offset Printing
56.	4056	Book Binding
57.	4057	Brush making units with fibre/plastic wire

58.	4058	Candle manufacture
59.	4059	Carpentry & furniture units without seasoning without electrical motor
60.	4060	Carpet weaving
61.	4061	Chewing Tobacco packing
62.	4062	Coated electrode manufacturing
63.	4063	Cotton belts and tapes/cotton niwar etc.
64.	4064	Cotton cloth knitting
65.	4065	Cotton quilt and mattresses making
66.	4066	Cotton socks-knitting
67.	4067	Crown cork making units
68.	4068	Dairy farming (other than as prescribed at orange category - 2107)[9] All dairy farms shall follow the "Guidelines for Environmental Management of Dairy Farms and Gaushalas" issued by CPCB.
69.	4069	DG sets < 10 KVA ***Note:*** *Standalone DG sets having total capacity of 1 MVA or less provided or being provided for setting up of telecom towers are exempted[17]. (Also refer Orange Category – 2025 & Green Category - 3065)*
70.	4070	DPC coating of copper and aluminium were without any wet process
71.	4071	Drawing, surveying and scientific instrument making with no wet process
72.	4072	Dry grinding of spices
73.	4073	Electrical switches, accessories making and panel board without wet process
74.	4074	Electrical/ electronics testing and measuring instruments without wet process
75.	4075	Electronic components without use of chemicals
76.	4076	Embroidery
77.	4077	Fabrication units connected with animal drawn vehicles, trailers without any heat treatment, furnace use i.e. with no emissions.
78.	4078	Finished leather goods, conversion of finished without wet process
79.	4079	Fish Ponds
80.	4080	Floor Polish, Nail Polish, Tooth Powder, Hair Oil, Shampoo and Tooth Paste with blending only
81.	4081	Fuel dispensing only (without automobile servicing, repairing and painting) (Also refer orange category -2018)
82.	4082	Garments manufacturing without wet process.
83.	4083	General Wire Industries like wire drawing, barbed wire, chain links, making units without wet process
84.	4084	Gold/ Silver smithy shops with no water or chemical use
85.	4085	Green House/ Floriculture under Mechanized process under controlled temperature

86.	4086	Hand Tools without casting
87.	4087	Handicraft
88.	4088	Handlooms without wet process
89.	4089	Household appliances and kitchen equipment, without wet process
90.	4090	IT industry as per Board's office order no. GPC/Inf.Tech/F-53/2010/3 dated 16.2.2010 as amended from time to time[19].
91.	4091	Jobbing and machining
92.	4092	Knitting cloth /Fabrics (small scale) dry process.
93.	4093	Lathe and Welding sets (only electrical) without casting
94.	4094	Manufacture of cement blocks/ jallies etc.
95.	4095	Manufacture of Steel trunks/ boxes/ drums/ shutters
96.	4096	Marketing/Industrial consultancy/ advertising agencies
97.	4097	Mechanical clock/ watches etc.
98.	4098	Light Engineering & fabrication units without spray painting (dry process only)
99.	4099	Mfg. of Transformers without poly chlorinated hydrocarbon
100.	4100	Mosaic tiles, cement pipes, spun pipes manufacturing units
101.	4101	Motor and Pump Making without foundry and wet process
102.	4102	Mushroom cultivation under controlled conditions/ temperature and its compost making
103.	4103	Musical instrument with no wet process
104.	4104	Non-conventional energy items
105.	4105	Nut cracking & roasting
106.	4106	Oil extraction by kohlus or expellers without Boiler
107.	4107	Optical Frames and glasses without wet process
108.	4108	Orthopaedic equipment's without casting/ wet process
109.	4109	Packing and processing of items using mechanized process
110.	4110	Packing of agricultural/ forest produce under controlled temperature (mechanized process)
111.	4111	Paints and varnishes (mixing and blending) (without ball mill) (without any wet process)
112.	4112	Paper pins, 'U' clips, pen holders, pen & paper products without wet process
113.	4113	Paper products without wet process
114.	4114	Plastic niwar from monofilament yarn
115.	4115	Polythene bags from monofilament sheets/ polythene sheets

[19] *PPCB office order No. GPC/Inf.Tech/F.53/2010/3 dated 16.03.2010, No. GPC/Inf.Tech/F.53/2011/268 dated 04.10.2011 & No. GPC/Inf.Tech/ F.53/2015/159 dated 14.05.2015*

116.	4116	Power loom weaving (Small Scale) dry process
117.	4117	Preparation of photo identify card by using video camera-laser printing
118.	4118	R.C.C bricks
119.	4119	Seed processing units/ hybrid seeds- mechanized process
120.	4120	Sericulture units
121.	4121	Small restaurants, coffee/ tea shops and snack bars
122.	4122	Solar energy panel makings
123.	4123	Spinning (small scale) dry process
124.	4124	Sports goods without leather tanning & other wet process
125.	4125	STD booth/cable T.V net work/EPBAX
126.	4126	Tailoring shop as SSSBI
127.	4127	Tea grading and packing
128.	4128	Telecommunication equipment without wet process.
129.	4129	Typing centre/Xeroxing
130.	4130	Tyre rethreading (only cold processing).
131.	4131	Umbrellas, raincoats, tarpaulins without wet process
132.	4132	Weigh Bridge
133.	4133	Weighing machines with no wet process
134.	4134	Welding electrodes
135.	4135	Wooden and corrugated crates and boxes
136.	4136	Zip fasteners
137.	4137	Power press
138.	4138	Household bio-digesters/gobar-gas (cow-dung) plants based on biodegradable waste, etc. [10] ▪ Household bio-digesters/gobar-gas (cow-dung) plants based on biodegradable wastes, etc. with feed slurry to digesters having Volatile Organic Fraction more than 75%.
139.	4139	Used Cooking Oil (UCO) collection centres[9] i. Generally, there is no waste water generation or air emissions from UCO collection centers ii. Concerned SPCB/PCC shall ensure the above
140.	4140	Compressed Biogas (CBG)/Bio-CNG plants [10] Pollution potential from Compressed Biogas (CBG)/Bio-CNG plants may vary depending on the type of feed stock, size of operation and requirement for discharge of wastewater. In CBG plants, high BOD/COD wastewater is generated from anaerobic bio-digesters which is required to be treated prior to disposal or to comply with Gazette Notification No. 2051 dated 14.07.2020 & No. 1972 dated 01.06.2021 for use as Fermented Organic Manure (FOM) and/or Liquid Fermented Organic Manure (LFOM). Further, these plants may cause odour nuisance due to storage & handling of organic waste and composting.

		Exhausted adsorption media/ filters, used lubrication/hydraulic oils and spent solvents may also get generated as hazardous waste. Accordingly, the following classification is suggested:
	4140 A	CBG plants (irrespective of the type of feed) producing Fermented Organic Manure (FOM) & Liquid Fermented Organic Manure (LFOM) as by-products. [10] • CBG plants producing FOM & LFOM as by products in conformity with requirements of Gazette Notification No. 2051 dated 14.07.2020 & No. 1972 dated 01.06.2021, respectively, and utilizing entire FOM & LFOM as a fertilizer or manure on land and also not discharging any waste-water, subject to verification by SPCB on case-to-case basis. • Above criteria may be re-assessed based on ground conditions after a period of two years.
	(Also refer red category-1091, orange category -2106, green category -3071)	

***Conditions for exemption from consent management for white category industries:**

i) Industry is established/being established in the demarcated Industrial Estates/Zones classified by the State Authorities viz. PSIEC, Department of Industries, PUDA, CTP under draft Master Plan or in mixed category area or predominantly Industrial areas within Municipal limit of a Town/City after classification of the area by CTP/STP/DTP.

ii) There will not be any discharge of trade effluent from the industry into stream or well or sewer or onto land and/or that industry will not discharge any air pollution including noise into the atmosphere.

iii) Industry will not discharge any toxic/hazardous wastes and will not handle any toxic/hazardous chemical.

iv) In case the industry is found to create conditions that generate any type of pollution or if there is any objection from the surrounding community and if on verification, it is found that such objection has some substance, the Board shall be at liberty to take legal action against the industry under the provisions of the Water Act, 1974 and Air Act, 1981 or Environment (Protection) Act, 1986 as considered appropriate.

2. Industries which falls under white category of industries and have installed DG set of capacity more than 10 KVA and less than 1 MVA, such industries shall obtain consent only for the DG set under green category. (standalone DG sets up to 1 MVA provided with telecommunication towers are exempted from consent management)[17]

**Conditions for exemption with regard to capital investment of Rs. 1 crore waived off[20].*

[20] *PPCB Office Order No. PPCB/SEE(HQ-2)/2020/207 dated 19.03.2020*

4. Guidelines for Location of Industries and Code of Practices

4.1 General Guidelines[21]

4.1.1 For New Industries

- No new industry of any category shall be allowed in the approved residential area of any town/city of the State of Punjab and no red/orange category of industry shall be given consent to establish(CTE) within M.C. limits except in the designated industrial area/zone.
- PPCB will continue to grant CTE to any category of industries, which are permissible in the mixed land use areas/zones as per by-laws of the notified Master Plan / draft master plan.
- All Red/Orange/Green/white category of industries, which are to be established in the areas/Zone other than designated/approved areas such as Industrial Area/Industrial Estate/Industrial Focal Point/Approved Industrial Park/Industrial Zone of the statutory/non-statutory Master Plans, will be allowed to set up at a distance of 100m outside the Municipal Council limits/phirni of village/designated residential area/residential area comprising of 15 pucca houses by the Competent Authority of the State. In such cases, certificate of its location/situation from the nearest village lal lakir/phirni/MC limits from the Revenue Authorities such as Deputy Commissioner/ Additional Deputy Commissioner or the Sub-Divisional Magistrate will be required for grant of CTE(NOC)/authorisation by the Board.

  Note: *For industries where specific guidelines are prescribed and projects (other than industrial) like construction projects, marriage palaces, hotels, petrol pump, dairy farms, poultry farms etc., refer to the sub-head 4.2 (industry/projects specific guidelines)*

4.1.2 For Existing Industries

PPCB will continue to grant its consent to operate/ authorisation to all industries not having any hazardous process*, existing and operating in non-designated industrial areas prior to the date of notification of Master Plan provided the industry complies with the prescribed norms for the discharge of effluent/ emissions.

4.1.3 Continuation of operation of the industrial establishments in mixed land used/ non-designated areas[22]

*Existing industrial unit/ other establishments which were established before the notification of the Master Plan of the respective cities shall be allowed consents / extensions under the provisions of the Water Act, 1974 and Air Act, 1981 and authorisation under the provisions of Hazardous Waste

[21] *PPCB Office Order No.EE(Mega)/2013/19650-19761 dated 30.4.2013.*

[22] *PPCB Office Order No. 21 dated 08.06.2018*

Management Rules, 2016 for a period of 15 years from the date of the notification of Master Plan after taking the concrete documentary proof regarding the date of commissioning of such units. No separate approval from local bodies and other authority is required to be obtained.

4.1.4 Restriction on setting up of industrial and other activities in the vicinity of wildlife sanctuaries/zoo[23]

As per the guidelines issued by the Deptt. of Forests & Wildlife Preservation, Govt. of Punjab for compliance by existing/new industrial units/other projects and the activities regulated/permitted/ prohibited in the eco-sensitive zones around various sanctuaries/zoos in the State:

- No new industrial unit shall be allowed to be established within 500 mts periphery of any wildlife sanctuaries/zoo.
- Existing industries within 500 mts. of the wildlife sanctuaries/zoos shall follow the guidelines detailed in Annexure attached with the notification titled as "Policy Guidelines for compliance by Industrial Entrepreneurs/Units in the Eco-Sensitive Zone surrounding Wildlife Sanctuaries/Zoos of Punjab State."

4.2 Industry Specific Guidelines

State Govt. / PPCB / CPCB / MoEF&CC has laid down specific locational guidelines and codes of practice for the following industries/activities:

Sr. No.	Type of Industry/Activity	Sr. No.	Type of Industry/Activity
1.	Stone crushers and screening-cum-washing plants	2.	Stone Quarrying
3.	Brick Kilns	4.	Rice Shellers & Saila Plants
5.	Cement Plants & Grinding Units	6.	Hot Mix Plants
7.	Pyrolysis Plants	8.	Construction Projects (Residential Colonies, Commercial & other Establishments)
9.	Hotels/Marriage Palaces etc.	10.	Poultry Farms
11.	Jaggery Units	12.	Common Bio-Medical Waste Treatment Disposal Facility
13.	Petrol Pump/Gas Stations (Retail Outlets and Fuel dispensing Outlets)	14.	Gold Assaying and Hallmarking Centres
15.	Dairy Farms & Gaushalas	16.	End of life vehicles (ELVs)

[23] *Govt. of Punjab (Deptt. of Forests & Wildlife Preservation) Notification No.26/2018/08-Ft-5/4097 dated 5.6.2012*

4.2.1 Stone Crushing Units & Screening-cum-Washing Plants

Locational Guidelines

For new Stone Crushers & Screening Plants (Established after 17.3.1998)

No new stone crushing unit and screening-cum-washing plant shall be allowed to be installed and operated within the limits of[24]:

500 meters on National Highway/State Highway/Scheduled Roads in plain areas and 250 meters in sub-mountainous areas
5 Km of the city limit of metropolitan cities/Municipal Corporation.
2 Km of the city limits of A-Class Towns
1.5 Km of the city limits of B-Class Towns
1.0 Km of other Cities/Towns.
500 meters of Village Phirni/Lal Lakir/Approved Residential Colony/Zoological Park/ Wildlife Sanctuaries[25].
300 meters of Historical Places/Educational Institutions/Protected Monuments[24].
300 meters of all major district road in plain areas and 150 meters in sub-mountainous areas. ▪ No stone crusher / screening-cum-washing plant will be allowed to be set up in a choe, rivulet, stream or river bed within their Flood Protection Embankments. The stone crusher / screening-cum-washing plant shall be set up at a minimum distance of 50 meters from the Flood Protection Embankments on the outer side of the river and 25 meters from the Flood Protection Embankment on outer side of rivulet/ stream /choe. Where there is no Flood Protection Embankment, the stone crusher / screening-cum-washing plant shall only be set up at the minimum distance of 50 meters from the outer edge of the Gair-Mumkin land as per revenue record recorded as Gair-Mumkin nadi, choe or similar nomenclature identifying a water body on the outer side of the choe/river[25]. This sub-clause will apply to all new crushers/screening-cum-washing plants prospectively i.e. from the date of gazette notification. Existing stone crusher / screening-cum-washing plants will be allowed to continue as per the terms of consent already issued i.e. these guidelines will be implemented prospectively[25]. **Note:** *Existing stone crushers within 500 meters of wildlife sanctuaries/zoo but not within 30 meters from the boundary of wildlife sanctuary in Eco-sensitive zones are allowed to operate subject to compliance of stringent emission standards to be prescribed and notified by the PPCB[23].* ▪ *"Stone crushers with crushing capacity up to 10,000 cft/day or with one set of machinery shall be located in a minimum area of 0.4 hectare or 1 acre and the stone crushers with crushing capacity more than 10,000 cft/day or with more than one set of machinery shall be located in a minimum area of 1.5 acre which should be owned by the stone crusher unit or by taking land on lease either owned by the Panchayats or in the private sector[25].*

For existing Stone Crushers (Established before 17.3.1998)[24]

Existing stone crushers meeting the guidelines given below along with standards notified under Environment (Protection) Act, 1986 and the code of practice for pollution prevention as specified hereinafter, should be allowed to operate:

[24] *Govt. of Punjab (STE) Notification No. 3/7/96-STE (5)/562 dated 17.03.1998*

[25] *Govt. of Punjab (STE) Notification No. 3/35/2013-STE (4)/734 dated 30.07.2013*

- No dust emitting point within 100 meters from right of way of scheduled roads within the Chandigarh Capital Periphery Control Area/Communication Zone.
- No dust emitting point within 30 meters from the right of way of Highways/Scheduled Roads in other parts of the State.
- 250 meters from Municipal/Notified Area Committee Limit/Village Lal Lakir/approved Residential Colonies/Historical Places/Zoological Parks/Wild Life Sanctuaries/Protected Monuments.

Note: *Units not conforming to the above guidelines should be shifted from the present site.*

For New Clusters of Stone Crushers[24]

In addition to the guidelines for new stone crusher / screening-cum-washing plant crushers recommended above, the following criteria will be adopted where stone crusher / screening-cum-washing plant crushers are set up in clusters:

- A green belt of width as specified by the PPCB will be provided around the cluster.
- Only one approach from National Highway/Scheduled Road will be provided to the cluster.
- Approach road leading to a cluster of 5 or more stone crushers shall not pass through the village.
- All new clusters of stone crushers shall get the layout plan approved from the Town and Country Planning Department, Punjab.

For Existing Clusters of Stone Crushers

Approach road leading to a cluster of 5 or more stone crushers shall not pass through any village.

Code of Practice for Pollution Prevention

All the dust emitting points like Jaw/Roller Crushers, screens/classifiers should be properly enclosed / covered.
Conveyor belts should be proper quality material instead of used tyres.
ends of conveyor belts should be covered with telescopic chute
Regular water spray should be carried out at all dust emitting points and transfer points
Water spray should be done on the boundary as per requirement.
Regular cleaning of approach roads should be carried out.
All the approach roads and ramps should be metalled.
A green belt, consisting of three rows of trees, of which one of tall leaved trees and two rows of medium leaved dense trees, should be provided along the periphery.
Annual health survey of the workers should be conducted.
Openings of the housing for the movement of mechanical drives, conveyor belts etc. should be properly sealed with flexible rubber flaps.
Process waste i.e. file material should not be dumped along with roadside and should be used for filling up of low lying areas.
Water sprayer system should be interlocked with the main crushing operation.
Stone crushers should conform to the emission standards laid down by the Board.
Path between the crusher and the metalled road should be brick paved with the bricks or clay pavers or c.c. pavers of sufficiently high compressive strength so as to ensure that dust/noise pollution is within prescribed norms.[25]

Code of Practice for pollution prevention for stone crushing units using wet raw material and having washing facilities at screener/classifier[26]

Dust emitting points namely jaw/roller crushers should be properly enclosed/covered.
End of conveyor belts should be provided with conventional type Chute made of rubber sheet/flapper of minimum 5 ft. height supported by Mild Steel angles in place of telescopic chute at the end of the conveyor belt.
Regular water supply should be carried out at jaw crushers and roller crushers.
Water supply should be done on the boundary wall at main entrance. Stone Crushers should also provide proper water sprinkling system on the berms of ramp and approach road to ensure that these are in wet condition during the operation hours.
All the approach roads and ramps should be 30 cm. thick with washed river bed material of size 10-53 mm duly compacted with any mechanical means such as road roller or in conformance to IS:6579-1981.
A green belt consisting of three rows of trees (out of which one row of tall leaved trees and two rows of medium leaved (dense trees) should be provided along the periphery. In case of cluster of stone crusher / screening-cum-washing plant crushing units, a common green belt may be provided along the periphery of the cluster.
Stone crushing units should make the following provisions for the management of wastewater:
a) Stone crusher / screening-cum-washing plant crushing unit shall provide settling tank(s) for wastewater of adequate capacity, designed by taking surface loading rate of 25 $m^3/day/m^2$ and length to width ratio of 3:1 and clear water depth as 3 m excluding 0.3 m free board &0.5 m depth for accumulation/storage of solids. The treated effluent shall be discharged into inland surface water/onto land for irrigation as per the mode of disposal allowed by PPCB.
b) Units shall ensure that the settling tank(s) is/are cleaned regularly to maintain minimum clear water depth of 3m.
c) Measuring the discharge of wastewater, the stone-crushing units shall provide 90° V-notch at the outlet of settling tank(s) and maintain the record of discharge in register on daily basis.
d) Process waste i.e. fine material and silt so produced from the settling tank(s) will be disposed of in an environmentally sound manner such as filling in low lying area with half meter height of silt layer followed by cover of good earth of 15 cm and so on with the prior approval of concerned Environmental Engineer of PPCB.
e) Discharge of treated effluent into inland surface waters may not be allowed and these units should either use the treated effluent for washing purposes etc. or use the same for sprinkling purpose to suppress the dust emissions generated from these sources including emissions generated due to movement of vehicles.
Existing stone crushers meeting with the guidelines for existing stone crushers / screening-cum-washing plant crushers, but not conforming to the guidelines for new stone crushers shall, in addition to the above pollution control measures, provide a 10 ft. brick wall as boundary/wind breaking wall facing the road as well as towards residential area with a well-defined single entry point from the road.
Each stone crusher shall install suitable pollution control measures to the satisfaction of the Board and shall obtain 'No Objection Certificate' from the Board as well as from the Town and Country Planning Department, Punjab and also conform to the other statutory regulations, if any.

[26] *Govt. of Punjab Notification No. 3/7/96-STE (4)/523 dated 01.02.2006*

Stone crusher / screening-cum-washing plant crusher unit hence forth would be permitted anywhere subject to the restrictions of the Department of Town and Country Planning, Punjab and the PPCB.
Existing stone crusher / screening-cum-washing plant crusher units which are not conforming to the parameters, as detailed above, shall shift to sites conforming to the above parameters with the time frame given by the PPCB to them but not later than three months.

Quantitative Standards for the SPM

Suspended particulate matter measured between 3 & 10 meters from any process equipment of stone crusher/screening-cum-washing plant crushing unit shall not exceed 600 µgm/m^3.

Instructions to regulate the source of mining material for stone crushers in the State of Punjab

In pursuance of Hon'ble NGT directions issued in the matter of Bachittar Singh V/s State of Punjab (OA No. 57 of 2020) vide orders dated 10.12.2020 and considering huge gap in the raw material used and raw material accounted for by the stone crusher in the state of Punjab, PPCB vide letter No. 16536 dated 23.07.2021 has issued following instructions to the field officers/offices of the Board while processing the CTE/ CTO applications of stone crushers/ screening/ washing units:

1. Verify the quantity of mining material assigned/ allotted to the various stone crushers by the Department of Mines & Geology.
2. Obtain carrying capacity certificate of the area/ stone crusher from Deptt. Of Mines & Geology, Department of Water Resources and act on the basis of such certificates.
3. Accordingly, modify the conditions of consent by issuing notice u/s 27(2) of Water Act, 1974and section 21(6) of Air act, 1981 and shall mention the quantity of Mining Material in the Consent Certificate.
4. Impose additional condition to the effect that the stone crushers shall maintain a stock register to justify the legitimate source of mining material, its availability, usage and sale etc. shall also be imposed in the consent certificate.

No new stone crusher shall be given consent without obtaining credible & effective data for carrying capacity of area, so as to ensure that raw material is not soured by illegal mining.

4.2.2 Stone Quarrying[27]

Mining Type		Minimum Distance	Locations
A.	When Blasting is not Involved	100 m	Residential / Public buildings, inhabited sites, protected monuments, Heritage Sites, National / State Highway, District Roads, Public Roads, Railway line/area, Ropeway or Ropeway trestle or station, Bridges, Dams, Reservoirs, River, Canals, Lakes or Tanks, or any other location to be considered by States.
B.	When Blasting is Involved	200 m**	

*** **Note:** The regulations for danger zone (500 m) prescribed by Directorate General of Mines Safety also have to be complied compulsorily and necessary measures should be taken to minimize the impact on environment.*

***Note:** PPCB vide its letter no. 18642 dated 26.08.2020 has sent the communication from CPCB to the Director, Deptt. of Mining, Govt. of Punjab for compliance and issuance of the notification in this regard.*

[27] *Hon'ble NGT order dated 28.02.2020 in OA No. 304/2019 and Report on 'Distance Criteria for permitting Stone Quarrying' circulated by CPCB vide letter dated 12.05.2020*

4.2.3 Brick Kilns

Locational guidelines[28]

Distance from	Distance	Remarks
Municipal Corporation Limits	5 Km	MoEF&CC vide notification dated 22.02.2022 has prescribed: ▪ a minimum distance of 0.8 Km from habitation and fruit orchards. ▪ a minimum distance of one kilometre from an existing brick kiln to avoid clustering of kilns in an area.
Class A Towns & Cities Limits	2 Km	
Other Town & Cities Limits	1 Km	
Village Lal Dora/Phirni	500 Mts.	
Wild Life Sanctuary/Zoo	500 Mts.	
National Highway	500 Mts.	
State Highway/Scheduled Road	300 Mts.	
Residential Area (15 Pucca Houses)	300 Mts.	
Educational Institute/Historical Religious Place/Protected Monuments	300 Mts.	
Note: *Distance shall be calculated from the berms of the metalled road to the nearest stack*		

Emission Standards

New Units / Units meeting with the prescribed siting guidelines S.P.M. (mg/Nm^3): 750
For existing units not meeting the prescribed siting guidelines S.P.M. (mg/Nm^3): 500

Code of Practice

Approach road within the premises of brick kiln area should be pucca/ stabilized with brick bats/keri etc.
They should use crushed coal* for better burning efficiency.
Bricks should be laid in a staggered manner for baking to entrap maximum particulate matter at the source itself.
They should use a properly designed gravity chamber.
Height of chimney/stack should be at least 30 m.
Provision of Green Belt: Industry should plant three rows of spreading crow varieties of evergreen broadleaved trees all along the boundary.
Industry shall not be located in the H.T. Transmission zone of PSTCL.
Note: *Board in its 122nd meeting held on 5.3.2004 also approved the use of mustard straw as fuel in brick kilns.*

[28] *PPCB Notification No. Admn/A-2/File.No.178/98/3 dated 2.9.1998*

Additional compliances as required by MoEF&CC[29]

(Applicable from 22nd Feb. 2022)

Particulate matter in stack emission: 250 mg/Nm^3 Particulate Matter (PM) results shall be normalized at 4% CO_2 as below: PM (normalized) = (PM (measured)x 4%)/ (% of CO_2 measured in stack), no normalization in case CO_2 measured ≥ 4%. Stack height (in metre) shall also be calculated by formula $H=14Q^{0.3}$ (where Q is SO_2 emission rate in kg/hr), and the maximum of two shall apply.
All new brick kilns shall be allowed only with zig-zag technology or vertical shaft or use of Piped Natural Gas as fuel in brick making and shall comply to these standards as stipulated in this notification.
All brick kilns shall use only approved fuel such as Piped Natural Gas, coal, fire wood and/or agricultural residues. Use of pet coke, tyres, plastic, hazardous waste shall not be allowed in brick kilns.
Brick kilns shall construct permanent facility (port hole and platform) as per the norms or design laid down by the Central Pollution Control Board for monitoring of emissions.
Brick kilns should be established at a minimum distance of 0.8 kilometre from habitation and fruit orchards. State Pollution Control Boards/Pollution Control Committees may make siting criteria stringent considering proximity to habitation, population density, water bodies, sensitive receptors etc.
Brick kilns should be established at a minimum distance of one kilometre from an existing brick kiln to avoid clustering of kilns in an area.
Brick kilns shall follow process emission/fugitive dust emission control guidelines as prescribed by concerned State Pollution Control Boards/Pollution Control Committees
Ash generated in the brick kilns shall be fully utilized in-house in brick making
All necessary approvals from the concerned authorities including mining department of the concerned State or Union Territory shall be obtained for extracting the soil to be used for brick making in the brick kiln
Brick kiln owners shall ensure that the road utilized for transporting raw materials or bricks are paved roads
Vehicles shall be covered during transportation of raw material/bricks

4.2.3.1 Adoption of zig-zag firing technology by brick kilns[30]:

No new / existing brick kiln shall be allowed to be established / operate in the State of Punjab without having induced draft technology with zig zag setting.
Brick kilns which are continuing to operate and are in the process of conversion to induced draft technology with zig zag setting/ yet to start the process of such conversion are required to pay environmental compensation on the basis of 'polluter pays principal' to the PPCB with effect from 01.02.2019 till the adoption of induced draft technology with zig zag setting under: ✓ *Rs. 2500 per month for kiln of capacity equal to or more than 3000 bricks per day.* ✓ *Rs. 2000 per month for kiln of capacity less than 3000 bricks per day.*
Department of Power shall ensure to provide 15 HP power connection as required by the brick kiln for running the Induced Draft fan.
Notification is available on the website of the Board having link: https://ppcb.punjab.gov.in/en/guidelines-notifications/notification

[29] *Govt. of India, MoEF&CC notification no. G.S.R. 143 (E) dated 22.02.2022*

[30] *Govt. of Punjab (STE) Notification No. 10/48/2019-STE(5)/1491442/1 dated 28.5.2019*

4.2.3.2 Consent to operate under the Water Act, 1974[31]

All Brick kilns are required to obtain consent to operate under the Water Act, 1974 and consent fee shall be application w.e.f. 01.11.2018.

4.2.4 Rice Shellers / Saila Plants (Parboiled Rice)[32]

Locational criteria:

(1)A(i)	In Focal Point and in designated Industrial Land Use Zones.
	OR
A(ii).	In rural zone of Master Plan (Statutory/Non-Statutory), rural zone of Local Planning Area & in the agriculture land outside the rural zone of Master Plan & Local Planning Area but shall be at a distance of 500 meters from urbanisable limits of Master Plan and 2 Kms from Local Body limits where the master plan are yet to be prepared. # In clause (1)A(ii), the words 'and 2 kms.' shall be substituted by the words 'and 1.5 kms.'[33] *(Refer footnote for applicability of emission standards for above relaxation)*
A(iii).	500 meters away from bye-pass, National Highway, State Highway & Scheduled Road. (Point No. A(i) to A(iii) to be certified by D.T.P.)
A(iv).	500 meters away from the village Lal Dora/Phirni/Wild Life Sanctuary, Zoo, residential area*, educational institutes, historical, religious places and protected monuments. *The residential areas means the area under a scheme notified by Punjab Urban Planning & Development Authority (PUDA), Municipal Corporation, Municipal Council, Improvement Trust or any other authority/agency in the State. (Point No. A(iv) to be certified by Revenue Authority)
A(v).	PPCB will ask for certificate from the District Town Planner/Revenue authorities who will submit the same within 15 days failing which Board will be at liberty to issue NOC and the rice millers will not have to approach the concerned authorities for obtaining the requisite certificate. The requisite fee to be charged by the Town & Country Planning Department will be deposited by the industry as a separate Bank Demand Draft along with NOC fee with the PPCB. The Board will forward the same to the DTP with a request to send the requisite certificate within 15 days failing which the Board will be at liberty to issue NOC to the applicant industry.
A(vi)	Rice mills/ Saila Plants located outside the Municipal limits of towns and cities and in the designated areas within the cities established with NOC of PPCB will be allowed to expand /modernize within their existing premises if pollution load of existing unit has been effectively taken care of by the industry and no specific approval of DTP will be required.
Note:	*(i) No new sheller shall be allowed between intersections of the municipal committees having distance less than 2 kilometres.*
	(ii) Right of the way will be accepted as per revenue records and minimum width of 15 ft. to 16 ft. of passage may be provided for easy transportation instead of 22 ft.
	(iii) The parking will be provided within the site.
	(iv) All distances shall be measured from right of way upto pollution control device chimney.
	(v) All these siting criteria specified above will be applicable in to and not in piece meal.
	(vi)"Historical religious places" and" Historical, religious places" are one and the same thing.

[31] *PPCB vide its office order no. SEE(HQ-2)/2020/477 dated 26.08.2020*

[32] *Govt. of Punjab (STE) notification No.10/48/2004-STE (4)/932 dated 15.10.2013*

[33] *Govt. of Punjab (STE) notification No.10/2020-STE 5)/223516 dated 05.08.2021*

Note:

1. *Siting criteria as laid down in Part A(i) is independent of criteria stipulated in Part A (ii), (iii) & (iv) of the Order dated 13/09/2006.*
2. *Siting criteria as laid down in para A(ii) is to be implemented in conjunction with criteria as laid down in paras A(iii) and A(iv) of the order dated 13.09.2006.*
3. *Notwithstanding amendments in the earlier order by the present one, anything done or any action taken under the provisions of order dated 19/12/2011 shall be deemed to have been done or taken in accordance with law*

Emission Standards

Emission Standards for Rice Sheller & Saila Plants in the State of Punjab will be applicable as under:

a) Emission standards 750* (S.P.M. (mg/m^3)##

b) Inside the building TLV of air**

* Existing units not meeting the prescribed siting guidelines will meet stack emission standards of SPM 500 mg/m^3.

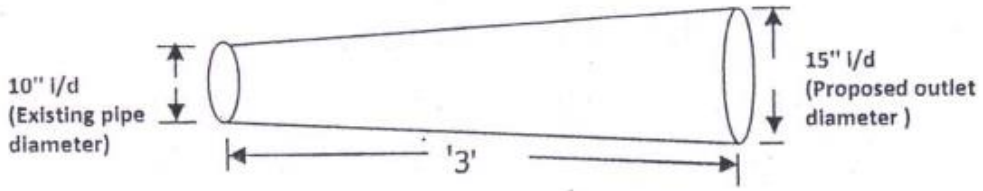
** To be controlled by Director of Factories.

Note[33]:

1. *For new rice shellers/saila plants coming within the distance of 1.5 kms to 2 kms from the local body limits, stringent emission standards of 350 mg/Nm^3 shall be applicable.*
2. *For the units established or being established beyond 2 kms from the local body limits, the emission standards of 750mg/Nm^3 as prescribed in the order dated 15.10.2013 shall remain applicable.*

Code of Practices

1.	All the processing sheds be covered and have minimum ventilation as per the recommendations of Director of Factories.
2.	Industry should plant thick plantation of spreading crown varieties of evergreen trees all along the boundary wall of the rice Sheller / saila plant.
3.	All dust emitting points should be properly hooded and dust extracted to a common point. At this exhaust point, dust coming here will be passed through a dust control system and air will be emitted through a stack of height 3 meters above the roof of the building.
4.	Industry shall not be located in High Tension Transmission Zone of Punjab State Power Corporation Limited.
5.	Management and handling of rice husk in the rice shelling units/ saila plants should be done as under:
a)	'All the rice shelling units / saila plants shall provide paved / brick roads / cement concrete roads / metalled roads inside their premises for movement of vehicles, so as to prevent the generation of dust.'
b)	(i) Industry shall provide proper rice husk storage facilities inside the factory premises and the height of brick wall in front of the discharge point of rice husk area should be at least 10' high or 3.5' higher than the discharge point of the rice husk pipe (whichever is more) and the length of aforesaid brick wall should be at least 35' on each side of the rice husk discharge pipe. (ii) Industry shall provide a layer of wind screen of mild steel or some other similar material of at least 5' height above the brick wall. The wind screen system should have a porosity of ~30% to lower the wind velocities, thus reducing the amount of airborne particulate from storage, handling and loading / unloading areas of rice husk. (iii) Minimum diameter at the outlet of discharge pipe of rice husk be kept as 15" which can be maintained by extending the existing discharge pipe with the help of a conical shaped pipe of at least 3' length as shown in the figure below:

	
	(iv) Wherever the height of rice husk is 3' or more, the industry shall cover the heap of husk with HDPE warp knitted fabric completely, except the area near the discharge pipe. The HDPE warp knitted fabric be made of 100% virgin high density polymer of at least 70 gm/m2 weight having 40-45. hole/inch2 to prevent wind blowing of stored husk.
	(a) "During transportation of rice husk through vehicles, it shall be covered from all sides with tarpaulin to prevent blowing of husk by winds." (b) "Feeding of rice husk in the boiler furnace is required to be regulated with automatic regulating system and no manual feeding of rice husk, in the boiler furnace, shall be done." (c) 'In case, the rice shelling units have provided belt / chain conveyors for conveying rice husk from de-husking section to storage and from storage to boiler section, then, it should be covered from all sides to prevent blowing of rice husk by winds. In case, any other mode for conveyance of rice husk from de-husking section to storage and from storage to boiler section has been adopted, then it should be environmentally sound."
6.	Handling, Transportation, Storage and Disposal of Ash from Husk Fired Boilers: Management and handling of rice husk ash in the rice shelling units/ saila plants should be done as under: - a. Ash collected from APCD from husk fired boiler shall be temporarily stored in a shed / chamber closed from at least three sides and a roof, with access only from the front side for purpose of removal of ash. b. During loading / unloading of ash, water shall be sprinkled periodically to keep the ash heap in wet condition so that the top layer remains wet at all times so that ash particles are not blown by winds. c. All the conveyors / vehicles conveying ash within or outside the plant premises shall be covered from all sides to prevent blowing of ash particles by winds. d. Boiler ash shall be disposed in such a way that secondary emissions of the ash do not occur due to wind blowing effect.
	Following disposal practices shall be followed: <u>For units disposing ash outside their own premises:</u> Rice mills disposing their boiler ash outside their premises through contractors shall ensure that the ash has been disposed at a designated landfill site facility as approved by PPCB.

	<u>For units disposing ash within their own premises:</u> e. Units disposing ash at the ground level should cover the ash with soil and periodically sprinkle water on the disposed ash so as to keep it in wet condition at all times. Piling up of another batch of ash over the earlier disposed ash may be done but the ash heap should be covered each time by soil and kept wet by sprinkling of water. A wind breaking wall of a height equal to the height of the ash heap shall be erected around the ash disposal site, leaving an opening for access road. f. Industry may develop underground ditch for disposal of boiler ash within plant premises in an environmentally sound manner.
Note: 1) *Dry rice shelling units with sun drying process, which have been established in compliance to siting guidelines as amended on 19.12.2011, shall comply with the conditions of NOC and code of practice prescribed therein.* 2) *'Sortex machine is permitted to be installed in the existing rice shelling units / saila plants irrespective of siting guidelines, provided they have obtained consents under the Water Act, 1974 and Air Act, 1981 and there is no increase in the consented capacity and pollution load.*	

4.2.4.1 Locational Guidelines for Fortified Rice.[18]

Standalone units engaged in manufacturing of fortified rice (without any trade effluent except RO Reject)

General Siting criteria applicable for green category industries.

Fortified Rice Units to be established in the existing premises of rice mills/parboiled units

Siting criteria/expansion clause as prescribed vide Govt. notification dated 15.10.2013.

Note: *Besides above, the industries shall comply with following conditions: -*

1. *The Wastewater from RO reject shall meet the general standards of 2100 mg/l and the industry shall provide adequate arrangements for the disposal of treated water or shall use for inhouse purpose including flushing etc.*
2. *The pulverizer installed by the units for grinding purpose shall have inbuilt dust control system or shall be equipped with appropriate pollution control system, so as to control the dust emission, if any.*

4.2.5 Cement Plants & Grinding Units[34]

Locational guidelines

Distance from	Distance
Municipal Corporation Limits	5 Km
Class A Towns & Cities Limits	2 Km
Other Town & Cities Limits	1 Km
Village Lal Dora/Phirni	500 Mts.
Wild Life Sanctuary/Zoo	500 Mts.
National Highway	500 Mts.
State Highway/Scheduled Road	300 Mts.
Residential Area (15 Pucca Houses)	300 Mts.
Educational Institute/Historical Religious Place/Protected Monuments	300 Mts.

[34] *PPCB Notification No. Admn/A-2/F.No.178/98/3 dated 02.09.1998*

Provision of Green Belt

Industry should plant three rows of spreading crown varieties of evergreen broad-leaved trees all along the boundary.

If the existing unit wants to convert to a integrated cement plants the minimum distance should be 200 m from National/State Highway.

Note: *Distance shall be calculated from the berms of the metalled road to the nearest stack.*
Emissions standards for the cement grinding units being followed are as notified by the Govt. of India Ministry of Environment, Forest and Climate Change.

4.2.6 Hot Mix Plants[35]

Locational guidelines

Distance from	Distance
Municipal Corporation Limits	5 Km
Class A Towns & Cities Limits	2 Km
Other Town & Cities Limits	1 Km
Village Lal Dora/Phirni	500 Mts.
Wild Life Sanctuary/Zoo	500 Mts.
National Highway	500 Mts.
State Highway/Scheduled Road	300 Mts.
Residential Area (15 Pucca Houses)	300 Mts.
Educational Institute/Historical Religious Place/Protected Monuments	300 Mts.
Note: *Distance shall be measured from the edge of the metalled road to the nearest stack of the hot mix plant.*	

Provision of Green Belt

Industry should plant three rows of spreading crown & fast growing varieties of evergreen broad-leaf trees all along the boundary.

Emissions Standards for Hot Mix Plant

S.P.M. (mg/m^3): 150

Note: *There should be no smoke visible from the plant.*

Important Points for prevention of pollution by Hot Mix Plant

1.	Suitable dust control system for the dryer and mixer to contain/recycle permissible fines in the mix should be provided. It should be capable of preventing the exhaust of fine dust into atmosphere from both ends of the dryer drum by creating adequate negative pressure.
2.	Plant should have centralized control panel/cabin capable of pre-setting controlling/synchronizing all operations, starting from feeding of cold aggregates to the discharge of hot mix to ensure proper mixing. It should have adequate water scrubbing mechanism to completely remove/control the dust coming out of the drier with proper provision of re-circulation system for the scrubber water.
3.	Bitumen must be mixed with aggregate as soon as it is heated and dried and second time lifting of the dried aggregate for proper batching should be avoided.
4.	All roads/vehicular movement areas at site of the Hot Mix Plant should be pucca/stabilized with stone aggregates and regular sprinkling of water be ensured so that no dust is generated with vehicular movement.
5.	Hot Mix Plant must have proper stack heights for the discharge of its scrubbed flue gases and bitumen heating system with proper platform and port holes as per the PPCB norms.

[35] *PPCB Notification No. Admn/A-2/File.No.178/99/03 dated 26.4.1999*

6.	Fine dust arrested by water scrubber and collected in the re-circulation water tank should be collected and filled in a pit to be covered with fresh earth. This exercise should be repeated as and when dust is removed from re-circulation tank.

4.2.7 Waste Tyre Based Pyrolysis Plants[36]

FOR NEW PLANTS

Location guidelines

Considering the pollution potential and accidental hazards, such plants shall be allowable only within the designated industrial zones (Notified/approved Focal Points, Industrial estates/areas, designated industrial land use areas) of the Master Plant (Statutory/Non-Statutory).

Site clearance from the Site Appraisal Committee

All new units shall have to obtain site clearance from the Site Appraisal Committee (SAC)/Department of Factories under the Factories Act, 1948, irrespective of their location. The exemption from obtaining site clearance by units proposed to be located in the designated/approved areas such as industrial area/industrial estate/industrial focal point/approved industrial park/industrial zone of the master plan/draft master plan as given vide Government of Punjab, Deptt. of Labour (Directorate of Factories Wing) letter No.7345 dated 27.08.2013 will not be applicable in case of the pyrolysis plants. The representatives of departments concerned of SAC shall strictly keep in view the nature of the adjoining industries while making recommendations to the SAC for the grant of site clearance to these projects.

Minimum area requirement

In view of the requirement of green belt requirement and open area to be left for the movement of fire-brigade vehicles, minimum area required for the plant shall be as under:

Total Reactor Facility	Minimum Area Requirement
5 to 10 Tonne/batch	3000 Sq. m.
> 10 to 15 Tonne/batch	1 acre
> 15 to 20 Tonne/batch	1.5 acre
> 20 Tonne/batch	2 acre

Minimum capacity allowed

Keeping in view the viability and expertise required for this plant, the plants with a minimum reactor capacity of 5 tonne/batch will only be allowed.

Code of Practice and Pollution Abatement Measures

Complete ban on import of raw-material (waste tyres, scrap etc.) All units, including existing ones, shall be allowed to process the waste tyres generated from within the State of Punjab only. Procurement/import of scrap tyres/waste rubber products from foreign off-shores or even from other states within the country shall not be allowed.
Pollution Abatement Measures ▪ For the initial heating of the reactor, all authorized fuels are allowed. The emissions emitted from the fuel burning should be passed through an alkali scrubber before discharging these into the atmosphere through a stack of minimum 30 mts height for proper dispersion of the gases.

[36] Govt. of Punjab (STE)order circulated vide endst. No.10/46/2014-STE (5)/325542 dated 15.10.2014

- Furnace for heating the reactor should be optimally designed and operated so that proper burning of the fuel can take place and generation of Carbon monoxide (CO) emissions is minimized.
- Uncondensed gases should be flared through a properly designed flare mechanism at a minimum height of 10 mts. from the ground level or 3 mts above the height of the nearest building, whichever is more.
- Carbon powder produced should be removed from the reactor in completely closed and controlled conditions through a pneumatic/scree conveyer system in such a manner that the contents of the reactor are not open to the atmosphere at any point of time. The end of the conveyor system shall be attached to a bagged plant where all the carbon black will be bagged in the HDPE bags and the bags shall be properly sealed. Only one exhaust after the bagging plant shall be allowed and the same should be attached to a stack of minimum 30 mts. height after passing through a suitable APCD such as Alkali scrubber to prevent dust/odour emissions.
- Unit should carry out stack and ambient air quality monitoring of SO_2, RSPM, CO and HCs at least once in three months from a recognized laboratory. The unit will maintain a log book for recording the plant operation, monitoring of the stack emissions and ambient air quality, generation and utilization of wastewater and sale of various products and by-products.
- Wastewater generated from the oil-water separator should not be discharged anywhere and should be mixed with the carbon powder, which may be sold to the cement manufacturing plants or other such industries.
- Generation, transportation and disposal of carbon black powder to the cement manufacturing plants or any other such industry will be recorded through proper manifest system and no third party should be involved in its disposal.

Providing green belt and open areas

A green belt of minimum 4 mts. width all along the boundary of the plant should be developed with minimum three rows of broad-leaved trees. Open space to be left after the green belt for the movement of the fire tenders should be 6.0 mts. all around the plant or as per requirement of Nation Building Code of India (NBC)-2005, whichever is more. Any amendments from time to time will be applicable at that time. No material is allowed to be stored in this open space.

Storage of raw-material, product and by products

Raw material, product (oil) and carbon powder (by-product) shall be stored in areas separate/distinct from the processing area (shed where the reactors are installed), open space provided for green belt and open space for movement of fire tender.

Location of Flare Room

Flare room should be located at the farthest place from the processing shed in an area other than three belt and open space.

Safety Measures

- At least three digital pressure and temperature gauges outside the reactor should be provided which should be easily readable to a person on the floor for accurate measurement of the reactor pressure and temperature.
- There will be one emergency exit route for the pyrolytic gases in the reactor operated through a spring loaded valve which should automatically open in case of any emergency e.g. uncontrolled rise in reactor pressure. The exit should be connected with the existing APCD/Stack provided with the reactor for the discharge of emissions from the fuel burning.
- Arrangements for water sprinkling on the reactor will be provided which will get automatically activated along with the activation of pressure release valve.
- A sensor for CO gas will be installed in the main working area to ensure that concentration of CO

in the work area does not exceed the prescribed limits for occupational safety and health. It will also be occupied with a warning/alarm system so that the plant operator can take adequate steps to rectify the situation.

- Appropriate Onsite Emergency Plan, as per requirements under the Factories Act, 1948, will be made and implemented to handle any accident, fire/leakage or any other emergency situation. All such measures shall include raw material storage, product storage and handling thereof.
- Plant will be operated under the continuous supervision of a qualified person with a minimum of two year experience in a similar process.
- All the persons/workers in the premises should wear an air filter mask to avoid inhaling of the fine carbon black particles.
- Plants will conform all safety measures as provided in Factories Act, 1948 and fire safety norms.
- Plants will maintain good house-keeping and will ensure that non raw material, products and by-products get spilled inside or outside the plant.

Guidelines for Existing Plants

Existing plants implies those plants which have already been granted the statutory approvals such as site clearance by SAC/consent to establish/consent to operate by the PPCB under the Water Act, 1974 and Air Act, 1981 or those which had applied for consents to operate under the Water Act, 1974 & the Air Act, 1981 to PPCB on or before 31.3.2013.

Existing units as defined above and which have applied for consents to operate under the Water Act, 1974 & the Air Act, 1981 for site clearance to Site Appraisal Committee under Factories Act, 1948 prior to 31.3.2013 shall be allowed to operate only if they fulfil the following criterion:

- Their premises have open space all along the boundary @ ½ mtr. wide for green belt and 6 mtr. wide for movement of fire tender.
- Such plants conform to pollution abatement/safety measures as mentioned at Point No. V, VI, VIII, IX and X of Para A of this notification.
- Such plants are granted site clearance by the Site Appraisal Committee/ Deptt. of Factories under Factories Act, 1948.
- Such plants are granted consent to establish/consent to operate by PPCB.

Provided that those existing units, which meet with the stipulation of 6 meter wide open space and ½ meter wise green belt but do not conform to pollution abatement/safety measures as mentioned at Point No. V, VI, VIII, IX and X of Para A of this notification shall be allowed six months time to conform to the aforementioned measures.

- Required to deposit immediately on publication of this notification, a bank guarantee @ Rs.1,00,000/- per reactor, valid for one year, to the PPCB, as a surety to implement the aforesaid measures within the stipulated time period.
- Units which fail to implement the aforesaid measures within the stipulated 6 months period shall not be allowed to operate and action shall be initiated under the relevant provisions of Water Act, 1974 and/or the Air Act, 1981 against them.

All those existing plants which do not meet with the stipulation of 6 meter wide open space and ½ meter wise green belt and also do not conform to the pollution control and safety requirements as mentioned at Point V, VI, VIII, IX & X of Part-A of the office order, shall not be allowed to operate. Appropriate action under the relevant provisions of the Water Act, 1974 and/or the Air Act, 1981, will be initiated against such units by the PPCB

Emission Standards[37]

Stack emission standards

Parameter	Emission Limit
Particulate Matter (PM)	150 mg/Nm^3
Sulphur Dioxide (SO_2)	200 mg/Nm^3
Carbon Monoxide (CO)	200 ppm
Hydrocarbon (HC)	25 ppm

Ambient Air Quality Standards

Parameter	Emission Limit
Particulate Matter (PM_{10})	100 mg/Nm^3
$PM_{2.5}$	60 mg/Nm^3
Hydrocarbon (HC)	80 mg/Nm^3
Carbon Monoxide (CO)	2000 mg/Nm^3

MoEF&CC Guidelines for recycling of Waste/Scrap Tyre to Pyrolysis Oil[38]

MoEF&CC has prescribed Standard operating practices for import and recycling of waste pneumatic tyres/scrap tyres for Pyrolysis Plants. The Hon'ble NGT is monitoring the compliance of these guidelines. The guidelines are available on the CPCB website at hyperlink as https://cpcb.nic.in/SOP-General-Application-Processing/

Restriction on establishment of new waste tyre based pyrolysis Industry/expansion of existing plant[39]

In pursuance of Hon'ble NGT orders dated 19.09.2019 in the matter of O.A no. 400 of 2019 and CPCB directions dated 30.12.2019 u/s 5 of EPA, 1986 for regulating location of tyre pyrolysis industries, Board with effect from 03.02.2020 has decided as under:

1.	Henceforth, any new/expansion of existing tyre pyrolysis industry be granted consent to establish or amendment in consent to establish only after assessing the carrying capacity of the area*.
2.	To ensure the safeguard of the health of workers involved in the tyre pyrolysis industries, a condition may be imposed while issuing the Consent to Establish / Operate to the industrial units to the effect that regular health check-ups at an interval not more than 3 months shall be got carried out by the project proponent for his workers / staff. A certificate to the effect that no adverse effect has been observed to the health of workers / staff shall be obtained and submitted by the industry / project proponent to the Board at the time of consent / renewal of consent from the concerned Medical Officer/Senior Medical Officer of the area.
3.	Till a proper mechanism* is developed w.r.t. 1 and 2, applications received for obtaining Consent to Establish (CTE) shall be referred to the Head Office for approval.
	Note: *Matter is under consideration of a technical committee constituted by the Board for assessing carrying capacity of areas/mechanism to be developed while allowing such units.*

[37] *PPCB Office Order No.314 dated 24.9.2015*

[38] *MoEF&CC Notification No. F. No.23-61/2015-HSMD dated 24.11.2015*

[39] *NGT orders dated 19.09.2019, in OA No. 400 of 2019, CPCB letter No. B-29016/1(NGT)/19/WM-III Division dated 30.12.2019 and PPCB Office Order No. PPCB/SEE(HQ-2)/2020/92 dated 03.02.2020*

4.2.8 Construction Projects (Residential Colonies, Commercial & other Establishments)[40]

Siting/policy guidelines for establishment

The Master Plan is the final legal solution to planned development and hence the master plans be prepared in a time bound manner on priority. Where statutory master plan has been notified under the Punjab Regional and Town Planning and Development Act, 1995 (Amended) 2006, mixed land use or any other development/construction which come up as per the earmarked zone, in case of new residential/commercial project, there is no need to keep any additional distance from the existing industry from the environment point of view because these factors have already been considered while earmarking the use of land for different categories in the master plan, as per Notification No.6312 dated 11th August, 2009 issued by Department of House & Urban Development. [41]
All residential colonies, commercial establishments like shopping malls multiplexes etc. shall maintain a minimum distance of 250 meters from the hazardous (Maximum Accident Hazard) Industries notified by Director General Factory Advice Service Labour Institute. The distance should be measured from the source of pollution hazard (e.g. storage tank, gas chamber etc.) in the industrial premises to the building lines as per Zoning Plan, of residential colonies/commercial complex. This notification would not have an overriding effect on any Act/ Rules/Orders of the Govt. of India/ State Govt. which prescribe a distance of more than 250 meters from such source of hazard and the said prescribed distance shall be maintained. The notification/ orders issued by the State Govt./ PPCB relating to siting of industries namely stone crushers, rice shellers, saila plants, brick kilns, cement plants, grinding units, hot mix plants and other industries shall remain operative and unaffected by this policy/ notification. In order to resolve any dispute regarding measurement or other related issues, an inspection committee comprising of Chairman, PPCB or his nominee, Chief Inspector of Factories, Punjab or his nominee, Chief Town Planner, Punjab or his nominee and a nominee of the Department of Industries is hereby constituted. This inspection committee will be headed by the Chairman, PPCB who will also act as convener of the said …
Minimum buffer of 15 meters green belt of broadleaf trees should be provided by the colonizer towards the air polluting industries, boundary of which are located within 100 meters from the boundary of such air polluting industries. This would be included as a clause both by licensing authorities of Housing Department as well by PPCB. The species/ varieties of trees shall be decided in consultation a Forest Department.
In view of the fact that these guidelines may affect few existing housing complexes and also that some projects in the pipeline may not be conforming to the policy and also the fact that huge investments made by the project proponents and the prospective buyers in the these project, it is decided that all such projects which are not covered under the policy, shall be studied on unit to unit basis by the above said inspection committee as per the guidelines prescribed above with Public safety being the prime concern.

Policy regarding installation of sewage treatment plants for residential/ commercial complexes/ construction projects proposed to be established/ being established[42]

In light of the directions issued by the MOEF&CC/CPCB to the effect that the treated waste should be re-used for flushing purposes as well as for watering of green areas in the project, the Board has decided the policy for installation of STPs for colonies as under:

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[40] *Govt. of Punjab notification No.3/6/07-STE (4)/2274 dated 25.7.2008*

[41] *Substituted vide Govt. of Punjab notification circulated vide No.3/6/07/STE(4)/3770 dated 30.10.2009*

[42] *PPCB Office Order No. SEE(HQ-2)/2018/20448 dated 05.07.2018*

If the residential colony/commercial complex/construction project is proposed to be established within the municipal limits of a City/Town of the State and it proposes to discharge its entire sewage into the municipal sewer, then the promoter of the residential colony shall install adequate and appropriate individual sewage treatment plant. The project proponent shall make arrangements to re-use the treated effluent for flushing purposes and/or for watering of green areas in the project premises. Only the surplus treated waste water shall be discharged into the Municipal Council sewer.
If the residential colony/commercial complex/construction project is proposed to be established outside the municipal limits of a City/Town of the State or jurisdiction of any other development authority, then the individual colonizer shall provide adequate and appropriate STP to treat its waste water and shall make arrangements to reuse the treated waste water for flushing purposes and to discharge the remaining treated effluent onto land for plantation/irrigation purposes.
Projects which have already been granted consent to operate by the Board before the issuance of these orders shall be governed by the conditions of the consent granted to them.

4.2.9 Hotel/ Motel/ Inn/ Lodge/ Guest House/ Restaurant/ Banquet Hall/ Marriage palace[43]

Suitability of Site

Project proponent shall be allowed to set up Hotel / Motel / Inn / Lodge / Guest House / Restaurant / Banquet Hall / Marriage palace within MC limit, In case, the project proponent submit a certificate issued by the concerned Municipal Corporation / Municipal Council / Nagar Panchayat / Notified Area Committee to the effect that the site is suitable as per the statuary / non-statuary Master Plan and their bye- laws and / or submit Building Plan duly approved by the said Authority.
Project proponent shall be allowed to set up Hotel / Motel / Inn / Lodge / Guest House / Restaurant / Banquet Hall / Marriage palace outside MC limit, In case, the project proponent submit a certificate issued by the District Town Planner of the concerned area to the effect that site is suitable as per the statuary / non-statuary Master Plan and their bye- laws and / or submit Building Plan duly approved by the said Authority.

Mechanism/Guidelines for Control of Pollution and Enforcement of Environment Norms at Individual Establishments and the Area/Cluster of Restaurants/ Hotels/ Motels/ Banquets etc.[44]

WATER POLLUTION

Effluent Treatment Plant

Establishment shall provide effluent/sewage treatment plants (ETPs/STPs) for the treatment of entire waste water generated from kitchen, laundry and domestic sewage, subject to following: (i) Establishments having their outlets connected with city sewage system having terminal STP(s) and having due written permission from the concerned local body and competent authority shall provide the necessary treatment arrangements as prescribed by MoEF&CC vide notification no. GSR/794(E) dated 04.11.2009 and PPCB office order no. SEE(HQ-1)/F.244/2011/271 dated 10.10.2011.

[43] *PPCB Office Order no. SEE(HQ-1)/F.244/2011/271 dated 10.10.2011*

[44] *PPCB Office Order no. SEE(HQ-2)2021/64 dated 02.02.2021*

(ii) Establishments which are not connected to city STPs, shall provide captive ETPs/STPs for treatment of effluent generated from their premises and make necessary arrangements for the reuse of treated effluents including disposal onto land for plantation.

(iii) Standalone/seasonal Marriage Palaces shall continue to follow the policy already circulated by Board vide no. SEE(HQ-2)/2016/26654-64 dated 12.05.2016 and shall provide at least a grit removal arrangement with oil & grease trap followed by septic tank of having adequate design to treat the effluent received.

(iv) Bigger establishments/stared hotels with hosting capacity more than 500 persons/guests or the establishments under red category (having rooms 100 and above or having over all waste water generation @ 100 KLD and more) or the establishments having in house laundry section and the establishments covered under schedule appended to EIA notification, 2006 shall provide adequate and appropriate captive ETP irrespective of their connectivity with the city STPs.

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:

(i) Eateries/ restaurants along roadside having minimum seating capacity of 36 numbers.

(ii) 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/PCC.

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, 27ºC	100	100
Total Suspended Solids	100	100
Oil & Grease	10	10

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 Bedroom	pH	5.5-9.0	5.5-9.0
	$BOD_{3days, 27ºC}$	30	100
	TSS	50	100
	Oil & Grease	10	10
	Phosphate	1	-
Hotel with less than 20 bed rooms or a banquet hall with minimum floor area of 100 m2 or a restaurant with minimum seating capacity of 36 Nos.	pH	5.5-9.0	5.5-9.0
	$BOD_{3days, 27ºC}$	100	100
	TSS	100	100
	Oil & Grease	10	10

Establishments shall maximize the reuse of treated sewage in toilet flushing, floor washing, gardening and other non-potable purposes, wherever possible.

Establishments shall provide water meters at source(s) of water supply record the daily consumption of water as well as at the inlet and outlet of ETP / STPs. Bigger establishments/ banquets / stared hotels with hosting capacity more than 500 persons / guests shall provide electromagnetic flow meter at the inlet and outlet of effluent treatment plant to record actual flows on a daily basis
Establishments shall install separate energy meters to record the daily energy consumption of the effluent treatment plant on daily basis prior to completion of the project
Treated water has to be discharged as per conditions specified by the PPCB
Establishments shall carry out self-monitoring of the effluent being discharged regularly and shall submit quarterly report to the PPCB. The quality of treated sewage and trade effluent shall be analyzed by the establishments as per protocol / frequency prescribed by PPCB/CPCB. The PPCB officers shall carry out surprise cross-checks to ensure that the effluent being discharged by the establishment
Provisions/arrangements for utilizing treated wastewater for gardening and non-potable uses need to be done in case of all such units (smaller & bigger)
Local authorities shall ensure to make necessary arrangements for collection, treatment and reuse of waste water generated from those establishments, which falls under their jurisdiction. In case of city sewage treatment plants, the concerned local body/ municipal authority in association with Department of Soil Conservation shall prepare and implement treated water reutilization scheme for various purposes such as horticultural / gardening / non potable purposes. (Responsible authority for implementation: PPCB/Deptt. of Local Govt.)

Groundwater extraction

a) Establishments shall obtain necessary permissions from Punjab Water Regulation and Development Authority (PWRDA)/ Central Ground Water Authority (CGWA) for extraction of groundwater.
b) PPCB shall grant NOC/ consent to such establishments with condition to obtain necessary clearance for abstraction of groundwater from concerned authorities. PPCB is at liberty to take action against the defaulting units which failed to obtain the necessary permission from the concerned Department.
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. (Responsible authority for implementation: PWRDA/CGWA)

Water conservation measures

a) Establishments shall maximize the reuse of treated water for non-potable purpose/gardening
b) All the establishments shall furnish quarterly reports to the PPCB showing quantity of water consumption (month-wise) and quality of treated water
c) Rain water harvesting systems shall be installed by all establishments in consultation with the PWRDA/CGWA. 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 shall then go for ground-based/artificial storage systems, storage tanks and other similar arrangements.

d) Along with bigger hotels, all the establishments shall need to use efficient fixtures such as low flow shower heads, bath, sink faucet aerators, low flow toilets. (Responsible authority for implementation: PWRDA/CGWA)

AIR POLLUTION

Gen sets and fuel

a) Establishments shall use approved fuel such as LPG, PNG, Charcoal for tandoor, boiler, etc. with preference to cleaner fuels.
b) Establishments 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 Gen sets having necessary Type Approval for emissions/ Noise level from the concerned agencies to be installed at the premises.
d) Establishments shall provide stack for the emissions from the generator as well as acoustic enclosure for Gen sets as per the specified norms

Energy Conservation Measures

a) Application of solar energy in various areas such as illumination, water heating shall be promoted.
b) Use of inverters instead of Diesel Generator Sets shall be encouraged.
c) Use of LED bulbs shall be adopted. (Responsible authority for implementation: PPCB)

Consent to establish and Consent to operate

a) Establishments shall 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.) under the Water Act, 1974 and Air Act,1981.
b) Defaulting units shall be liable for paying environmental compensation for damaging the environment considering their operations despite being non-compliant.
c) PPCB shall workout and assess the amount of environmental compensation in-line with the mechanism for charging environmental compensation as evolved by the CPCB/ State Govt. from time to time. (Responsible authority for implementation: PPCB)

Solid Waste Management

a) Establishments 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: ✓ Store horticulture waste and garden waste generated from such premises separately in within the own premises and ✓ 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.

✓	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 sources as prescribed
	in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorized waste pickers or the authorized recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the Local body.
c)	Establishments shall ensure that food waste shall be kept in segregated form at source and shall be treated/ processed in organic waste convertor or through any other scientific way allowed under the SWM Rules, 2016 and the treated compost / by product shall be used as manure or for other useful purposes.
d)	Establishments 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 PPCB.
e)	Establishments shall ensure that there is no usage of single use plastic-thermocol disposable items such as water bottles/water pouches/water cups/cups, plates, glasses, forks, spoons, straw etc. and single use decorating materials made of plastic-thermocol or any other non-biodegradable material on its premises.
f)	Concerned local authorities shall make necessary arrangement for collection and processing of waste from these units in accordance with provisions of SWM Rules.
g)	The BWG will be responsible to make necessary arrangements for segregation of waste at source, segregated collection &transportation, specific processing and safe disposal of waste from these units in accordance with provisions of SWM Rules.
h)	The guidelines of the concerned departments / Department of Local Govt. for the handling and management of solid waste shall also remain applicable as issued from time to time. (Responsible authority for implementation: Deptt. of Local Govt/ PPCB)

Noise Pollution

a)	Establishments shall obtain permission from designated authorities as per provisions of Noise Pollution (Regulation & Control) Rules, 2000.
b)	Establishments 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 PM only. No loudspeakers and bands should be permitted beyond 10 PM.
d)	D.G. sets shall comply with the provisions of Noise Pollution control limits.
e)	Use of only green crackers to be permitted upto 10 PM as per Hon'ble Supreme Court Guidelines.
f)	Guidelines issued by District Administration / Police Authorities concerned departments / for abatement and control of noise pollution shall also remain applicable. (Responsible authority for implementation: Transport Deptt., PPCB & Police Authorities)

INFRASTRUCTURE ISSUES & OTHER REQUIREMENTS

Infrastructure Requirements

Establishments 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:

Parking Facilities

a)	Adequate infrastructure arrangements may be made w.r.t parking in the area by Local Authorities. The parking capacity to be in line with the hosting capacity of such units
b)	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.
c)	Minimum parking norms as notified by Department of Housing and Urban Development through notification no. 12/8/2012-5Hgll /4610 dated 11.08.2017shall be applicable, as amended from time to time. (Responsible authority for implementation: Department of Housing & Urban Development/Department of Local Govt.)

Traffic Movement

a)	Local authorities shall ensure adequate space for movement of vehicles.
b)	Use of horse drawn carriages during Barat Processions shall not be allowed in areas not having adequate space for movement of vehicles to avoid the traffic crawls due to narrowing of the Right of Way(ROW).
c)	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.
d)	Establishments shall obtain prior permission for such processions from local authorities.
e)	Min. approach road norms as notified by Department of Housing and Urban Development through notification no.12/8/2012-5Hgll /4610 dated 11.08.2017shall be applicable, as amended from time to time. (Responsible authority for implementation: Department of Housing & Urban Development / Department of Local Govt.)

Fire Safety

a)	Establishments shall make adequate arrangements for fire safety and obtain fire safety certificate from the respective State Government agencies.
b)	Establishments shall 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.
(Responsible authority for implementation: Department of Housing & Urban Development / Department of Local Govt.)

Building Plan

a) Establishments shall approve their building plans from concerned authorities. Local Authorities shall ensure that these units are operating in compliance with approved building plans and without any parking & traffic issues.
(Responsible authority for implementation: Department of Housing & Urban Development / Department of Local Govt.)

Green Belt

a) Bigger unit /star hotels shall develop green belt on its premises and shall furnish the green belt development plan while applying for consent to operate.

b) Provisions for green belt as prescribed by Department of Housing and Urban Development and Local authorities shall be complied. However, where space is available along with boundary of the units, the plantation/green belt shall be provided to the maximum extent.

Note: *Guidelines issued by the Department of Housing and Urban Development / Local Govt. / other concerned department w.r.t parking facilities, traffic movement, fire safety, building plans and green belt shall also remain operative.*

(Responsible authority for implementation: Department of Housing & Urban Development / Department of Local Govt.)

4.2.10 Poultry Farms[45]

Siting Criteria (For New Poultry Farms-Set up after issuance of guidelines)

1.	The poultry farm should not be located within:
	500 m from residential zone
	100 m from major water course like River, Lake & Canals and drinking water source like wells, summer storage tanks
	100 m from National Highway
	50 m from State Highway
	10-15 m from rural roads/internal roads/village pagdandis
2.	The poultry sheds should not be located within 10 m from farm boundary

Note: *Above siting criteria shall be adopted only for new poultry forms to be setup and shall not be applied vice versa for establishment of any industry[46].*

Poultry farming consist of the following unit operations.

- Breeder Farms (Breeding)
- Hatchery Farm (Hatching)
- Layer farm (Egg production)
- Broilers (Meat production)

[45] *CPCB letter no. CPCB/IPC-V/NGT/Poultry/2022/10270 dated 10.01.2022*

[46] *PPCB vide its office order no. 140 dated 26.03.2018*

Poultry farms classified under three categories based on the number of handling of birds:

- Small (5,000-25,000 birds)
- Medium (above 25,000-1,00,000 birds).
- Large (above 1,00,000 birds)

Regulatory/ Monitoring Mechanism for 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 and Air Act, 1981 from State Pollution Control Board/Pollution Control Committee w.e.f. 01.01.2023.
- 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.

Environmental Guidelines

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.

(ii) Dust from Feed Mills

- Feed mill and godown should be located on a well elevated ground preferably near the entrance to 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

Management of Solid Wastes (contains Manure/litter, Hatchery Debris and Dead Birds)

- **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 utilized 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:

Sr. No.	Poultry Farms	Methods for Disposal/Utilization of manure
1.	Small Poultry Farms	• Composting
2.	Medium & Large Poultry Farms	• Composting or Biogas production for disposal/utilization of manure/litter. • Combination of any of the methods for disposal/utilization of manure/litter
3.	Poultry Farms in Cluster	• 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.

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

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.

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.
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.

4.2.11 Jaggery Units [47]

Location Guidelines

Distance from	Distance
MC limits of cities / towns	500 m
Village Phirni / Lai Lakir	300 m
Wild life Sanctuary / Zoo	500 m
Road (Outer edge of metalled/RCC road)	20 m
Residential area (more than 5 pucca houses)	200 m
Educational Institute/Religious Place	300 m
Health Care Establishments	300 m
Note: ▪ *All the above distances shall be measured from the source of air pollution.* ▪ *However, such units will be categorized as white category units for the purposes of consent management.*	

[47] *PPCB Office Order No.192 dated 02.04.2019*

Code of Practice:

Stack of minimum 10 mts. height above ground level shall be provided for proper dispersion.
Jali type bhathi will be used in the jaggery units.
The final product (Gur) shall be stored properly & hygienically in a glass/plastic casing.
Only dry wood/bagasse will be used as fuel.
Scum/waste residue will be disposed off properly.
Movement area inside the jaggery unit will be stabilized to contain dust emissions.
Note: *CPCB has also issued certain guidelines. However, PPCB decided to follow its own guidelines as above*[48].

4.2.12 Common Bio-Medical Waste Treatment & Disposal Facility[49]

CBWTF shall preferably be developed in a notified industrial area without any requirement of buffer zone* (or)
CBWTF can be located at a place reasonably far away from notified residential and sensitive areas and should have a buffer distance of preferably 500 m so that it shall have minimal impact on these areas. In case of non-availability of such a land, the buffer zone distance from the notified residential area may be reduced to less than 500 m (but not less than 250 m) by SPCB/PCC without referring the matter to CPCB by prescribing additional control measures such as (i) adoption of best available technologies (BAT) by the proponent of CBWTF; (ii) prescribing stringent standards for operation of the CBWTF by the SPCB/PCC; (iii) adoption of zero liquid discharge by the CBWTF and (iv) in case of any complaints from the public, then CBWTF should prove that the facility is not causing any adverse impact on environment and habitation in the vicinity. If SPCB/PCC is not in a position to resolve the issue relating to buffer zone while selecting the site for CBWTFs, in such a case, SPCBs/PCCs may refer the matter to CPCB.
CBWTF can also be developed as an integral part of the Hazardous Waste Treatment Storage and Disposal Facility (TSDF) subject to obtaining of necessary approvals from the authorities concerned including 'environmental clearance' from the concerned authority from the concerned authority as per Environmental Impact Assessment 2006 and further amendments notified under the Environment (Protection) Act, 1986, provided there is no CBWTF exist within 150 KM distance from the existing TSDF.
*Buffer zone represents a separation distance between the source of pollution in CBWTF and the receptor. ***Note:*** *These guidelines are applicable to all the upcoming or new CBWTFs.* *In case of the existing CBWTFs, these guidelines shall be applicable in case* *(a) the existing CBWTFs desires to expand or enhance the existing treatment capacity* *(or)* (b) *the existing CBWTFs desires to modernize the existing treatment* equipment with the new equipment with enhancement in the existing treatment capacity

[48] *CPCB guidelines issued vide no. CPCB/IPC-V/Kohlu/2019/5120 dated 13.8.2019*

[49] *CPCB guidelines dated 21 December, 2016*

4.2.13 Petrol Pumps[50]

Siting criteria for Retail Outlets
Petrol pumps (new Retail Outlets) shall not be located within a radial distance of 50 meters (from fill point/ dispensing units/ vent pipe whichever is nearest) from schools, hospitals (10 beds and above) and residential areas designated as per local laws
In case of constraints in providing 50 meters distance, the retail outlet shall implement additional safety measures as prescribed by PESO.
In no case the distance between new retail outlet from schools, hospitals (10 beds and above) and residential area designated as per local laws shall be less than 30 meters
No high tension line shall pass over the retail outlet
Note: *The above siting criterion for the new retail outlets is to be complied with in cases where construction of retail outlets by oil marketing companies commenced on or after 07.01.2020 and will not apply to those cases where PESO prior clearance / initial approval has been obtained and subsequently construction has been started by OMC before 07.01.2020.*
All the surface water bodies irrespective of utility shall be protected from any possible contamination. These include lakes, ponds, streams, rivers, wetlands, canals and creeks, as per revenue records. Retail Outlets shall not be located within a distance of 50 meters from the nearest point of water bodies. In case of streams and rivers, the distance shall be considered **from** floodway. In case floodway is not defined, the distance shall be considered from firm banks/ edge of river. The siting criterion is to be implemented for all new petrol pumps where construction by OMCs starts post the issuance of these guidelines[51]**.**
Note: *The above provision has been made as addendum to the guidelines dated 07.01.2020 vide O.M. 16th August 2021.*

Environmental Guidelines

Containment and treatment of spillages from fuel filling operations at petrol pumps
Petrol pumps located in areas with high groundwater table i.e. groundwater levels less than 04 meters shall have secondary containment by way of double walled tanks or concrete Protection walls so as to minimize groundwater and soil contamination. It shall be the responsibility of OMC to properly get measured groundwater level at the site of proposed petrol pump and ensure implementation of these adequate protection measures for such sites Details of measures taken by Oil Marketing Company shall be placed in public domain and in. case of contradictory view, view of State/ Central Ground Water Board/ Authority will prevail
All new retail outlets shall have underground tanks/ above ground tank and its ancillary components such as pipes, flexible connectors, pumps, fittings etc. protected from leaks due to corrosion by adopting materials (HDPE/ Mild Steel etc.) with required protective coating, as applicable, duly approved by PESO
Any major-leakage/ spillage of Petrol, Diesel, Lube Oil (more than 1 barrel-165 litres) occurs at fuelling station, concerned OMC shall report to State Pollution Control Board, PESO and District Administration under intimation to CPCB within 24 hours of occurrence
▪ Operation of concerned underground storage tank & its ancillary components shall be stopped immediately and not be resumed till corrective measures to contain & stop leakage/spillages are implemented to the satisfaction of PESO and concerned SPCB.

[50] *CPCB vide OM no. B-13011/1/2019-20/AQM/10822 dated 07.01.2020*

[51] *CPCB vide OM no. B-13011/1/2019-20/AQM dated 16.08.2020*

- OMCs will be held liable for Environmental Compensation (imposed by SPCBs/PCCs) and assessment of environmental damage (depending on extent of contamination in soil and groundwater) and site remediation Consultant/ Expert agency appointed by OMCs for damage assessment and site remediation shall have minimum national/ international experience of 5 years in this field. Various approved methods shall be considered for cleaning underground contaminants.
- All DUs shall have Auto Cut off Nozzles which shuts dispensation of fuel if its level in customer fuel tank reaches full capacity
- Breakaways to be installed for all the hoses of dispensing units to reduce till in the spillage in the event of customer vehicles moves away with nozzle still in the fuelling position.
- Single/ double plane swivel with breakaway coupling shall be installed for all the dispensing units for better positioning of nozzle while refuelling so that it does not fall off accidently.
- In pressurized dispensation, all dispensing units shall be installed with shear valves to cut the fuel flow from pipe line immediately upon accidental knocking of dispensing units from its position.
- In pressurized system all Submersible Turbine Pumps (STPs) are to installed with line leak detectors and in the event of pipeline leaks STPs shall stop pumping fuel from underground tanks.
- Emergency stop button switch shall be provided on the Multi Product Dispenser (MPD) to stop the dispensation in case of emergency
- Automation system shall be installed at all new retail outlets to alert in case of tank leak by way of auto gauging system approved by PESO.
- All Retail Outlets shall provide overfill alarm through automation.
- Measures for spill containment in fill point chambers and forecourt area shall be implemented as prescribed by PESO.

Check on leakages (Leakage Detection System) from underground storage tanks so as to prevent groundwater and soil contamination

- All new retail outlets will have automation system installed which will provide reports on volume balance after every day operation and records shall be maintained.
- Manual gauging shall be done once in a month and compare the same with Automatic Tank Gauging for accuracy.
- Daily MS and HSD loss shall not exceed MoPNG prescribed limits. In case of leakage beyond such limits, matter shall be got analyzed by OMCs and further action shall be taken for ascertaining the reasons of losses. In case of leakage resulting in soil / groundwater contamination:
  - ✓ Concerned OMC shall report to State Pollution Control Board, PESO and District Administration under intimation to CPCB within 24 hours of occurrence. Operation of such underground storage tank and its ancillary components shall be stopped immediately.
  - ✓ Fuel shall be removed immediately from underground storage tank to prevent further release to environment. Measures to prevent explosion due to vapours released due to leakage as recommended by PESO shall be implemented immediately.
  - ✓ OMCs will be held liable for Environmental Compensation (imposed by SPCBs/PCCs) and assessment of environmental damage (depending on extent of contamination in soil and groundwater) and site remediation Consultant/ Expert agency appointed by OMCs for damage assessment and site remediation shall have minimum national/ international experience of 05 years in this field Various approved methods shall be considered for cleaning underground contaminants.

- ✓ Operation of Underground tank and its ancillary components shall not be resumed till corrective measures to contain and stop leakages are implemented to the satisfaction of PESO and concerned SPCB.
- All underground tanks and pipelines shall be subjected to test for leaks every 7 years.

Policy towards Treatment & disposal of sludge removed from underground tanks during cleaning

- Sludge shall be collected, stored and disposed as per Rule 8 of Hazardous Waste (Management and Transboundary) Rules, 2016 and amendments thereof and records shall be maintained

Installation, Operation and maintenance of Vapour Recovery System

- All new retail outlets set up with sale potential of 300KL MS per month and setting up in cities with population more than 1 lakh will be provided with VRS. VRS should be functional by the time of sale of MS touch 300 KL. In case of failure of installation of VRS, Environment Compensation will be levied by SPCBs/ PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance.
- Any new retail outlet set up in cities having population more than 10 lakh and having sale potential of 100 KL MS per month will be provided with VRS. VRS should be installed within a period 03 months from the day of sale of MS touch 100 KL. In case of failure of installation of VRS, Environment Compensation will be levied by SPCBs/ PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance
- In case of Stage II VRS, nozzle shall be provided with flexible cover flap or other alternative system for proper covering of filling tank and therefore proper recovery of vapours.
- OMCs are responsible for maintaining installed VRS. They have to maintain periodic inspections for A/L regulator as prescribed by Legal Metrology Proper record shall be maintained.
- Working of dispenser shall be interlinked with VRS functioning. Online system shall be developed within 06 months to monitor status of operation of VRS In case of non-operation of VRS, the same shall be automatically reported to concerned OMC. VRS shall be brought into operation immediately within 24 hrs and in any case within 72 hrs failing which sale of MS shall be stopped from the fuelling station. Proper records of operation of VRS shall be maintained.
- Work zone monitoring for Total VOC and Benzene shall be conducted by OMCs for petrol pumps selling more than 300 KL/month and more than 10 lakh population (in first phase) by EPA, 1986 approved labs once in a year to check compliance with OSHA norms (Time-Weighted Average) and report shall be submitted to SPCB. In addition, pilot study shall be conducted by OMCs through expert institutions for online monitoring of VOCs.

Guidelines in case of petrol pumps near water bodies

Retail outlets corning within 50 meter to 100 meter from the nearest point of surface water body shall have secondary containment by way of double walled tanks or concrete protection walls around Underground Storage Tank.

Groundwater and soil quality monitoring near the premises of fuel retail outlets shall be conducted by OMCs once a year through E (F) Act, 198 approved labs or labs with national/international accreditation. The monitoring shall be done for those Fuel Retail Outlets

which are located within 100 meter from the nearest point of surface water bodies. These shall be applicable to all petrol pumps, regardless of the date of establishment. In case of any clarification and/or difficulty in obtaining sanirlip. for groundwater and soil quality monitoring, 'MOs may seek assistant of local administration/SPCB/PCC/CGWB.

Groundwater and soil quality monitoring shall also be conducted by OMCs before installation of the new fuel retail outlet, for those retail outlets coming up within 100 meter from the nearest point of surface water bodies

Protocol for Ground Water and Soil Quality Monitoring

Ground water and soil quality monitoring within petrol pump selling more than 300 KL/ month and more than 10 lakh population shall be conducted by OMCs once in two years through EPA, 1986 approved labs for the following parameters from the nearest source and report submitted to SPCB:

Sr. No.	Parameter	Permissible Limit
1.	Total petroleum hydrocarbons	600 µg/l
2.	BTEX	i. Benzene-950 µg/l ii. Toluene = 300 µg/l iii. Xylenes- a. o-xylene- 350 µg/l b. m & p- xylene -200 µg/l
3.	Ethanol	1400 µg/l
4.	Methyl Tertiary Butyl Ether	13 µg/l
5.	PAH	0.0001 µg/l

Enforcement agencies including SPCB can collect samples in and around petrol pump to check contamination.

Protocol for monitoring quality of soil and groundwater near the premises of fuel retail outlets (located within 100 mtr. from the nearest point of service water bodies)[47]

Samples of groundwater being used for drinking purposes shall be collected from at least three different directions with reference to the retail outlet. The sampling point should be preferably within 50m distance from the underground storage tank location at the retail outlet. The samples shall be analysed for the following parameters:

Sr. No.	Parameter	Screening Values
1.	Total petroleum hydrocarbons	0.6mg/L
2.	BTEX	i. Benzene- 0.01 mg/l ii. Toluene- 0.7mg/l iii. Xylene- 0.5 mg/l
3.	Methyl Tertiary Butyl Ether	13µg/l
4.	Total PAH	0.0001mg/l

Further, soil sample shall be collected from a borehole within the premises of the fuel retail outlet adjacent to the Underground Storage Tank pit. The depth of bore hole should be up to 1m below the bottom of the storage tank level. Soil samples shall be analysed for the fallowing parameters:

Sr. No.	Parameter	Screening Values (mg/kg)
1.	Total Petroleum hydrocarbons (TPH)	5000
2.	Benzene	5

3.	Toluene	30
4.	Xylene	50
5.	Methyl Tertiary Butyl Ether	100
6.	Total PAH	40

Ground water and soil quality monitoring shall be conducted by OMCs once a year through E (P) Act, 1986 approved labs or labs with national/international accreditation and the reports are to be submitted to SPCB. The soil monitoring shall be done in first six months while groundwater monitoring shall be done in the next six months.

In case of exceedance of screening by any parameter, or in case of leakage resulting in soil/groundwater contamination, the measures/steps as prescribed in the guidelines for setting up of petrol pumps dated 07.01.2020 shall be taken up. Assessment and remediation shall be carried out as per the guidelines issued by MoEF&CC and CPCB.

Measures for protection of Worker's Health

- All workers engaged at retail outlet may be covered under ESI. OMC dealers shall implement the Personal Protective Equipment (PPE) as per labour laws.
- IEC (Information Education Communication) activities should be organized by OMC dealers for workers at regular intervals in order to sensitize them about harmful impacts of VOC emissions.

Audit of all protection measures and monitoring system implemented at petrol pumps:

PESO shall conduct audit of tanks and fuel equipment including pipes, overfill protection equipment and alarm system on annual basis and maintain records.

These guidelines are supplementary to all existing relevant rules, guidelines, orders, notifications such as Wetlands (Conservation and Management) Rules, 2017, Coastal Regulation Zone (CRZ) Notification, 2011 etc.

For the CNG Retail Outlets / Dispensing Stations[52]

- All the existing petrol pump / fuel station shall be allowed to setup CNG stations in their premises subject to requisite approval from District Administration and PESO.
- For new CNG stations / standalone stations, the guidelines prescribed by the CPCB for petrol pumps may be followed till any new guidelines are received from CPCB for CNG stations.

4.2.14 Gold Assaying and Hallmarking Centres[53]

Siting Criteria

Gold Hallmarking Assaying facilities/Centres should be established as per the siting policies/guidelines of local administration

Environmental Guidelines

The emissions from cupellation and parting process should be channelized through a well-designed suction hood and duct arrangement system to control lead and nitric acid fumes.

The extracted fumes from cupellation and parting should be scrubbed by installing well designed scrubbing system for removing the pollutants from the exhausted air& discharged through appropriate stack as per SPCBs consent conditions.

The adequacy/efficiency of the Scrubber system installed need to be verified by the SPCBs or through Expert institutions.

[52] *PPCB Letter No. SEE(HQ-2)/2021/ 15172-78 dated 06.07.2021*

[53] *CPCB letter no. CPCB/IPC-V/NGT_Gold/2020 dated 09.10.2020*

The spent acid generated from parting acid should be sent to TSDF or neutralized before its disposal. These Hallmarking centres should have facilities of pH testing like litmus paper, pH meter to check that the spent acid is neutralized.
The Spent cupels/scrubbed water containing lead should be sent to TSDF or to the authorized registered lead recyclers dealers.
Manifest/records should be maintained for storage and disposal of spent acid/cupels/scrubbed water residue generated during the process.
Proper personal protection equipment's such as Face Shields, Helmets, Acid Gloves, First Aid Box, etc. must be used by the personals carrying out fire assay & parting test.
Good housekeeping should be maintained by frequent and regular cleaning of the assay lab, preventing lead dust from accumulating on laboratory surfaces.
All the gold assaying and hallmarking centers shall obtain necessary Consents under the provisions of Water (Prevention and Control of Pollution) Act, 1974 & Air (Prevention and Control of Pollution) Act, 1981 & Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 from the concerned State Pollution Control Boards / Pollution Control Committees.
Blood test of worker for lead, should be done once in a year who has worked for at least 6 months in such facility.
BIS may explore new alternate instrumental methods like Spark or Arc OES with low pollution foot print for assaying of Gold.
BIS may also make mandatory to have a copy of consents issued by SPCBs/PCCs under Water Act 1974 & Air Act, 1981 and Authorisation certificates while issuing the BIS certificates.

4.2.15 Dairy Farms and Gaushalas [54]

4.2.15.1 Guidelines for Dairy Farms

A. (Urban & Peri-urban Area)

- **Siting Policy (For New Dairy Farms)**

Dairy farm shall be setup as per siting policy/guidelines of local administration and follow criteria as below:

Located in area wherever permissible and atleast 100 meters away from residential dwellings, health centers/hospitals & schools in order to avoid odour problem
Atleast 200 meters away from water spread area of major watercourses like Lake, canal and major drinking water sources
Away from flood plain area of River and areas having shallow groundwater.
Atleast 5 meters of inter-se distance between two establishments (each establishment should provide 2.5 meters from each side) for ventilation should be provided and developed green belt.
Note: *Existing establishments should take appropriate environmental friendly practices as per Guidelines.*

[54] *CPCB letter no. CPCB/IPC-IV/NGT/Dairy/2021/3960 dated 23.07.2021*

Solid Waste Management

Dung from floor of shed should be collected at regular interval, so as to keep floor clean. Surrounding areas should also be cleaned regularly to prevent obnoxious smell in area.
Premises and its surrounding areas should be properly sanitized and disinfected, e.g. by sprinkling crushed lime.
Dung & fodder residue etc. should not be washed into drains in order to avoid clogging of drains. Local bodies/corporations/SPCBs should ensure that untreated wastes are not discharged outside premises.
Collected solid wastes should be stored properly for its utilization.
Small Dairy Farms may adopt dung for manufacture of dung wood/dung cake or composting/vermicomposting or combination of both methods for disposal/utilization of solid wastes. In case of cluster, biogas/compressed biogas production may be adopted for disposal/ utilization of solid wastes in association with entrepreneurs or local dairy farmers association. Local bodies/corporations/SPCBs should facilitate Dairy farmers/entrepreneurs/NGOs in setting up of individual or common utilization facilities.
Medium & Large Dairy Farms may adopt a combination of disposal/utilization methods like manufacturing of dung wood or biogas generation or vermicomposting. However, Large Dairy Farms may setup biogas/compressed biogas production facility either by themselves or in association with entrepreneurs.
Domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.) should be disposed as per provisions of "Solid Waste Management Rules, 2016". If they have their own medical facilities then wastes should be disposed as per provisions of "Bio- medical Waste Management Rules, 2016".

Wastewater Management

Water should be judiciously used for bathing of bovines and other services including floor cleaning to contain wastewater quantity to 100 litres/day/bovine.
Adequate infrastructure should be provided to ensure proper handling, treatment and disposal of wastewater. They may set-up individual or common treatment facilities where in cluster. Local bodies/corporations/SPCBs should facilitate Dairy farmers/ entrepreneurs/NGOs in setting up of individual or common treatment facilities.
Wastewater should be adequately treated so as to meet standards as prescribed by SPCBs/PCCs.
Flooring of shed should be properly paved (impervious) with a wastewater collection system. However, floor should not be slippery in order to ensure safety of animals.

Air Quality Management

Animal housing should 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.
Good housekeeping practices like maintaining proper sanitary conditions, protecting dung from unwanted pests/insects should be followed in order to minimize odour nuisance.
Floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. Space requirements should be provided as per Bureau of Indian Standards (BIS) (refer BIS: 12237-1987 given at **Annexure-I**).
It is suggested to obtain ration advisory for improving/modifying quality and dosage of feed/forage/supplements from any of agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc. in order to reduce enteric methane generations from livestock. It is beneficial to animal health/nutrition and reduced impact on environment.

Plantation of trees or green belts, wherever feasible, to provide a barrier against the spread of foul smell or noise originating from them.

B. Rural Area

Siting Policy (For New Dairy Farms)

The dairy farm should be located:

Away from residential dwellings/hospitals/schools as in order to avoid odour issue as per siting norms of local administration.
100 meters away from water spread area of major drinking water sources
away from flood plain areas of River and areas having shallow groundwater
Atleast 5 meters of inter-se distance between two establishments for ventilation, this space of 5 meters (2.5 meters from each side from each unit) shall be developed for green belt.
Note: *Existing establishments should take appropriate environment friendly practices as per Guidelines.*

Solid Waste Management

Dung should be collected & stored properly for its utilization. It should be used as compost in field or in making dung wood or vermi-compost. Biogas production may be practiced wherein cluster as a source of energy for rural area.
Dung & fodder residue should not be washed into drains in order to avoid clogging of drains and surrounding areas should also be cleaned regularly to prevent obnoxious smell in area.
Provisions of "Solid Waste Management Rules, 2016" should be followed for disposal of domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.).

Wastewater Management

Water should be judiciously used to contain wastewater quantity to 100 litres/day/ bovine.
Floor should be paved and wastewater should be collected and utilized for agriculture purpose. Floor should not be slippery in order to ensure safety of animals.
Wastewater should be adequately treated so as to meet standards as prescribed by SPCBs/PCCs.

Air Quality Management

Animal housing should be ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases.
Good housekeeping practices should be followed in order to minimize odour nuisance.
Floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. Space requirements should be provided as per Bureau of Indian Standards (BIS) (refer BIS: 11799-2005 given at **Annexure-II**).
It is suggested to obtain Ration advisory for improving/modifying quality and dosage of feed/forage/supplements from any of agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc. to reduce enteric methane generations from livestock.
Plantation of trees or green belts, wherever feasible, to provide a barrier against spread of foul smell or noise originating from them.

4.2.15.2 Guidelines for Gaushalas

Following guidelines are framed for management of wastes from Gaushalas located in urban, peri-urban & rural area. These guidelines are applicable to establishment which are discharging their wastes into environment. These establishments shall also follow existing laws, rules, guidelines, directions and standard operating procedures issued by different organizations.

Siting Policy (For New Gaushalas)

Gaushala shall be setup as per siting policy/guidelines of local administration.
Atleast 100 meters away from residential dwellings/schools/hospitals in order to avoid odour issue and away from the water spread area of major drinking water sources.
Away from flood plain areas of River and areas having shallow groundwater.
Atleast 5 meters of inter-se distance between two establishments for ventilation, this space of 5 meters (atleast 2.5 meters from each side from each unit) shall be developed for green belt.

Solid Waste Management

Dung from floor of shed should be collected at regular interval, so as to keep floor clean. Surrounding areas should also be cleaned regularly to prevent obnoxious smell in area.
Premises and its surrounding areas should be properly sanitized and disinfected, e.g. by sprinkling crushed lime.
Dung & fodder residue etc. should not be washed into drains in order to avoid clogging of drains. Local bodies/corporations/SPCBs should ensure that untreated wastes are not discharged outside premises.
Solid wastes should be stored properly for its utilization in dung wood manufacturing or biogas generation or vermicomposting. In case of small & medium scale Gaushalas, a combination any of methods may be adopted for utilization of dung wherein large scale Gaushalas may setup biogas generation facility at its own or in partnership with entrepreneurs.
Domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.) should be disposed as per provisions of "Solid Waste Management Rules, 2016". If they have their own medical facilities then the wastes should be disposed as per provisions of "Bio-medical Waste Management Rules, 2016".

Wastewater Management (For New Gaushalas)

Water should be judiciously used for bathing of bovines and other services to contain wastewater quantity to 50 litres/day/bovine. (As water utilized by Gaushala is less in comparison to Dairy Farm due to occasional bathing & mechanized floor cleaning).
Adequate infrastructure should be set-up to ensure proper handling, treatment and disposal of wastewater. Local bodies/corporations/SPCBs should facilitate Gaushala owners/ entrepreneurs/NGOs in setting up of treatment facilities.
Wastewater should be adequately treated so as to meet standards as prescribed by SPCBs/PCCs or utilized for various medicinal purpose.
Flooring of shed should be properly paved (impervious) with a wastewater collection system. However, floor should not be slippery in order to ensure safety of animals.

Air Quality Management (For New Gaushalas)

Animal housing should be ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases.
Good housekeeping practices like maintaining proper sanitary conditions, protecting dung from unwanted pests/insects should be followed in order to minimize odour nuisance.

Floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. Space requirements should be provided as per Bureau of Indian Standards (BIS) (refer BIS: 11942-1986 given at **Annexure-III**).
It is suggested to obtain Ration advisory for improving/modifying quality and dosage of feed/forage/supplements from any of agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc. to reduce enteric methane generations from livestock.
Plantation of trees or green belts, wherever feasible, to provide a barrier against spread of foul smell or noise originating from them.

Methods for Disposal/Utilisation of Dung

Sr. No.	Dairy Farms/ Gaushalas	Methods for Disposal/Utilization of Dung
1.	Small Dairy Farms (upto 25 animals)	• Composting/vermicomposting, or • Manufacture of dung wood/dung cake, or • Combination of both
2.	Medium Dairy Farms (upto 100 animals)	• Combination of any of three methods for disposal / utilization of dung
3.	Large Dairy Farms (more than 100 animals)	• Biogas/compressed biogas production or • Combination with any of remaining method
4.	Dairy Farms in Rural Area	• Composting/vermicomposting, or • Manufacture of dung wood/dung cake
5.	Dairy Farms in Cluster	• Common Biogas/compressed biogas production, and • Any of remaining method at individual level
6.	Small (upto 100 animals) & Medium (upto 1000 animals) Gaushalas	• Combination of any of three methods for disposal/utilization of dung
7.	Large Gaushalas (more than 1000 animals)	• Biogas/compressed biogas production or • Combination with any of remaining method

Regulatory/ Monitoring Mechanism for Dairy Farms & Gaushalas

Local authorities/corporations should carry out inventory of Dairy farms and Gaushalas located in their jurisdiction in inventory performa given at Annexure-IV and same should be updated & shared with concerned SPCB/PCC on annual basis (calendar year wise).
Local bodies/municipal corporations shall publish a public notice in newspapers and on their website for registration of Dairy farms and Gaushalas as per municipal laws. Registration may be done preferably through online mode and same may be displayed at their websites.
SPCBs/PCCs shall publish a public notice for Dairy farms & Gaushalas to obtain consent to establish and consent to operate under Water Act, 1974 as well as Air Act, 1981 as per the categorization of industries in Orange and Green Category, respectively.
SPCBs/PCCs/local bodies/municipal corporations shall upload Environmental Guidelines on their website and also circulate to all Dairy farms and Gaushalas.
Concerned SPCBs/PCCs/local bodies/corporations should monitor dairy farms and gaushalas on regular basis to ensure proper disposal of bovine dung and wastewater to check compliance of environmental norms. SPCBs/PCCs will consider carrying capacity of surroundings while allowing a new establishment and laying down environmental norms.

SPCBs/PCCs shall carry out environmental audit of atleast 2 Dairy farms and 2 Gaushalas, randomly selected from each district of State/UT and submit compliance and action taken report to CPCB on half yearly basis.
SPCBs/PCCs shall submit status of compliance of guidelines by Dairy farms and Gaushalas located in their jurisdiction in form of report once in six months to CPCB for Audit purpose.
CPCB shall carry out environmental auditing of 4 Dairy farms and 4 Gaushalas in each State/UT, randomly selected based on information received from SPCBs/PCCs on annual basis.
In case of any violation of environmental norms under Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and Environmental (Protect) Act, 1986 by Dairy farms and Gaushalas, concerned SPCBs/PCCs should impose environmental compensation as per CPCB methodology for "Environmental Compensation to be levied on Industrial Units", for damaging the environment and in order to stop polluting activity and initiate prosecution for repeatedly polluting units.
SPCBs/PCCs should provide training and consultation to Gram Panchayat for implementation of guidelines in their jurisdiction. Gram Panchayat should ensure implementation of guidelines by Dairy farms and Gaushalas falling under their jurisdiction for handling and management of wastes.

Hands on practical trainings on environment/waste management & treatment technologies, scientific feeding for enteric methane reduction, waste to wealth management programme, etc. should be provided to Dairy & Gaushala workers/entrepreneurs by local bodies/ SPCBs/PCCs on regular interval.

4.2.16 End of life vehicles (ELVs)[55]

Rules under Environment (Protection) Act 1986 having relevant provisions for regulatory framework applicable for ELVs

The wastes generated during environmentally sound recycling process of ELVs shall be managed in accordance with the various Rules notified by the Ministry of Environment, Forests and Climate Change under the Environment (Protection) Act, 1986. These rules have been notified in order to provide statutory provisions for regulating the handling and management of wastes without causing any adverse effects on environment and human health. The Rules are implemented through the State Government and State Pollution Control Boards or the Pollution Control Committees of the Union Territories. The following waste regulations have been notified by the Ministry that are applicable for the management and recycling of ELVs: a) The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. b) The Solid Waste Management Rules, 2016. c) The E-Waste Management Rules, 2016. d) The Plastic Waste Management Rules, 2016. e) The Ozone Depleting Substances (Regulation and Control) Rules, 2000. All the above rules address environmental issues concerning waste management (recycling or disposal). The different rules cover industrial wastes, urban waste as well as post- consumer waste.
The concept of recyclability of wastes and regulating recycling activity has been introduced in all these rules with the goal to increase the recovery of resources thereby reducing the waste destined for disposal. Some of these rules include provision for the registration/authorisation of recyclers which have the capability to recycle wastes using environmentally sound technologies (ESTs).

[55] *CPCB letter No. F.No. B-29016 (SC)/1/2018-19/WM-II Div./910 dated 12.04.2019*

The hazardous substances and hazardous fluids present in ELVs such as waste oil, transmission fluid, coolant fluid, brake fluid, power steering fluid, hydraulic fluid, gear oil, lead acid batteries and other materials arising from de-pollution shall be recycled or disposed of in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. In addition to these substances, the hazardous solid wastes such as air filter, oil filter, brake shoe, asbestos in clutch discs, etc. are required to be disposed of in accordance with these Rules. Any recycling of these hazardous wastes recovered from the ELVs shall be carried out only by the registered recyclers notified under these rules. The residues containing hazardous substances arising from both manufacturing and recycling activities have to be disposed of in an environmentally sound manner and the disposal procedures shall be decided on the basis of the constituents present in the waste. All hazardous wastes generated from the ELVs shall be disposed of in accordance with the requirements under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
In compliance with the requirements under the Montreal Protocol the Ozone Depleting Substances (Regulation and Control) Rules, 2000 have been notified. These rules provide a control on the production, consumption, export and import of the 95 Ozone Depleting Substances listed in the Schedule 1 of these rules. All refrigerants containing ODS recovered from ELVs should be disposed off in accordance with these rules.
The plastic waste which can be recycled shall be channelized to registered plastic waste recycler in accordance with the Plastic Waste Management Rules, 2016.
The collection, recovery and disposal of the solid waste shall be in accordance with the Solid Waste Management Rules, 2016.
Similarly, all electronic parts are to be treated and disposed of in accordance with the E-Waste Management Rules, 2016 to channel e-waste for recycling to registered recyclers.

Various activities such as Collection and handling of ELVs, ELV collection & dismantling centres, Handling, storage and transportation of ELVs, environmentally sound de-pollution of ELVs, environmentally sound dismantling & segregation and Environmentally Sound Shredding and separation and processing of residues shall be carried out as per guidelines for environmentally sound facilities for handling, processing and recycling of end of life vehicles, prescribed by CPCB.

Requirements for setting up of ELV recycling facility

The establishment of an ELV recycling facility to be based on the guidelines published, best practices adopted and regulatory requirements in India for establishing and operating "Recycling and Disposal Facilities". Such facilities shall only be set up by the formal, formalized or organized sector. The activities presently taking place in the semi-formal sector need to be integrated. They shall provide a support and channelization system for the integrated facilities that are to be established. With the increasing vehicular population, a suitable infrastructure for large scale operations is needed to deal with a large number of vehicles. This would facilitate semi-formal sector into the main stream of the ELV management activities and ensure environmental compliance. The proposed mechanism for the ELV recycling facility is only an illustrative model and may need upgradation as we progress.
ELV Facility and operation requirements: In order to provide an infrastructure for recycling ELVs there is a need to identify large areas of land where adequate space is available for storage,

handling, and recycling of ELVs. ELVs requiring treatment range from small two wheelers to large trucks and trailers. It may be possible to have different facilities for different types of vehicles but one major facility in every region catering to a number of States would be advantageous. However, the interstate movement would need to be streamlined.

Procedures for Setting up & Management of ELV recycling facilities

i. A license shall be obtained to set up the ELV recycling industry from the appropriate authorities.

ii. Land shall be produced in an industrial estate/area to set up the facility. Requisite layout and design approvals shall be obtained from the concerned SPCB/PCC.

iii. In accordance with AIS PART-1 para. 4.2.4 any person(s) operating Collection Centre(s) and Dismantling Centre(s) shall fulfil the minimum requirements in accordance with Annex A.

iv. Environmental Clearances (EC), wherever applicable, shall be obtained based on the scale of operations as prescribed in the Environmental Clearance notification dated 14 September 2006.

v. An Environmental Management Plan (EMP) shall be prepared and put in place.

vi. Facility shall obtain consents under the Water Pollution (Control & Prevention) Act, 1974 and Air Pollution (Control & Prevention) Act, 1981 from the concerned SPCB/PCC.

vii. Facility shall have authorisation under HoWM Rules, 2016, from the concerned SPCB/PCC for handling, storage, packaging, transportation of hazardous to authorized recyclers and treatment and disposal facility operators. The facility shall have membership or agreement with authorized recyclers and treatment and disposal facility operators. Further, authorisation under Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016 shall also be obtained for management of solid waste and plastic waste generated during de-pollution/dismantling/shredding activity.

viii. Requisite methodologies shall be planned for acceptance of ELVs and distribution of destruction certificates (at the end of destruction of ELVs) among the stakeholders in accordance with guidelines or policy prescribed by the concerned Transport Department.

ix. Facility shall have a written plan describing the facility's risk management objectives for environmental performance and compliance and its plans for attaining these objectives based on a "plan-do-check-act" continual improvement model.

x. Regular evaluation of Environment, Health and Safety (EH&S) objectives and monitoring of progress toward achievement of these objectives shall be conducted and documented in the facility.

xi. Facilities shall take sufficient measures to safeguard occupational and environmental health and safety. Such measures may be indicated by local, state, national and international regulations agreements, principles and standards, as well as by industry standards and guidelines.

xii. The guidelines of CPCB for storage and transportation of hazardous waste shall also be compiled with.

xiii. Training & Capacity Building for employees at different levels.

xiv. Environment, Health & Safety (E H & S)

a. An up-to-date, written hazardous materials identification and management plan to address the specific hazardous materials that would be handled.

b. Where materials are shredded or heated, appropriate measures to protect workers, the general public and the environment from hazardous dusts and emissions.

c. An up-to-date, written plan for reporting and responding to exceptional pollutant releases, including emergencies such as accidents, spills, fires, and explosions.

d. Liability insurance for pollutant releases, accidents and other emergencies.

e. Completion of an EH&S audit, preferably by a recognized independent auditor, on an annual basis.

xv. Facility to have a regularly implemented and documented monitoring and recordkeeping program that tracks key process parameters, compliance with relevant safety procedures, effluents and emissions, and incoming, stored and outgoing materials and wastes.

xvi. Facility to have an adequate plan for closure and shall be updated periodically and financial guarantees shall ensure that the necessary measures are undertaken upon definite cessation of activities to prevent any environmental damage and return the site of operation to a satisfactory state, as required by the applicable laws and regulations.

xvii. Finally, as laid out in AIS PART-1 para. 4.2.12 any person(s) operating Collection Centre(s) and Dismantling Centre(s) may accredit their centers/units as per ISO 14001 (Environmental Management System)

Registration and authorisation of Recyclers processing ELVs

a. The ELV recyclers and their facilities shall have authorisation from the respective State Pollution Control Board

b. In accordance with AIS PART-1 para. 4.2.1 any person(s) operating Collection the procedures prescribed in AIS PART-1 para. 5 "Procedure for authorisation by Government certifying agency" from the concerned Government Certifying Agency (see Annex B) or as per procedures prescribed by the concerned Govt. agency.

c. Only registered and authorized recyclers shall be allowed to recycle.

ELVs Recycling shall be carried out using environmentally sound technologies and as per this document, 'Guidelines for Environmentally Sound Facilities for Handling, Processing and Recycling of End-of- Life Vehicles (ELV)".

d. Centre(s) and Dismantling Centre(s) shall obtain an authorisation in accordance with.

Management of various wastes generated during de-pollution, dismantling and shredding of ELVs

Besides obtaining useful scraps which can be channelized for reuse or recycling; de-pollution, dismantling and shredding of ELVs will generate light and heavy fractions ASR and several categories of wastes such as hazardous wastes, E-wastes, Solid wastes and plastic wastes which requires to be managed in an environmentally sound manner in compliance with provisions stipulated under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016; E-Waste Management Rules, 2016; Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016, respectively.

The light ASR and heavy fractions ASR may be considered as hazardous wastes and in case authorized resource/energy recovery facilities are not available, the same shall be disposed in authorized common hazardous waste treatment, storage and disposal facility (TSDF) where the same may be imparted incineration or secured landfilling depending upon characteristics of the ASR.

Management of Hazardous Wastes

Various hazardous waste generated during de-pollution/dismantling/shredding of ELVs such as Used Oil, Waste Oil, Transmission oil, brake fluid, coolant fluid, lead acid batteries, brake shoe, clutch plates, ASR, etc. requires to be managed in accordance with provisions stipulated under the Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016.

i. Application made to SPCB/PCC for grant of authorisation for handling, generation, collection, storage, transportation, packaging, offering for sale, transfer, disposal, etc. under Rule 6 of the said Rules shall clearly mention categories of hazardous waste, their quantity, method of recycling/recovery/disposal, etc. which shall be carefully be examined by the SPCB/PCC. Upon assessment of the same and verification during inspection by SPCB/PCC, authorisation for management of hazardous waste may be granted by SPCB/PCC stipulating categories of hazardous

waste, their quantity, method of recycling/recovery/disposal, etc. and other conditions as prescribed under Form 2 of the said Rules.

ii. The storage period of hazardous wastes shall be in accordance with the Rule 8 of the Hazardous and Other wastes (Management and Transboundary Movement) Rules 2016.

iii. The wastes generated during the de-pollution/dismantling/shredding activity shall be stored under a dedicated covered storage shed.

iv. Proper slope with collection pits be provided in the storage area so as to collect the spills/leakages.

v. The de-polluting/dismantling/shredding facility shall ensure that wastes are packaged in a manner suitable for safe handling, storage and transportation. The labelling on packaging shall be readily visible and material used for packaging shall withstand physical and climatic conditions.

vi. Labelling of the hazardous waste container shall be in accordance with the provisions laid down under the HoWM Rules, 2016 and shall include the information with regard to waste type, the origin (name, address, telephone number of sender), hazardous property (e.g. flammable), and the symbol for the hazardous property (e.g. the red square with flame symbol).

vii. Drums containing wastes stored in the storage area should be labelled properly indicating mainly type, quantity, characteristics, source and date of storing etc.

viii. The collection center/de-polluting/dismantling/shredding facility shall ensure that the wastes generated during dismantling be sent or sold to an authorized collection center/ recycler/utilizer or authorized disposal facility, as case may be.

ix. The de-polluting/ dismantling/shredding facility shall maintain a record of wastes managed by him as per the format given in Form 3 of the said Rules and prepare and submit to the State Pollution Control Board, an annual return containing the details specified in Form 4 on or before the 30th day of June following the financial year to which that return relates in accordance with the said Rules.

x. Handing over of the hazardous waste to the authorised actual user shall be only after making the entry into the passbook of the authorised recycler/utiliser. Further, such authorised recycler/utiliser shall also maintain records of wastes purchased in a passbook issued by the State Pollution Control Board/Pollution Control Committee along with the authorisation.

xi. The transport of hazardous waste containers shall be in accordance with the provisions of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the rules made by the Central Government under the Motor Vehicle Act, 1988 and other guidelines issued from time to time.

xii. Manifest System shall be followed for movement of wastes. The flow of manifest document (which contains details of waste description & quantity, senders, transporters, receivers, acknowledgements by transporters and senders, etc.) as prescribed under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as below:

Copy number with colour code	Purpose
Copy 1 (White)	To be forwarded by the sender to the State Pollution Control Board after signing all the seven copies.
Copy 2 (Yellow)	To be retained by the sender after taking signature on it from the transporter and the rest of the five signed copies to be carried by the transporter.
Copy 3 (Pink)	To be retained by the receiver (actual user or treatment storage and disposal facility operator) after receiving the waste and the remaining four copies are to be duly signed by the receiver.

Copy 4 (Orange)	To be handed over to the transporter by the receiver after accepting waste.
Copy 5 (Green)	To be sent by the receiver to the State Pollution Control Board.
Copy 6 (Blue)	To be sent by the receiver to the sender.
Copy 7 (Grey)	To be sent by the receiver to the State Pollution Control board of the sender in case the sender is in another State.

Management of Ozone depleting substances

The refrigerant gases used in vehicle air conditioning systems may contain ozone depleting substances and may require to be regulated as per Ozone Depleting Substances (Regulation and Control Rules), 2000, or other policies/directions issued by Central Govt. from time to time.

The collected refrigerant gases shall be channelized for recovery/reuse to such registered recovery/reuse facility, as applicable. In case such recovery/reuse is not feasible or available, the same shall be destroyed in destruction facility recognized by Central Government or the appropriate authority, as applicable.

Management of E-Wastes

Air conditioners, display unit, circuit board, music system, etc., which are not in usable condition, shall be treated as E-waste during de-pollution/dismantling/shredding of ELVs. Such E-wastes shall be channelized to dismantlers/recyclers authorized under the E-Waste Management Rules, 2016. Records of such E-wastes generation and storage shall be maintained along with authorized dismantlers/recyclers to whom the same have been channelized. Manifest system for transportation of such E-wastes as prescribed under the said Rules shall be followed. Further, Annual Returns be submitted to the concerned SPCB/PCC by 30th June following the financial year to which that return relates, as stipulated under the said Rules.

Management of Plastic Wastes

The plastic waste generated during de-pollution/dismantling/shredding of ELVs shall be channelized to registered recyclers authorized under the Plastic Waste Management Rules, 2016. Records of such plastic waste generation and storage shall be maintained along with registered recyclers to whom the same have been channelized. Further, Annual Returns be submitted to the concerned SPCB/PCC by 30th April of every year, as stipulated under the said Rules.

Management of Solid Wastes

The solid wastes, which are not hazardous, shall be segregated, stored and the segregated waste be handover to authorized waste pickers or waste collectors in accordance with Solid Waste Management Rules, 2016. Records of such solid waste generation and storage shall be maintained along with authorised waste pickers to whom the same have been channelized. Further, Annual Returns be submitted to the concerned SPCB/PCC by 30th April of every year, as stipulated under the said Rules.

5. Environmental Clearance and Site Clearance

5.1 Environmental Clearance under EIA notification 2006[56]

Industrial and other developmental projects & activities requiring Environmental Clearance (EC) under EIA notification dated 14/9/2006

- Construction of new projects / activities or the modernization of existing projects and activities listed in the schedule appended to the notification **(Annexure-5-A)** entailing capacity addition with change in process and/or technology shall be undertaken in any part of India only after the prior environmental clearance from the Central Govt. or as the case may be, by the State Level Environment Impact Assessment Authority (SEIAA), duly constituted by the Central Govt. under the said Act, in accordance with the procedures specified in the notification.
- Besides obtaining EC, the project proponent is also required to obtain consent to establish (NOC) / Consent to Operate under the Water Act, 1974 and the Air Act, 1981, separately from the State Pollution Control Board as both are separate legal requirements under two different statues[57]**.**

5.1.1 Application for Prior Environmental Clearance (EC)

After the identification of prospective site(s) for the project and/or activities to which the application relates, before commencing any construction activity, an application seeking prior environmental clearance shall be made online on the portal namely PARIVESH of MoEF&CC i.e. www.parivesh.nic.in by the project proponent in the prescribed format along with the requisite documents and requisite fee.

5.1.2 Nodal Agency for processing of EC applications

The Govt. of Punjab has designated Directorate of Environment & Climate Change (DECC), Punjab as nodal agency for dealing with the cases of EC of Category 'B' projects. DECC, Punjab has its office at Mahatma Gandhi State Institute of Public Administration (MGSIPA), Sector 26, Chandigarh[58]. For all details regarding documentation, requisite fee etc. and for filing the application, the project proponent may visit the DECC on its website i.e. https://decc.punjab.gov.in/.

5.1.3 Exemption from Environmental Clearance in case of no Increase in Pollution Load[59]

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 EIA notification dated 14th September 2006 amended from time to time) with or without any change in (i) raw material-mix or (ii) product-mix or (iii) quantities within products or (iv) number of products including new products falling in the same category or (v) 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).

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[56] MoEF&CC notification No. SO.1533(E) dated 14.09.2006

[57] MoEF&CC circular F. No. J-11013/41/2006-IA-II(I) dated 21.11.2006

[58] Govt. of Punjab (STE) Notification No. 10/187/2017/STE (5)/1404038/1 dated 25.1.2019

[59] *MoEF&CC vide notification no. S.O. 3518 (E) dated 23.11.2016 as amended vide notification no. S.O.980 (E) dated 02.03.2021*

Procedure and documentation for obtaining 'No Increase in Pollution Load Certificate'[60]

- To claim exemption from obtaining prior Environmental Clearance in respect of such cases, the project proponent shall follow the process given in Appendix-XIII appended to notification dated 2nd March, 2021.
- The project proponent will submit a copy of application for claiming above exemption to the concerned Regional Office of the Board with requisite documents and fee.
- The unit shall inform the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, in prescribed format **(Annexure- 5 B)** along with

i) 'no increase in pollution load' certificate from the Environmental Auditor or reputed institutions empanelled 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

* QCI-NABET accredited EIA consultants for the respective sectors and category (A or B) provided the same consultant has not rendered consultancy service for proposed expansion of the said project. Further, the consultant accredited for Category B projects shall not audit Category A project.

Reputed institutions as mentioned in the notification shall include CSIR laboratories specializing in the relevant sectors for the purpose of providing 'no increase in pollution load certificate' for any development project seeking to avail benefit of the provision of the above Notification[61].

\# Chartered institutions empanelled by the Board/IITs/NEERI

- Application processing fee in respect of no increase in pollution load as below:

Scale of Industry	Processing Fee
Large Scale Industry	Rs. 1,00,000/-
Medium Scale Industry	Rs. 75,000/
Small Scale Industry	Rs. 10,000/-[62]

The application will be considered and a letter of acceptance/ refusal will be issued by the Competent Authority. Only upon the issuance of acceptance letter by the Board, the project proponent can initiate activities for the change or expansion or modernization of plant with the prior consent to establish of the Board.

5.2 Public Consultation

"Public Consultation" is one of the requirements for obtaining the EC. It 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.

5.2.1 Designated Authority for conducting Public Consultation

Punjab Pollution Control Board (PPCB) is the designated authority to conduct the public consultation. Project Proponent is required to submit an application with requisite documents and processing fee to the PPCB for conducting the public hearing.

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[60] *PPCB office order no. SEE(HQ-2)/2022/83 dated 17.03.2022*

[61] *MoEF&CC OM No. F. No. 22/20/2021-IA/III(E-164476) dated 23.08.2021*

[62] *PPCB office order no. SEE(HQ-2)/2022/153 dated 12.05.2022*

5.2.2 Requisite documents & fee for Public Consultation

Besides submitting the application (request letter) for getting the public consultation conducted in the Head Office of PPCB, Project Proponent is required to submit hard & soft copy of Draft EIA report and Executive Summary (Both in English & Punjabi) to the following offices:

- Deputy Commissioner of the concerned District
- Chairman, Zila Parishad of the concerned District
- Municipal Corporation or Municipal Council
- General Manager, District Industries Centre, of the concerned District
- Concerned Regional Office of the Board
- Advisor, MOEF&CC, Northern Regional Office at Chandigarh

Also, a hard & soft copy of presentation (both in English & Punjabi) in running form, to be made before the public on the day of public hearing with the application to be filed before PPCB.

5.2.3 Processing Fee for Public Consultation[63]

Total Project Cost In Rupees	Fee In Rupees
Up to Rs. 25 crore	Rs. 75,000/-
Above Rs. 25 crore and up to Rs. 50 crore	Rs. 1,00,000/-
Above Rs. 50 crore and up to Rs.100 crore	Rs. 1,50,000/-
Above Rs. 100 crore and up to Rs.250 crore	Rs. 2,00,000/-
Above Rs. 250 crore and up to Rs.500 crore	Rs. 3,00,000/-
Above Rs. 500 crore	Rs. 4,00,000/-

All efforts are to be made for completing the various steps of conducting the public hearing process within the time frame of 45 days as prescribed in the EIA notification.

For latest updates, notifications and office memorandum related to EIA notification consult website and dedicated portal (PARIVESH) at http://parivesh.nic.in/ of Ministry of Environment, Forest and Climate Change.

5.3 Site Clearance from Environmental angle under press note 17 of (1984 series) and Site Clearance u/s 41-A of the Factories Act, 1948 from SCA-cum-SAC

- Earlier, Govt. of Punjab, vide notification dated 17.11.1998 had constituted SCA-cum-SAC for approving the sites of 17 categories of highly polluting industries covered under Press Note 17 of (1984 Series) as well as 29 categories of industries covered under First Schedule of Factories Act, 1948[64].
- Central Govt. has withdrawn the press note no. 17 of (1984 Series) thus, doing away with the requirement of obtaining Site Clearance from Environmental angle[65].
- State Govt. has withdrawn the notification dated 17.11.1998[66] vide which it earlier had constituted SCA-cum-SAC. However, the industries covered under the First Schedule **(Annexure-5-C)** appended to the Factories Act, 1948, which are not located in the notified industrial area/ industrial estate/ industrial focal point/ approved industrial park/ industrial area or zone of statutory/ non-statutory Master Plans are required to obtain site clearance from the Deptt. of Factories, Punjab.

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[63] *PPCB Office order No. EE(Mega)/2013/292 dated 05.07.2013*

[64] *Govt. of Punjab, Deptt. of Science, Technology and Environment Notification no. 5/16/95-STE(4)/2381 dated 17.11.1998*

[65] *Govt. of India, Ministry of Industry & Commerce Press Note no. 3 of 2019 Series*

[66] *Govt. of Punjab, Deptt. of Science, Technology and Environment Notification no. 10/134/2019-STE (5)/689 dated 14.07.2020*

Annexure-5-A

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		Mining, extraction of natural resources and power generation (for a specified production capacity)		
(1)	(2)	(3)	(4)	(5)
1(a)	Mining of minerals	> 100 ha of mining lease area of non-coal mine lease	≤ 100 ha of mining lease area in respect of non-coal mine lease	General Condition 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.];
		>150 ha of mining lease area in respect of coal mine lease Asbestos mining irrespective of mining area	≤ 150 ha of mining lease area in respect of coal mine lease	
		Asbestos mining irrespective of mining area.		
	(ii) Slurry pipelines (coal, lignite and other ores) passing through national parks / sanctuaries / coral reefs, ecologically sensitive areas	All projects		
[1(b)	Offshore 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		**Note** 1: 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 of off-shore and onshore oil and gas exploration are categorized as 'B2' projects]

[1(c)	(i) River Valley projects (ii) Irrigation projects	(i) ≥ 50 MW hydroelectric power generation; (ii) ≥ 10,000 ha. of culturable command area	(i) ≥25 MW and <50 MW hydroelectric power generation; (ii) >2000 ha and < 10,000 ha. of culturable command area	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.]
		Irrigationsystem	**Requirement of EC**	
		(a) Minor Irrigation system (≤ 2000 Ha)	Exempted	
		(b) Medium irrigation system (> 2000 and < 10,000 ha.)	Required to prepare EMP and to be dealt at State Level (B2 category).	
		(c) Majorirrigation system (≥10,000 to < 50,000 ha.)	Required to prepareEIA/EMP and to be dealt at State Level(B1 category).	
1(e)	Nuclear power Projects and processing of nuclear fuel of nuclear fuel	All projects	-	
2	**Primary Processing**			
2(a)	Coal washeries	≥1 million ton/annum throughput of coal	<1million ton/annum throughput of coal	General Condition shall apply (If located within mining area the proposal shall be appraised together with the mining proposal)
2 (b)	Mineral beneficiation	≥ 0.5 million TPA throughput	< 0.5 million TPA throughput	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	Sponge iron manufacturing <200T	General Condition shall apply. ***Note:*** (i)The recycling industrial units registered under the 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,
		b) Sponge iron manufacturing ≥ 200TPD	Secondary metallurgical processing industry	

		c) Secondary metallurgical processing industry All toxic and heavy metal producing units ≥20,000 tonnes/annum	i) All toxic and heavy metal producing units <20,000 tonnes/ annum ii) All other non –toxic secondary metallurgical processing industries> 5,000 tonnes/ annum	submerged arc furnace and cupola with capacity more than 30,000 tonnes per annum (TPA) would require environmental clearance. (iii)Plant / units other than power plants (given against entry no. 1(d) of the 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 Pozzolona Cement (PPC) and Portland Slag Cement (PSC) shall be exempted 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 -	<2,50,000 & ≥25,000 tonnes/ annum All projects	-General conditions shall apply
4(c)	Asbestos milling and asbestos based products	All projects	-	-
4(d)	Chlor-alkali industry	≥300 TPD production capacity if a unit located outside the notified industrial area/ estate	i) All projects irrespective of the size, if it is located in 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 the

			ii) <300 tonnes per day (TPD) located outside the notified industrial area/ estate	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 condition shall apply ***Note:*** ▪ Granulation of single super phosphate powder is exempted. ▪ Neem coating of fertilizers is exempted 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 exempted 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 (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	All projects	-	-

5(d)	Manmade fibers manufacturing	Rayon	Others	General Condition shall apply
5(e)	Petrochemical 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 exempted
5(f)	Synthetic organic chemicals industry (dyes & 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 <25 m^3/day, fuel consumption <25 TPD 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 from 16th July, 2021 to 31st December, 2021, shall be appraised, as Category 'B2' projects, provided that any subsequent amendment or expansion or change in product mix, after the 31st December, 2021, shall be considered as per the provisions in force at that time.
5(g)	Distilleries	Molasses based Distilleries >100 KLD Non-molasses based distilleries >200 KLD	Molasses based Distilleries ≤100 KLD Non-molasses based distilleries ≤200 KLD	General condition shall apply **Note:** Expansion of sugar manufacturing units or distilleries for production of ethanol, having Prior Environmental Clearance (EC) for existing unit, to be used completely for Ethanol Blended Petrol (EBP) Programme only, as per self-certification in form of an affidavit by the Project Proponent, shall be appraised as category 'B2' projects. Provided that subsequently if it is found that the ethanol, produced based on the EC granted as per this dispensation, is not

				being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
5 (ga)	Grain based distilleries producing ethanol, solely to be used for Ethanol Blended Petrol Programme of the Government of India ***Note:*** *Grains include wheat, rice, maize, barley, sorghum.*	Projects without Zero Liquid Discharge	Projects with Zero Liquid Discharge	Note: (i) Projects under category B shall be appraised as B2 category project and in terms insertions made on 16.06.2021 in para No. 4 at (iiia) of the EIA notification dated 14.09.2006. (ii) Applicable for projects who file application for grant of EC up to 31st March 2024 or till further notification whichever is earlier provided that any subsequent amendment or expansion or change in product mix after 31st March 2024, shall be considered as per the provisions inforce at that time. (iii) The project proponent shall file a notarized affidavit that ethanol produced from proposed project shall be used completely for EBP Programme. Provided that subsequently if it is found that the ethanol produced, based on the EC granted as per this dispensation, is not being used completely for EBP Programme, or if ethanol is not being produced, or if the said distillery is not fulfilling the requirements based on which the project has been appraised as category B2 project, the EC shall stand cancelled.
5(h)	Integrated paint industry	-	All projects	General condition shall apply
5(i)	Pulp & paper industry	Pulp manufacturing and Pulp & Paper manufacturing industry except from waste paper	Pulp 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 coloring is exempted.
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**: Air strips which do not involve bunkering / refuelling 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 Category B industry.	Industrial estates 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 condition 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 > 20000 sq. mtr. and or development area more than 50 ha it will 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 & landfill or incineration alone	All facilities having landfill only	General condition shall apply.
7(da)	Bio-Medical waste Treatment Facilities	-	All projects	-

7(e)	Ports, harbors, 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 exempted provided it formed part of the original proposal for which Environment Management Plan (EMP) was prepared and environmental clearance obtained.
7(f)	Highways	i) New National High ways; and ii) Expansion of National High ways greater than 100 KM, involving additional right of way or land acquisition greater than 40m on existing alignment and 60 m on re-alignment or bypasses.	i) All New State Highways Projects; ii) State Highway expansion projects in hilly terrain (above 1000 m AMSL) and/or ecologically sensitive areas	General Condition shall apply ***Note:*** *Highways included 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 or Construction projects or 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. mtrs and <1,50,000 sq.	The term "built up area" for the purpose of this Notification the built up or covered area on all the floors put

			mtrs. of built-up area	together including its basement and other service areas, which are proposed in the building or construction projects. **Note 1**.- 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 apprised as Category 'B1' Project **Note** - "General Conditions" shall not apply
*** 8**	Building or Construction projects or 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		≥50,000 sq. mtrs and <1,50,000 sq. mtrs. of built-up area	The term "built up area" for the purpose of this Notification is the built up or covered area on all the floors put together including its basement and other service areas, which are proposed in the building or construction projects. **Note 1**.- The projects or activities shall not include industrial shed, educational institution, hospitals and hostels for educational institution. **Note-2**.- "General Conditions" shall not apply
8 (b)	Townships and Area Development projects as well as industrial sheds, educational institutions, hospitals and Hostels for educational institutions		≥ 1,50,000 sq. mtrs and <3,00,000 sq. mtrsbuilt up area orcovering an area ≥50 ha	A projects of Townships and Area Development Projects covered under this item shall require an Environmental Assessment Report and be appraised as Category 'B1' Project. **Note**.- General Conditions shall not apply.
*** Substituted by S.O. 5736 (E) dated 15th Nov. 2018 (Notification under sub-judice before the Hon'ble Courts/Tribunal**				

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 within 5 km. from the boundary of : (i) Protected areas notified under the Wildlife (Protection) Act, 1972 (53 of 1972); (ii)critically polluted areas as identified 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), industries estates/parks/complexes/areas, export processing zones (EPZs), Special Economic Zone (SEZs), biotech parks, lather 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 within10 km.

Provided further that the requirement regarding distance of 5 km 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 State or the Union Territories sharing the common boundary in case the activity does not fall within 5km or 10 km, as the case may be of the areas mentioned at item (i), (ii) and (iii) above.]

Specific Condition (SC)

If any Industrial Estate/Complex / Export processing Zones /Special Economic Zones/Biotech Parks/ Leather Complex with homogeneous type of industries such as Items 4(d), 4(f), 5(e), 5(f), or those Industrial estates with pre –defined set of activities (not necessarily homogeneous, obtains prior environmental clearance, individual industries including proposed industrial housing within such estates /complexes will not be required to take prior environmental clearance, so long as the Terms and Conditions for the industrial estate/complex are complied with (Such estates/complexes must have a clearly identified management with the legal responsibility of ensuring adherence to the Terms and Conditions of prior environmental clearance, who may be held responsible for violation of the same throughout the life of the complex/estate.)

Annexure-5-B

Prescribed Format

For submission of information to Punjab Pollution Control Board in the form of application with regard to 'No Increase in Pollution Load Certificate'.

1	Name of the Project / Industry with complete address	
2	Whether Environmental Clearance obtained from the Competent Authority for the existing activity. If yes, the details may be answered. a) Issuing Authority. b) Letter number and date.	Yes / No MoEF&CC or SEIAA, Pb
3	Whether modernization of the project or increase in production or manufacturing process. Details may be given with or without any change as under: a) Raw material-mix b) Product-mix c) Quantities within products d) Number of products including new products falling in the same category. e) Configuration of the plant or process or operations in existing area or in areas contiguous to the existing area for which prior EC has been granted	Modernization or increase in production or manufacturing capacity
4	Whether application filed with Parivesh Portal of MoEF&CC. If yes, the following facts may be given: a) Date of application b) Acknowledgement of the same	Yes / No Attached / Not Attached
5	Status of no increase in pollution load certificate. If yes, following facts may be answered. a) Date of obtaining the certificate b) From whom the certificate is obtained i. Environmental Auditors and Reputed Institutions as mentioned in the notification dated 2.3.2021 and office memorandum dated 23.8.2021 of MoEF&CC. ii. All Indian Institutes of Technology (IITs) iii. National Environmental Engineering Research Institute (NEERI), Nagpur. iv. Chartered Institutions emplaned by PPCB. v. Any other Environmental Auditor or Institute emplaned in this regard by MoEF&CC or CPCB or PPCB.	Attached / Not Attached Tick with details of relevant Environmental Auditors and Institution

6	Last Consent to operate of the project or activity as granted by the PPCB. a) Number and date of consent b) Valid upto	
7	Details of the processing fee deposited with PPCB. a) Amount of processing fee b) D.D Number and date	
8	Name, designation and address of the applicant	
9	Contact Number a) Mobile Number b) Email ID c) Any other detail	
10	Date of application	

Date: Place:	Signature of the applicant

UNDERTAKING

1) Certify that the information given in the application herein above is true and correct and is not false in any content.
2) Only after the issuance of acceptance letter by the Board, the project proponent shall initiate activities for the change or expansion or modernization of the plant / project with the prior consent to establish of the Board.
3) In case, upon verification by the authorities, the change or expansion or modernization results or has resulted in increase in pollution load, the exemption claimed under the notification shall not be valid and it shall be deemed as the project proponent is liable to obtain prior environmental clearance before undertaking such changes or increase.
4) The Board shall be at liberty to cancel the regulatory clearances granted on account of **'No Increase in Pollution Load'** declaration and the project proponent shall be liable for penal action, it is found and established that such change or expansion or modernization involves increase in pollution load.

Date: Place:	Signature of the applicant

Annexure-5-C

The First Schedule

List of industries involving hazardous process and requiring Site Clearance from Site Appraisal Committee (SAC) under the Factories Act, 1948

1.	Ferrous Metallurgical Industries - Integrated Iron and Steel - Ferro-Alloys - Special Steels	2.	Non-Ferrous Metallurgical Industries - Primary Metallurgical Industries, Namely zinc, lead, copper, manganese and aluminium.
3.	Foundries (Ferrous and Non-Ferrous) - Castings &forgings including cleaning or smoothing/roughening by sand and shot blasting.	4.	Coal (including coke) industries – Coal, Lignite, Coke etc. - Fuel Gases (including Coal Gas, Producer Gas, Water Gas)
5.	Power Generating Industry	6.	Pulp& Paper (including paper product)
7.	Fertilizers Industries - Nitrogenous- Phosphatic - Mixed	8.	Cement Industries [Portland Cement (including slag cement, pozzolona cement and their products)
9.	Petroleum Industries - Oil Refining, Lubricating Oils and Greases	10.	Petro-chemical Industries
11.	Drugs and Pharmaceutical Industries - Narcotics, Drugs and Pharmaceuticals	12.	Fermentation Industries (Distilleries and Breweries)
13.	Rubber (Synthetic) Industries	14.	Paints and Pigment Industries
15.	Leather Tanning Industries	16.	Electroplating Industries
17.	Chemical Industries - Coke Oven by-products and Coal Tar Distillation Products - Industrial Gases (nitrogen, argon, oxygen, acetylene, carbon dioxide, hydrogen, Sulphur dioxide, nitrous oxide, halogenated hydro-carbon, ozone etc.) - Industrial Carbon - Alkalis and Acids - Chromates and di-chromates - Leads and its compounds - Electrochemical (metallic sodium, potassium and magnesium, chlorates, perchlorates and peroxides). - Electro thermal produces (artificial abrasive, calcium carbide) - Nitrogenous compounds (cyanides, cyanimides and other nitrogenous compounds) - Phosphorous and its compounds - Halogens and Halogenated compounds (Chlorine, Fluorine, Bromine &Iodine) - Explosives (including industrial explosives and detonators and fuses).	18.	Insecticides, Fungicides, herbicides and other Pesticides Industries
		19.	Synthetic Resin and Plastics
		20.	Man-made Fiber (Cellulosic and non-cellulosic) industry
		21.	Manufacture and repair of electrical accumulators
		22.	Glass and Ceramics
		23.	Grinding or glazing of metals
		24.	Manufacture, Handling and processing of asbestos and its subsequent extensions products
		25.	Extraction of oils and fats from vegetables and animal sources
		26.	Manufacturing, handling and use of benzene & substances containing benzene
		27.	Manufacturing processes and operations involving carbon di-sulphide
		28.	Dyes and Dyestuff including their intermediates
		29.	Highly flammable liquids and gases

6. Water and Air Pollution Control

Water (Prevention & Control of Pollution) Act, 1974*: An act to provide for the prevention and control of water pollution and maintaining or restoring of wholesomeness of water.

Air (Prevention & Control of Pollution) Act, 1981*: An act to provide for the prevention and control & abatement of air pollution.

*Henceforth written as Water Act, 1974 and Air Act, 1981, respectively.

6.1 Responsibilities of the occupier of Industry /Project Proponent of other projects

- To obtain Consent to Establish (CTE) under Water Act, 1974 & Air Act, 1981.
- To obtain Consent to Operate (CTO) under Water Act, 1974.
- To obtain Consent to Operate (CTO) under Air Act, 1981.
- To provide adequate and appropriate treatment to effluents & emissions, so as to achieve the prescribed standards before discharging into the environment.
- To provide proper & adequate disposal arrangements to treated effluents & emissions.
- To comply with the conditions prescribed while granting CTE/ CTO and any other direction/ guidelines issued by the State Govt./Central Govt./PPCB/CPCB/MoEF&CC and other statutory agencies for the abatement & control of pollution.

6.2 Consent to Establish (CTE) / NOC

As per the provisions of Water Act, 1974 and Air Act, 1981, any entrepreneur desirous of establishing a new industry or expansion of its existing unit is required to obtain Consent to Establish (NOC) from the Board before taking any steps for establishment/expansion of the said industry.

White Category[67]

White Category of industries / projects notified by the PPCB exempted from 'Obtaining Consent to Establish' (NOC) shall have to get registered with the PPCB providing details of their project in a simplified form through Online Consent Management & Monitoring System (OCMMS) at https://ppcb.punjab.gov.in available on the Board's website. A system generated acknowledgement will be issued to the applicant/project proponent upon successful submission of data and undertaking. The said acknowledgement shall be construed as exemption certificate subject to the following conditions:

- Information furnished by the industry in the declaration is accurate and complete and no material information has been concealed by the applicant/ project proponent about the actual pollution potential/categorization of the industry.
- Industry shall inform the Board in case of change of data provided in the simplified form and shall get revised registration.
- Industry shall apply for obtaining consent to establish/operate from the PPCB, in the event of its graduation from white to green / orange/red category.

[67] *PPCB Office order No. PPCB/SEE HQ-2/2019/655 dated 29.11.2019*

- In case of industry is found to create conditions that generate any type of pollution and / or if there is my objection from the surrounding community and if on verification, it is found that such objection has some substance, the Board shall be at liberty to take action against the industry under the provisions of the Water Act, 1974 and / or Air Act, 1981 and / or Environment (Protection) Act, 1986 as deemed fit.
- Industry shall fulfil the stipulations prescribed for white category units in Board's office order dated 29.09.2016[68] and 19.03.2020[69]
- Inspection of the industry shall be governed by the inspection policy framed by CPCB/PPCB/Govt. from time to time. In case of complaint, the industry can be visited by the Regional Office or any other officer authorized by the Competent Authority.

Green Category

Board has simplified the procedure for green category industries as under[70]:

- All the green categories units notified from time to time shall have to apply for consent to establish / operate on the simplified online form through Online Consent Management & Monitoring System (OCMMS) through business first portal at https://pbindustries.gov.in, which may also be accessed through the PPCB website (https://ppcb.punjab.gov.in) under E-Governance project.
- No inspection of the unit shall be carried out by the Board officers / officials upon the receipt of the application except in those cases where some pollution related complaint or violation proceedings are pending against the specific unit. in case, where no complaints or violations proceedings are pending, consent to establish / operate will be issued on the basis of information provided in the simplified form and undertaking appended to it.
- The inspection of the industry shall be governed by the inspection policy framed by CPCB /PPCB / Govt. from time to time. In case of complaint, the industry can be visited by the Regional Office or any other officer authorized by the Competent Authority.
- A system generated consent to establish / operate will be issued to the applicant / project proponent upon successful submission of data and undertaking in following terms:
  - (#) For the applications (other than renewal / varied / extension) for new units proposed to be established and / or the existing unit operating in the demarcated industrial estate / zones classified by the State Authorities viz. PSIEC, Department of Industries, PUDA, CTP under draft Master Plan or in mixed category area of predominantly industrial areas within Municipal limit of a Town/ City after classification for the permissibility of area by CTP/STP/DTP and not located in approved residential areas of any town / city in the State of Punjab, subject to the following conditions:
  - ✓ The auto generated consent will be based on the information / data submitted by the industry. In case of any change of data or in case of any information submitted by the industry / project proponent is found incorrect, the consent shall stand cancelled.
  - ✓ In case industry is found to create conditions that generate any type of pollution and / or if there is any objection from the surrounding community and if on verification, it is found that such objection has some substance, the Board shall be at the liberty to take action against the industry under the provisions of Water Act, 1974 and Air Act, 1981 and / or Environment (Protection) Act, 1986 rules made there under as deemed fit.

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[68] *PPCB Office Order No. SEE(HQ-2)/F-10(Vol.II)/458 dated 29.09.2016*

[69] *PPCB Office Order No. PPCB/SEE(HQ-2)/2020/207 dated 19.3.2020*

[70] *PPCB Office Order no. PPCB/SEE(HQ-2)/2020/88 dated 30.01.2020*

- ✓ Consent will be issued on the basis of self-calculation of consent fee made by the industry. In case, any difference in the consent fee deposited by the industry is found, the industry shall have to deposit the balance consent fee.
- ✓ In case of change of data provided in the simplified form, the industry shall inform the Board and shall get revised Consent. The industry shall apply for obtaining Consent to Establish / Operate from the PPCB, in event of its graduation from Green to Orange / Red Category industry.

- Other applicants except mentioned at (#) above shall also apply online in the simplified form. However, the applications shall be processed on merits as per the existing policy of the Board and will be decided by the Competent Authority within 7 working days.

Red and Orange Category

- All the Red and Orange category of industries, before the establishment/ expansion of the new/existing industry, shall have to apply for Consent to Establish (CTE).
- All the units are required to obtain Consent to Operate (CTO) for the operation of their unit.
- Project proponents have to apply for CTE / CTO on the simplified online form through Online Consent Management & Monitoring System (OCMMS) through business first portal at https://pbindustries.gov.in, which may also be accessed through the PPCB website (https://ppcb.punjab.gov.in) under E-Governance project.

6.2.1 Procedure for Obtaining CTE

User has to register himself in the OCMMS Portal (https://pbocmms.nic.in) (in case not registered in OCMMS earlier). Already registered users have to login into the system and applies for CTE application by using users ID &. The detailed procedure is available in the OCMMS User Manual for Entrepreneurs. **(http://www.ppcb.gov.in /onlineapplication.aspx).**

Documents Required (CTE)

- Site Plan/Location Plan of the industry.
- Partnership Deed/Memorandum of Article of Association /Proprietorship certificate.
- Resolution of Board of Director/ partners regarding authorized signatory.
- Brief Project Report with Manufacturing Process Flow sheet& Cost of project.
- Compliance report of pervious consent to operate condition in annotated form (in case of modernization/expansion only).
- Land documents such as Registration deed/ Jamabandi/ Rent deed/ lease deed indicating details of the property.
- Any one of the following documents regarding designation of area/compliance of specific guidelines:

  a) **If the site of the project is located in the designated Industrial Area/ Industrial Estate/ Focal Point**……. Allotment letter issued by the Designated Authority.

  OR

  b) **If the site of the project is located within the industrial zone of the statutory/non-statutory of notified/ draft Master Plan of the city or Town or in such an area where the specific project/ activity is permissible under the provisions of Master Plan:** Certificate / NOC from Deptt. of Town & Country Planning (for the projects located outside the municipal Limits) or from the concerned Municipal Corporation/ Committee/ Council (for the projects located within the municipal Limits).

OR (in place of a & b)

c) Undertaking to the effect that the proposed site of the project / industry is located in the designated Industrial zone/ area of the notified/ draft Master Plan in which the establishment of such industry/ project is permissible. The undertaking shall clearly indicate the revenue entries I.e. Hadbast Number, khewat /khatauni number and Khasra numbers.

OR

d) **If the Statutory/ non- statuary Master Plan of the area yet to be prepared**: Certificate of Revenue Authorities (DC/ADC/SDM) indicating the distance of proposed site of industry from the MC Iimits, Phirni / Lallakir of the nearest village and distance from designated residential area as declared by competent authority /residential area comprising of 15 pucca houses.

OR

e) **If the Industry specific guidelines are Prescribed for the projects such as Rice Sheller/Saila Plants, Stone Crushers/screening-cum-washing plant, stone quarrying, Brick Kilns, Hot Mix plants, Cement plants & Grinding Units, Pyrolysis Plants, Jaggery Units, Poultry Farms, Petrol Pump/Gas Stations (Retail Outlets and Fuel dispensing Outlets), Gold Assaying & Hallmarking Centres, Dairy farms and Gaushalas, End of life vehicles (ELVs), Construction Projects, Marriage palaces & CBWTF or any other projects for which industry specific guidelines are prescribed by State/Central Govt./MoEF&CC/CPCB/PPCB,** certificates/ documents from the competent authority as prescribed in the respective guidelines.

Note: *In case of projects other than the industry like residential/commercial projects, hotels, marriage palaces, education institutions & HCFs etc., a permissibility certificate from the designated authority to the effect that the respective project/activity can be established is to be obtained.*

Any other project specific document required by the Board like

- Declaration of bed capacity/dental chair to be installed (for HCFs).
- Details of treatment and disposal arrangements for effluent in case of polluting industry/HCFs /common facility etc. (wherever required)
- Permission for disposal of effluent by industries/HCFs / other projects into public sewer from the concerned authority.
- Permission for disposal of municipal solid waste by industries/HCFs/other projects onto common facility from the concerned authority.

6.2.2 Validity Period of Consent to Establish (NOC)

Consent to Establish (NOC) is granted for a period of minimum one year. However, for the projects not covered under EIA notification dated 14.9.2006, the entrepreneur has the option to get the validity of the NOC for a period more than one year but not exceeding 5 years The entrepreneur will have to specifically mention the same in the application and deposit additional fees @ 50% of the original fees for every additional year or part thereof. But, if the project is not commissioned within the validity period of 5 years, no further extension in validity of NOC will be given and the entrepreneur will have to apply fresh for obtaining the NOC as per the prevailing guidelines at that time[71]. For the projects covered under EIA notification 2006 validity period of the NOC can also be for 5 years or up to the validity period of the Environmental Clearance (EC) granted under the EIA notification 2006, whichever is earlier, provided that the project proponent has obtained the Environmental Clearance and has deposited the requisite fee.[72]

[71] *PPCB Office order No. CEE(HQ)/F. No. 281/2015/244 dated 4.8.2015*

[72] *PPCB Office order No. CEE(HQ)/2017/973/ dated 05.09.2017*

6.2.3 Extension in Validity of Consent to Establish (NOC)

In case the industry/project proponent fails to implement its proposed project within the validity period of NOC, it will be required to get its NOC revalidated. The project proponent has to submit online application through business first portal at https://pbindustries.gov.in, which may also be accessed through the PPCB website (https://ppcb.punjab.gov.in) under E-Governance project along with following documents:

Documents Required (Extension in validity of CTE)

Request letter giving the reason for non-completion project in stipulated time.
Status report regarding installation of pollution control devices vis-à-vis main project.
50% of NOC Fee per year for the period for which extension is sought as per the total project cost.

Note:

- *In case the CTE was not granted online, the entrepreneur is required to submit a copy of CTE, copy of Project Report and any other industry specific document submitted at the time of obtaining CTE.*
- *Copies of such documents, wherein there is material change in the previous documents submitted at the time of grant of CTE.*
- Such requests are normally acceded to only if the progress made by the industry in installing the pollution control devices is commensurate with the main project both in physical as well as in financial terms.

6.3 Consent to operate (CTO) under Water Act, 1974 and Air Act, 1981

After completion of the project, it is mandatory on the part of every project proponent to obtain consent of the Board for operating an outlet for discharge of effluents, u/s 25/26 of the Water Act, 1974 and for discharge of gaseous emissions, u/s 21 of the Air Act, 1981. Such consent is also required for the existing projects or the projects which have been established / commissioned without obtaining consent to establish (NOC) of the Board.

White Category

White Category of industries / projects notified by the PPCB are exempted from obtaining 'Consent to 'operate' (CTE) and shall have to get only registered with the PPCB providing details of their project in a simplified form through Online Consent Management & Monitoring System (OCMMS) at www.pbocmms.nic.in available on the Board's website. A system generated acknowledgement will be issued to the applicant/project proponent upon successful submission of data and undertaking. The said acknowledgement shall be construed as exemption certificate.

Red, Orange and Green Category

All the Red, Orange and Green category of industries are required to obtain 'consent to operate (CTO) from the Board for operating an Outlet/Industrial Plant under the Water Act, 1974 and under the Air Act, 1981.

6.3.1 Procedure for Obtaining CTO Under Water Act, 1974 & Air Act, 1981.

Project proponent is required to apply 'online' for obtaining consent to operate through business first portal at https://pbindustries.gov.in, which may also be accessed through the PPCB website (https://ppcb.punjab.gov.in) under E-Governance project as per the procedure prescribed under the sub title "Procedure for Obtaining CTE (6.2.1).

Documents Required [First time application (fresh case)]

- **In** case **unit is established after obtaining CTE**
  - ✓ Compliance report of CTE conditions in annotated form
  - ✓ Latest certificate from Chartered Accountant (CA) regarding un-depreciated gross value of the fixed assets (wherever required).
  - ✓ Proof of date commissioning of the project.
  - ✓ Copy of building plan[73] prepared and duly authenticated by the Director of Factories / Chartered Architect / Chartered Engineer as may be authorized to do so under the provisions of Section – 3A of the Punjab Factory Rules, 1952.
- Additional **documents only for Red and Orange Category**
  - ✓ Dimensional Drawings of ETP/APCD.
  - ✓ Plan showing the location of ETP/APCD and all outlets and various channels/pipes /sewers with requisite colors as detailed below:
    - ❖ Fresh Water – Blue
    - ❖ Effluent Channel – Red
    - ❖ Recirculation Water Channel – Green
    - ❖ Storm Water – Orange
    - ❖ Domestic Sewer – Dotted Black Ink
  - ✓ Analysis report of treated effluents / emissions from Board / Approved Lab (not older than 6 months). (wherever required)
- **Other project specific documents wherever required**
  - ✓ Declaration of bed capacity/dental chair to be installed (for HCFs).
  - ✓ Details of treatment and disposal arrangements for effluent in case of polluting industry/HCFs /common facility etc. (wherever required)
  - ✓ Permission for disposal of effluent by industries/HCFs / other projects into public sewer from the concerned authority.
  - ✓ Permission for disposal of municipal solid waste by industries/HCFs/other projects onto common facility from the concerned authority.
- **In case, the project is established without obtaining CTE**
  - ✓ All documents as required with the CTE application
  - ✓ All documents as required with the CTO application
- **Renewal case**
  - ✓ Compliance report of previous CTO in annotated form
  - ✓ Latest certificate from Chartered Accountant (CA) regarding un-depreciated gross value of the fixed assets (wherever required)
  - ✓ Analysis report of treated effluents / emissions from Board / Approved Lab (not older than 6 months) (wherever required)
  - ✓ Declaration of bed capacity/dental chair to be installed (for HCFs).
  - ✓ Any other project specific document required by the Board

[73] *PPCB office order no. GPC/Guidelines-RS-SP/F33/2009/9 dated 13.01.2010 and no. GPC/Guidelines-RS-SP/F33/2011/227 dated 08.08.2011*

Note:

- *In case the CTE/ Previous CTO was not granted online, the entrepreneur is required to submit a copy of CTE/CTO granted.*
- *Wherein there is any material change in raw material/production/processes/ bed capacity/ pollution load/ treatment/disposal arrangements, project proponent shall apply for revised /varied consent with the relevant documents which are not submitted earlier.*
- *Copies of such documents, wherein there is material change in the previous documents submitted at the time of grant of CTE/CTO.*

NOC/Certificates from other Departments

For the grant of regulatory clearances like CTE, CTO, Authorisation or Registration, Board, besides the documents mentioned above in the procedure for grant of CTE/CTO may ask for any NOC/Certificate to be issued by other departments from the list notified by the Govt. of Punjab, Department of Science Technology & Environment vide no. STE-STEB10/25/2022-STE4/325110 dated 02.03.2022 or any other clearance from stakeholders to protect any adverse effect on the sensitive receptors.

6.3.2 Fees prescribed for CTE / CTO

6.3.2.1 For Industries / Other Establishments[74]

*Fixed Capital Investment (FCI) in Rs.	Consent fee to be charged for obtaining Consent to Establish (NOC)/ Consent to Operate per year (In Rs.)		
	Red	Orange	Green
Upto 5 Lacs	1100	700	700
> 5 lacs to 10 Lacs	1400	1100	900
> 10 lacs to 25 Lacs	2200	1800	1400
> 25 lacs to 50 Lacs	3600	2900	2200
> 50 lacs to 75 Lacs	5400	3600	2900
> 75 lacs &< 1 crore	7200	5600	4200
> 1 crore to 2 crore	10800	8400	6400
> 2 crore to 5 crore	14400	10800	8400
> 5 crore to 10 crore	21600	18000	10800
> 10 crore to 15 crore	36000	21600	14400
> 15 crore to 20 crore	42000	24000	18000
> 20 crore to 25 crore	49200	28800	21600
> 25 crore to 30 crore	56400	36000	24000
> 30 crore to 40 crore	63600	42000	28800
> 40 crore to 50 crore	72000	56400	42000
> 50 crore to 75 crore	84000	72000	56400
> 75 crore to 100 crore	105600	84000	72000
> 100 crore to 150 crore	144000	105600	84000

[74] *PPCB office order no. 524 dated 29.10.2018*

> 150 crore to 200 crore	216000	144000	105600
> 200 crore to 300 crore	282000	216000	144000
> 300 crore to 400 crore	360000	282000	216000
> 400 crore to 500 crore	420000	360000	282000
> 500 crore to 1000 crore	564000	420000	360000
> 1000 crore to 2000 crore	720000	564000	420000
> 2000 crore to 5000 crore	1440000	1080000	720000
> 5000 crore and above	2880000	2160000	1440000

1. *Consent to operate (CTO) fee shall be charged separately for obtaining each consent to operate as required under the Water Act, 1974 and the Air Act, 1981*
2. *Procedure / criteria for calculating fees and other modalities will be applicable as defined in the policy of the Board circulated vide letter no. EE(Mega)/2013/ 19650-19761 dated 30.04.2013 except the above revised rates of fee (available on Board's website ppcb.punjab.gov.in).*
3. *In case, the industry fails to apply for consent / renewal of consent to operate before commissioning of the project or expiry of the earlier consent as the case may be, than the penalty may also be imposed while charging consent fee as under:*

Time frame for applying consent	Penalty
Before expiry of consent	Nil
Within 3 months from date of expiry	10% of one year fee
Within 3 months to 6 months from date of expiry	25% of one year fee
Within 6 months to 9 months from date of expiry	50% of one year fee
Within 9 months to 12 months from date of expiry	100% of one year fee
Within 1 year to 2 year from date of expiry	200% of one year fee
Within 2 year to 3 year from date of expiry	300% of one year fee
For subsequent time frame i.e. 3 year to 4 year or 4 year to 5 year and so on	400% or 500% of one year fee and so on

This order is applicable with effect from November 1, 2018

***Fixed capital investment (FCI):** As notified by the Director of Industries & Commerce, Punjab vide notification no. INC.11/15/43/96-5/(IB)/4176 dated 01.06.1996 in its industrial policy or in consequent amendment or notification carried out or to be carried out from time to time.*[75]

Consent fee shall be charged on the basis of the FCI certificate issued by the General Manager, District Industries Centre or by the certifying Charted Accountant.

Explanations Regarding Charging/Calculation of Consent Processing Fee[76]

Fee calculations for fraction of year: In case of renewal cases, where consent expired/is going to expire before the respective culminating dates mentioned against the respective categories in Annexure-22 appended to the Board policy dated 30.04.2013, the fee will be calculated for gap

[75] *PPCB Office Order no. 2911 dated 10.08.2001*

[76] *PPCB circular no. 484 dated 13.09.2021*

period (from expiry date to culminating date) for total no. of gap days + fee full years for which consent is applied/applicable. Example illustrated in aforesaid Annexure-22 may be referred.

In other cases, consent fee will be charged on yearly basis and for the fraction of year, the consent fee for full year will be charged. Example illustrated in Annexure-21 appended to the Board policy dated 30.04.2013 may be referred.

NOC regularization fee against increase in Gross Fixed Assets (GFA): Consent fee for the increase in GFA during any financial year will be charged against the increased component of GFA as applicable in that year irrespective of the change/no change in respective of slab of consent fee. Example illustrated in Annexure-21 appended to the Board policy dated 30.04.2013 may be referred.

Consent fee against refused/revoked/cancelled consent: No compensatory fee on account of refusal or revocation of consent is to be charged. However, a penalty for the period for which consent is not re-applied after its refusal/revocation/cancellation is to be imposed.

Penalty for not obtaining consent for the period prior to 01.11.2018: Penalty on account of not obtaining consent/renewal of consent is to be charged with effect from 01.11.2018 and not for the period prior to that.

Penalty for the period from date of expiry of consent to submission of complete application for its renewal: Procedurals period taken by the Board for processing the application should not be considered for the calculation of penalty. Hence, no penalty is to be charged for the period from submission of consent application to the completion of application.

In case the application is returned/rejected due to incompletions, penalty shall be imposed for the gap period for which it fails to resubmit the application after return/reject as per the penalty slabs provided in office order dated 29.10.2018.

Applicability of new consent fee structure (Notified on 29.10.2018) on the existing but newly identified industries: The procedure/criteria for calculating fee and other modalities on such industries will be applicable as per the fee structure of the previous respective years as illustrated in Annexure-21 appended to the Board policy dated 30.04.2013.

6.3.2.2 Fee for Local Bodies[77]

Description	Fees for one year (Rs)	Fees for five years (Rs)
Municipal Corporation	1,00,000	5,00,000
'A' Class Municipal Corporation	50,000	2,50,000
'B' Class Municipal Corporation	25,000	1,25,000
Consent fee rate for local bodies are under revision		

[77] *PPCB office order no. SEE-1/315 dated 29.11.2011*

6.3.2.3 Fee for HCFs and CBWTFs[78]

Category	Consent to establish Fees Rs/Annum	Consent to operate Fees Rs/Annum	
		Water Act	Air Act,
Occupier of Bedded/ Chaired HCFs			
Between 1-25 beds/ chairs	1000	1000	1000
Between 26-50 beds/ chairs	2000	2000	2000
Between 51-199 beds/ chairs	10000	10000	10000
Between 200-499 beds/ chairs	50000	50000	50000
Between 500-999 beds/ chairs	100000	100000	100000
More than 999 beds/c hairs	350000	350000	350000
Non-bedded HCFs/ Labs	2000	2000	2000
Operator of CBWTF	50000	50000	50000

6.3.3 CTO for D.G. sets (Commercial Establishments)[79]

In compliance of the orders dated 01.03.2015 passed by the Hon'ble NGT in Appeal No. 12 (THC) of 2013 OA No. 17 (THC) of 2013 an OA No. 32 (THC) of 2013, PPCB has laid down uniform procedure for issue of consents. The applicant has to submit an application on simplified performa with requisite fee and analysis report from approved Lab of the Board to be charged to the DG sets of commercial establishment is as per **Annexure-6-A** with following documents / requisites:

- Analysis reports of noise as well as stack emissions got analyzed by Board's lab / approved labs of the Board/NABL/MoEF.
- Fee to be charged by Board's labs as well as Pvt. Labs shall be Rs. 1500/- for analysis of stack emissions and Rs. 500/- for noise monitoring.

Consent Fee Criteria

Capacity of the D.G. Set(s)	Fee to be charged (Rs.)
Up to 10 KVA	1000
More than 10 KVA but up to 20 KVA	2000
More than 20 KVA but up to 50 KVA	5000
More than 50 KVA	10000
Note: *The above said fee structure is for grant of consent to the occupiers of D.G. Sets initially for a period of two years.*	

6.3.4 Validity Period of Consent to Operate

Category of the industry/project	Validity of Consent
Red Category industries	5 years
Orange Category industries	10 years

[78] *PPCB Office Order no. 299 dated 1.7.2016 & 688 dated 02.03.2017*

[79] *PPCB vide its Office Order no. 369 dated 09.09.2013*

Green Category industries	15 years
Bedded HCFs falling under Red & Orange category	5 years
Non-bedded HCFs	10 years

Culminating period of the consents

Scale and category of the industry/project	Culminating period
Large & Medium-Red Category	31st March
SSI-Red category except brick kilns	30th June
All scale orange category of industries and brick kilns	30th September
All scale green category of industries	31st December

6.3.5 Period prescribed for processing application for consent to establish / operate

Govt. of Punjab has prescribed timelines for deciding the applications for consent to establish/ operate under the Water Act, 1974 & the Air Act, 1981 under **The Punjab Transparency and Accountability in Delivery of Public Service Act, 2018:**

Approval / Clearance required	Timelines
Consent to establish (NOC)	
Green Category	15 days
Red & Orange Category ▪ Large & Medium ▪ Small Scale	 21 days 15 days
Consent to Operate	
Green Category	15 days
Orange Category ▪ Large & Medium ▪ Small Scale	 30 days 15 days
Red Category	30 days
Authorisation / Registration under Waste Management Rules (BMW/HWM/PWM/E-Waste)	30 days

6.3.6 Auto 'Acknowledgement-cum- Renewal Certificate' for regulatory clearances[80]

To provide ease of doing business to the entrepreneurs, the Board has decided to extend the facility for auto generated renewal to all categories of small scale industries / projects, without inspection / physical verification of the environmental parameters at the time of submission of such application(s) subject to the following stipulations:

1. This auto generated certificate will be available for renewal to all categories of small scale industries / projects (Red, Orange & Green) for the purpose of all mandatory regulatory clearances under the domain of PPCB (i.e. consent to establish/operate, authorisation, registration etc.) being issued under the environmental laws.
2. This auto generated certificate will also be available to the small health care facility having bed capacity upto 50 beds, area development and building construction projects (not covered under EIA notification 2006) having project cost upto 10 crores, un-stared hotels (including restaurant, inns, motels, banquet halls, marriage palaces etc.) and e-waste recyclers/re-furbishers/ dismantlers. However, this facility shall not be available to Common Waste Treatment and Disposal Facilities (i.e. CBWTF, TSDF, MSW, CETPs & STPs etc.).

[80] *PPCB office order no. SEE(HQ-2)/2021/443 dated 09.08.2021*

3. An auto 'Acknowledgement cum Renewal Certificate' will be generated to the applicant/project proponent upon successful submission of complete renewal application (with requisite documents and prescribed processing fee).
4. This auto 'Acknowledgement cum Renewal Certificate' will be confirmed after scrutiny and verification of data with conditions as applicable to the specific industry/project.
5. In case, the application is found incomplete at a later stage after scrutiny, the concerned Regional Office shall intimate the discrepancies/observations to the entrepreneur with advice to complete the same within 7 days. Failing to complete the application, the Board will be at liberty to revoke the auto 'Acknowledgement cum Renewal Certificate'.
6. The inspection of the industry shall be governed by the inspection policy framed by CPCB/ PPCB/ Govt. from time to time.
   i) In case, the inspection of the industry/project has already been made as per the protocol prescribed by the Board vide office no. SEE(HQ-2)/2020/56 dated 24.01.2020 and no major violation was observed during that inspection or compliances have been made subsequently, then there is no need for fresh visit at the time of processing such renewal applications before confirmation of consent certificate;
   ii) In case, the inspection of the industry/project has not been made as detailed at 5(i) and there is no complaint or pending violation proceedings against the industry/ project, the confirmation certificate will be issued subject to inspection of the industry as per the protocol at a later stage;
   iii) In case of complaint or pending violation proceedings, the industry/project shall be visited by the Regional Office or any other officer authorized by the Competent Authority before processing such renewal application.
   iv) Out of the industries granted auto renewal at para 5 (i) & (ii) above, physical inspection of only 10% of the industries shall be made, within 6 months. These 10% industries will be selected by the Head Office of the PPCB on the basis of risk parameter and system generated random number.
7. The validity of the auto 'Acknowledgement cum Renewal Certificate' shall be for a period of one year from the date of generation or the renewal period as mentioned in the confirmation certificate, whichever is earlier.
8. This facility for auto 'Acknowledgement cum Renewal Certificate' shall be available for all small scale industries/ projects except the following where:
   i) there is any change in the technical data including raw material/product/ manufacturing process/quantity of waste generation/pollution load/pollution control device(s)/mode of disposal of effluent or emission or solid waste or any other critical data. In such cases, the industry/project proponent shall be required to file application for issuance of NOC for expansion(modernization) & varied consent/authorisation/registration;
   ii) there is graduation of scale of industry (Small/Medium/Large) or change of category (White/Green/Orange/Red);
   iii) the previous consent/authorisation/registration application submitted by the industry/ project proponent has been refused/revoked by the Board;
   iv) any proceedings u/s 25, 26 or 33-A of the Water (Prevention Control of Pollution) Act, 1974, u/s 21, 31-A of the Air (Prevention Control of Pollution) Act, 1981 and u/s 5 of the EPA (Protection) Act, 1986 including directions if issued any, are pending with the Board.
9. The Procedure for filing the application shall be as under:
   a) The industry/project proponent shall submit application for renewal on Business First Portal https://pbindustries.gov.in through OCMMS application of PPCB.
   b) Auto 'Acknowledgement cum Renewal Certificate will be issued, based on self-certification of documents by the owner/director/managing partner/authorized responsible authority of industry/project. Application shall include self-attested compliance report of previous

consent/authorisation/registration granted by the Board, consent fee and analysis report from Board's approved laboratory (wherever applicable), supported by an undertaking that no proceedings are pending against the industry/project proponent as specified at 7(iv) above.

10. In case, the industry/project proponent is found violating the provisions of the respective Environmental Act(s)/Rule(s) or found creating conditions which are detrimental to the environment or the information/data submitted by the industry/project proponent is found to be incorrect/wrong, this auto 'Acknowledgement cum Renewal Certificate' shall be revoked/cancelled without giving any notice/opportunity to the industry/project proponent and penal action as per provisions of environmental laws shall also be initiated.
11. The facility for system generated consent to establish/operate given to the green category units vide Board's office order No. PPCB/SEE(HQ-2)/2020/88 dated 30.01.2020 shall remain operative. However, the facility earlier given to green and orange category industrial unit vide Board's office order No. SEE(HQ)/F.No./957/2016/59 dated 02.02.2016 is superseded.
12. The competency to approve the confirmation certificate shall remain with the respective officers as already delegated by the Board, from time to time.

6.3.6.1 Self-Certification and Third Party Inspection for Environmental Clearances[81]

It has been decided by the Board to extend the facility of '*Third Party Inspection*' to all the small scale categories of industries/projects (Red, Orange, Green) for the purpose of all renewal applications required for the mandatory regulatory clearances under the environmental laws, falling under the domain of PPCB (i.e. consent to establish/operate, authorisation, registration etc.). The entrepreneur shall have now the following options for filing application to avail the benefit of system generated auto renewal clearance certificates:

i. Self-Certification

   The entrepreneur would self-certify that all the data/information provided in the application is correct and is complying with the environmental laws.

ii. Third Party Certification

   The entrepreneur would also have an option to submit a 'third party inspection report' from the list of Chartered Engineers/Institutions empanelled by the Board.

A system generated auto 'Acknowledgement cum Renewal Certificate', will be generated to the applicant/project proponent upon successful submission of complete renewal application in both options as mentioned at (i) & (ii) above, initially for a period of one year. Thereafter, the application will be processed by the concerned office, in due course. If application is found complete in all respects, the validity period of renewal shall be granted for full term as admissible for respective establishments as per policy.

Random Inspection: In order to maintain the regulatory compliances for such industries/establishments to whom auto renewed clearances have been granted at para (i) & (ii) above, random physical inspection of industries, shall be made, within 6 months. These industries will be selected by the Head Office of the PPCB on the basis of risk parameter and system generated random number as per below criteria:

i) In case of Self-Certification : 10% of the industries/establishments

ii) In case of Third Party Certification : 5% of the industries/establishments

[81] *PPCB office order no. SEE(HQ-2)/2021/444 dated 10.08.2021*

Note:

1. *Periodic inspections of the industries/project to check the regulatory compliances shall be governed by the monitoring protocol framed by the PPCB/Government.*
2. *In case of complaint or pending violation proceedings, the industry/project shall be visited by the Regional Office or any other officer authorized by the Competent Authority before processing such renewal application.*
3. *In case of third party inspection, the Chartered Engineers/Institutions shall follow the TOR/guidelines of Chartered Engineer/Institutions of the Board as amended time to time.*

6.3.7 Delegation of powers to decide applications for various Clearances & other actions

Description	Competency
CTE/CTO under the Water Act, 1974 & the Air Act, 1981	
Small Scale units Green Category	Environmental Engineer
Orange and Red Category	Senior Environmental Engineer
Medium Scale units Green Category	Senior Environmental Engineer
Orange and Red Category	Chief Environmental Engineer
Large Scale units Green and orange Category	Chief Environmental Engineer
Red category industries having total project cost upto Rs.15 crores	Member Secretary of the Board
Red category industries having total project cost more than Rs.15 crores	Chairman of the Board
Common Environmental Treatment Facilities like CETP, Integrated Municipal Solid Management Facility, Common TSDF &STPs. Authorisations under the Municipal Solid Waste (Management & Handling) Rules, 2000 and consent to operate to the Municipal Corporation.	Chairman of the Board
Municipal Councils/ Local Authorities etc.	Member Secretary of the Board
Building Construction and Area Development Projects Projects having total project cost upto Rs. 10 crores	Senior Environmental Engineer
Projects having total project cost above Rs.10 crores, but upto Rs. 25 crores	Chief Environmental Engineer
Projects having total project cost above Rs.25 crores, but upto Rs. 50 crores	Member Secretary of the Board
Projects having total project cost above Rs.50 crores.	Chairman of the Board
Hotels 5 Star and above	Chairman
4 Star	Member Secretary
Upto 3 Star	Chief Environmental Engineer
Without Star hotels, restaurant, inns, motels, banquet	Senior Environmental Engineer

halls, marriage palaces etc.	
To be reviewed in light of the categorization of hotels into Red/Orange/Green categories as per latest categorization.	
Mining of sand and other minor mineral projects[82]	
0-5 ha	Chief Environmental Engineer
>5 ha and < 25 ha	Member Secretary
≥ 25 ha	Chairman
Waste tyre pyrolysis plant (new/expansion projects).	Chairman (refer chapter 4 sub-head 4.2.7)
Authorisation under BMW Rules	
Upto 50 beds HCEs and lab and Blood Banks, Pathological Lab, Veterinary Institutions/ Animal House etc.	Environmental Engineer
More than 50 beds but upto 200 beds	Senior Environmental Engineer/ Additional Secretary
More than 200 beds but upto 500 beds	Chief Environmental Engineer
More than 500 beds	Member Secretary through EPA Cell
Common Bio-medical Waste, Treatment and Disposal Facility	Chairman through EPA Cell
Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016	
Authorisation under the HWM Rules, 2016	Delegation of powers will be same as for consent to operate under the Water Act, 1974 and Air Act, 1981. However, in this case the Senior Scientific Officer will exercise powers at par with Senior Environmental Engineer.
Registration for importers under the HWM Rules, 2016	Environmental Engineer[83]
Registration as co-processor for using hazardous waste as raw material	Chairman of the Board[83]
Plastic Waste Management Rules, 2016	
Registration as Manufacturer/Recycler	As per powers delegated for CTE/CTO under the Water Act, 1974 and Air Act, 1981
Registration as Producer/Brand-Owner/ Importer	Member Secretary. File for registration shall be routed through EPA cell by the concerned RO
E-Waste (Management & Handling) Rules, 2016 as amended in 2018	
Registration/ Consent to establish/ operate for Integrated e-Waste Common facility.	Chairman. File shall be routed through EPA cell by the concerned Regional Office of the Board[84].
Registration/ Consent to establish/ operate for Re-cycler/ dismantler/ Re-furbishing/ Recovery unit	Chairman. File shall be routed through EPA cell by the concerned Regional Office of the Board[84].
Battery Management and Handling Amendment Rules 2010	
Registration for Dealers	Environmental Engineer of concerned Regional Office

82 *PPCB office no. CEE(HQ)/2018/542 dated 09.11.2018*

83 *PPCB office order no. SEE (HQ-2)/2020/523 dated 17.09.2020 and No. 475 dated 21.08.2020*

84 *PPCB Office Order no. 531dated 06.10.2021*

Solid Waste Management Rules, 2016	
Authorisation applied by ULBs	Chairman: To be considered and decided by the Committee constituted for deciding applications. File shall be routed through EPA cell by the concerned Regional Office of the Board[84]
Misc. Clearances	
Installation of Mobile phone Towers (amended vide Board's office order No. SEE.(HQ-2)/2017/16 dated 09.01.2018.	Environmental Engineer of concerned Regional Office
Permission for Incineration for Narcotics/ drugs confiscated by the police/ any other authority	Concerned Environmental Engineer (where incinerator installed) after checking the surplus capacity.
Notices/Directions for Closure or any other Directions[85]	
u/s 33-A of Water Act 1974 & u/s 31-A of Air Act, 1981 • Small scale (all category) * • Large/Medium Scale (Orange and Green Category) • Large/Medium Scale (Red Category) ***Note:** For all closure orders prior approval from Member Secretary and Chairman of the Board is to be taken.*	Chief Engineer Member Secretary Chairman
Action u/s 5 of EPA, 1986	Chairman. File shall be routed through EPA cell by the concerned Regional Office of the Board[84].
Environment Compensation (EC)	Chairman. EC calculations to be verified by the Committee constituted for the purpose.
Court Cases • Specific industrial units	To be filed by the competent authority as prescribed under consent management after vetting by Law officer.
• Specific industrial units in which senior authority (Chairman/ Member Secretary) has been impleaded as party	To be filed by the competent authority as prescribed under consent management after approval of the authority impleaded as party.
• General cases/ policy decisions	To be filed by the concerned Environmental Engineer in whose area it falls, but with the approval of Chairman of the Board.
Take decision on the release of Bank Guarantee Submitted by the Industry/project proponent.	Officer who is competent to decide the consent to establish/ operate cases of the industries/ projects.
Report/comments related tio Pubic hearing and comment sought by SEIAA/SEAC.	
With respect to construction status, suitability of site and adequacy of pollution control arrangements to be sent to SEIAA/MoEF&CC or to Mega Branch with respect to EC or public hearing applications.	Senior Environmental Engineer of concerned Zonal Office

***Note:** Govt. of India, Ministry of Micro, Small, Medium vide its notification no. S.O. 1702(E) dated 01.06.2020 has revised the criteria for classification of industries, which is under consideration for adoption by the Board.*

[85] *PPCB Office Order no. SEE(HQ-1)/2011/32722-57 dated 08.08.2011, EE(Mega)/2013/28770-96 dated 27.06.2018 and MS/PPCB/32785-811 dated 08.08.2017*

6.3.8 Frequency of Visit / Sampling[86]

The minimum mandatory environmental surveillance of the industries / other establishments shall be carried out as per the frequency prescribed below:

Industrial Category / Facility	Frequency of Mandatory Inspection for Environmental Surveillance*
Highly Polluting 17 Category Industries	3 months
Red Category (Other than 17 category industries)	6 months
Orange Category Industries	1 year
Green Category Industries	2 years
CBWTF / CHWSRDF / CMSWTDF / CETP / STP	3 months
In case of any exigency or complaint, the industry/ establishment can be visited as per requirement by recording the reasons, thereto.	

6.3.9 Online submission of visit report[87]

The Board has laid down procedure w.r.t. submission of inspection report of the industries by the visiting officers as under:

"Inspection / visit reports for processing the NOC/ consent application of the industries as well as compliance under Water Act, 1974, Air Act, 1981 and Hazardous and Other Wastes Rules, 2016 shall be uploaded online through Online Consent Management & Monitoring System (OCMMS) by the visiting officers within 48 hours of his / her visit."

6.3.10 Third party inspection

To facilitate the entrepreneurs for obtaining 'Consent to Establish' and / or 'Consent to Operate' of the Board, the Board has allowed third party inspection and has framed policy for empanelment of Charted Institutes / Charted Engineers. The detailed policy is available at the website of the Board i.e. www.ppcb.punjab.gov.in.

6.4 Procedure for processing the cases for restoration of power supply / release of Bank Guarantee / withdrawal of directions[88]

Upon the receipt of request of the industry/ project proponent regarding restoration of electric connection of the industry / project and release of Bank Guarantee, the concerned Regional Office/ Zonal office shall initially make recommendations for the restoration of electric connection temporarily for a period of six months to access the adequacy of pollution control arrangements. Permanent restoration of power supply / release of bank Guarantee shall be considered only after adjudging the adequacy/ efficacy of the treatment system on the basis of three effluent / emission sample collected on different date and these sample must comply with the effluent/ emission samples Sample.

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[86] *PPCB Office Order no. SEE(HQ-2)/2020/56 dated 24.01.2020*

[87] *PPCB Office order no. SEE(HQ-2)/2017/1022 dated 30.10.2017*

[88] *PPCB office order No. 144 dated 24.06.2009*

6.4.1 Restriction on the burning of certain type of fuels/material

Ban on use of burning of rubber scrap[89]

The Govt. of Punjab has banned the use and burning of rubber scrap, all tyres, oil sludge, acid sludge and loose rice husk as fuel, in the whole of the State of Punjab as per details given below:

- Rubber in any form with effect from 1.4.1994.
- Process waste containing sulphur and toxic substances with effect from 1.4.1994.
- Rice Husk (except in the form of fuel briquettes and use of rice husk in fluidized bed combustion) as fuel in the air pollution control area with effect from 1.4.1994.

Restriction on use of pet coke as fuel.

The Punjab Pollution Control Board in its 148th meeting held on 23.6.2010 vide item No.148.15 permitted the use of pet coke as fuel in the boilers/furnaces subject to the following conditions:

- The boilers/furnace emissions shall conform to SO_2 standards of 400 mg/Nm^3 as laid down by the Ministry of Environment & Forests for the small boilers.
- The industry shall provide well designed two stages desulphurization i.e. at combustion stage and of flue gas emissions.
- The industry shall install dry type air pollution control device, such as cyclone/multi-cyclone followed by spray type alkali scrubber and packed bed alkali scrubber. The packed bed scrubber to be installed should conform to the guide parameters as mentioned below and the industry shall use only caustic soda as scrubbing media:
  - ✓ Velocity of gas through the tower is recommended to be 1.5-7.5 m/s.
  - ✓ Liquid gas ratio is recommended to be 3.5-4.0 litre/m^3 of gas flow or 80-325 lpm/m^3 of tower cross sectional area.
  - ✓ Pressure drop is recommended to 15-150 mm W.G/m of packed bed height.
  - ✓ Maximum inlet concentration 5000 ppm by volume.
- The industry shall install online monitor for SO_2 with the stack of the boiler.
- The industry shall provide interlocking of online SO_2 monitor with the feeding system of the boiler, so as to ensure that the feeding system of fuel in the boiler furnace should become in shut down condition, in case the conc. of SO_2 increases beyond the prescribed standards of 400 mg/ Nm^3 at any time.
- The industry shall provide online pH meter on the recirculation tank of scrubbing liquor from where the said liquor is fed to the air pollution control device and ensure that the pH of the feed scrubbing liquor should remain within the range of 10-12.
- The industry shall provide flow meter and pressure gauge at the outlet of the pump used to supply the scrubbing liquor to the alkali scrubber, so as to ensure that the scrubbing liquor is fed to the air pollution control device at the desired rate and pressure.
- The industry shall provide a stack of height calculated by using the formula H=14 Q$^{0.3}$ and the emission rate of SO_2 (value of Q in kg/hr) should be calculated by using the volume of flue gas emissions and the standards for SO_2 (400 mg/ Nm^3) or 30 m, whichever is higher.
- The sludge produced in the recirculation tank of the scrubbing liquor shall be disposed of in an environmentally sound manner.

[89] *Govt. of Punjab notification No.4/46/92-3ST/2839 dated 29.12.1993*

6.4.2 Encouraging Utilization of Paddy Straw as Fuel[90]

For New Industries:

- It will be mandatory for new Distilleries and Breweries coming up in the State to install paddy straw fuel-based boiler. Similarly, existing ones going in for replacement of boiler/installation of new boiler for modernization/expansion will have to install paddy straw fuel-based boilers.
- Those units will be treated as new units which are yet to obtain CTE from PPCB.
- Effective from the date of approval by the Council of Ministers.

Note: *For financial/other incentives, logistics to be provided by various departments in lieu of utilizing paddy straw as fuel/resource material, for promotion of torrified bio-coal by thermal plants and replacement of paddy straw (bales/briquettes/pellets) in place of coal/other fuels in the existing boilers and brick kilns, refer the above Notification dated 27.08.2021*

6.5 Environmental Statement

Every person carrying on an industry, operation or process & requiring consent u/s 25/26 of the Water Act, 1974 and 21 Air Act, 1981 or both or authorisation under the HWM Rules shall submit an Environmental Statement for the financial year ending 31st March on prescribed proforma on or before of September every year beginning 1993. Prescribed proforma is available on the website of the CPCB.

6.6 Sample Testing Laboratories

Board has set up its central laboratory at Patiala and zonal laboratory at Ludhiana and Jalandhar for analysis of effluent/emission samples and ambient air samples analysis also. In addition, the Board has also authorized some private laboratories **(list available on Board's website)** for analysis the effluent/emission samples for monitoring and consent purposes. The industry can get its samples tested and performance study carried out from any of these laboratories for its own satisfaction.

6.7 Installation of CCTV Cameras[91]

To ensure and monitor the operation of water and air pollution control devices (ETP's and APCD's), the Board in year 2011 has initiated the process of installation of CCTV cameras in the industrial premises.

Type of industries where CCTV Cameras are to be installed

Distilleries	Paper Mills	Electroplating (Large / Medium Scale)*
Meat Plants	Sugar Mills	Dyeing & Textile (Large / Medium Scale)*
Pharmaceuticals	Induction Furnace/Arc Furnace (Small /Medium/ Large Scale more than 3 T/hour)*	
CETP for Electroplating industries at Ludhiana and CETP for Leather Complex at Jalandhar		
**Included vide its letter no. 20337-49 dated 07.03.2013.*		

Locations for CCTV Cameras to be installed

Bio reactors	Chemical dozing tanks	Outflow channel: electromagnetic flow meter
Stacks for checking of release of smoke		Any site specific requirement
Such cameras are required to be installed with DVRs and to be connected at central location of PPCB. Specifications of these cameras are provided on the Board's website		

[90] *Punjab Govt. Department of Science, Technology & Environment Notification issued vide endst. I.D No. 10/512/2021-STE3/2075 dated 27.08.2021*

[91] *PPCB letter no. CEE/2011/47114-26 dated 08.12.2011*

6.8 Online Continuous Effluent /Emission Monitoring System (OCEMS)

CPCB vide its letter no. B-29016(04/6PCI-1/5401 dated 05.02.2014 issued directions under Section 18(1) b of the Water and Air Acts to the SPCBs and PCCs for directing the 17 categories of highly polluting industries, CETP & STPs, Common Bio Medical Waste and Common Hazardous Waste Incinerators for installation of OCEMS to track the discharges of pollutants from these units. The directions envisage:

- Installation of OCEMS at the outlet of identified units for the measurement of the parameters pH, COD, BOD and other specific parameters as per the guidelines provided and transmission of online data so generated SPCB and CPCB as well
- Installation of surveillance system with industrial grade IP (Internet Protocol) cameras having PAN, Tilt Zoom (PTZ) with leased line real time connection for data steaming and transmission of the same.
- Ensure *regular maintenance and operation of OCEMS with temper proof mechanism having facilities for online calibration.*

Besides 17 categories of industries, CETPs, CBWTFs & TSDF to install the OCEMS, Board has also directed the industries/local bodies mentioned in the various action plans proposed by the DECC to install the OCEMS.

For detailed guidelines:

https://cpcb.nic.in/online-monitoring-of-industrial-emission/

For parameters to be monitored:

https://cpcb.nic.in/displaypdf.php?id=dGhydXN0LWFyZWEvcmV2aXNlZF9wYXJhbWV0ZXIucGRm

PPCB online monitoring portal:

http://ppcbcems.nic.in/

Annexure-6-A

PUNJAB POLLUTION CONTROL BOARD, REGIONAL OFFICE, _____

No. **Date:**

To

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office, _____.

Sub: **Application for 'Consent to Operate' u/s 21 of the Air (Prevention & Control of Pollution) Act, 1981 of M/s _____ .**

The information for obtaining 'Consent to Operate' u/s 21 of the Air (Prevention & Control of Pollution) Act, 1981 for operation of D.G. set is as under:

1.	Name & Address of the occupier / applicant			:		
2.	Location of the establishment where D.G. set has been installed			:		
3.	Name of the Directors / Partners / Proprietor of the Company / premises			:		
4.	Details of the D.G. Set(s)			:		
	Sr. No.	Capacity of the D.G. set	Type & Qty. Of fuel used (lt/hr.)	Month & Year of manufacture of D.G. set	Month & year of Purchase of D.G. set	Height of the stack attached to D.G. set (above roof level of the building in which the DG set is installed) (in m)
5.	Whether canopy has been provided with D.G. Set(s) or not? If yes, whether the same was supplied by the manufacturer along with D.G. set or the same has been locally manufactured?			:		
6.	Whether certificate of authorized manufacturer in regard to compliance of noise and emission standards has been obtained or not? If yes, please attach a copy of the same in case the same is valid.			:		
7.	In case, no valid certificate is available with the occupier, please attach a copy of the analysis results of the noise and stack			:		

	emissions of D.G. set from the Board's Lab/ Approved Lab of PPCB / NABL / MoEF. (The analysis reports should indicate the results of all parameters for which the standards have been fixed by the MoEF)		

I hereby undertake that the information given above is true to the best of my knowledge and belief and nothing has been concealed therein. In case, at any stage, the B Board finds that the information given above to be false / incorrect, the Board would be at liberty to cancel the consent granted and take appropriate action as deemed fit under the provisions of the Air (Prevention & Control of Pollution) Act, 1981.

Place:_____

Dated:_____

Signature of the applicant

Note: *1. Stack Height criteria for D.G. Sets laid down by the Board vide notification No. Admn/A-4/F.No. 160/87/14744 dated 14.9.1987.*

1. Prescribed stack heights for DG Sets

Sr. No.	Capacity of the D.G. Set(s)	Height of Stack
1.	0-50 KVA	Height of the Building + 1.5 m
2.	50-100 KVA	Height of the Building + 2.0 m
3.	100-150 KVA	Height of the Building + 2.5 m
4.	150-200 KVA	Height of the Building + 3.0 m
5.	200-250 KVA	Height of the Building + 3.5 m
6.	250-300 KVA	Height of the Building + 5.5 m
Note:	*For higher rating D.G. sets, the stack height H (in meter) shall be worked out according to the formula: $H = h+0.2\ (KVA)^{0.5}$ where h = height of the building in meters where the generator set is installed.*	

2. Consent Fee Criteria

Sr. No.	Capacity of the D.G. Set(s)	Fee to be charged
1.	Upto 10 KVA	Rs. 1000/-
2.	More than 10 KVA but upto 20 KVA	Rs. 2000/-
3.	More than 20 KVA but upto 50 KVA	Rs. 5000/-
4.	More than 50 KVA	Rs. 10000/-
Note:	*Above fee structure is for grant of consent to the occupiers of D.G. Sets initially for a period of two years.*	

3. Noise / emission Standards:

- Noise limits applicable to the applicant shall be as prescribed by the MoEF&CC vide notification No. GSR-371(E) dated 17.05.2002 as amended from time to time.
- Stack emission standards applicable to the applicant shall be as prescribed by the MoEF&CC vide notification No. GSR-520(E) dated 01.07.2003 or GSR-489(E) dated 7.9.2002 as amended from time to time.

7. Effluent / Emission Standards

The Board in general has adopted the effluent/emission standards as notified by the Ministry of Environment, Forest & Climate Change under the Environmental (Protection) Rules, 1986*. Besides, in some cases, the state Govt./PPCB has also prescribed emission/effluent standards. Effluent/emission standards for the industries and other establishments relevant to the State are given below:

***Source: 7th Edition of Pollution Control Acts, Rules and Notifications issued thereunder published by CPCB in April, 2021 vide No. PCLS/02/2021-2022.**

7.1 General Effluent Standards

Parameter	Unit	Standards		
		Inland Surface Water	Public Sewers	Land for Irrigation
Colour and Odour	-	All efforts should be made to remove colour and unpleasant odour	-	All efforts should be made to remove colour and unpleasant odour
Temperature	-	Shall not exceed 5°C above the receiving water temperature	-	-
Suspended Solids	mg/l Max.	100	600	200
Particulate size of suspended solids	-	pass 850 micron IS Sieve	-	-
pH value	-	5.5-9.0	5.5-9.0	5.5-9.0
Oil & Grease	mg/l Max.	10	20	10
Total residual chlorine	mg/l Max.	1.0	-	-
Ammonical Nitrogen (N)	mg/l Max.	50	50	-
Total Kjeldahl Nitrogen (NH_3)	mg/l Max.	100	-	-
Free Ammonia (as NH_3)	mg/l Max.	5.0	-	-
Biochemical Oxygen Demand*		30	350	100
Chemical Oxygen Demand,	mg/l Max.	250	-	-
Arsenic (as As)	mg/l Max.	0.2	0.2	0.2
Mercury (as Hg)		0.01	0.01	-
Lead (as Pb)	mg/l Max.	0.1	1.0	-
Cadmium (as Cd)	mg/l Max.	2.0	1.0	-
Hexavalent Chromium (as Cr+6)	mg/l Max.	0.1	2.0	-
Total Chromium (as Cr)	mg/l Max.	2.0	2.0	-
Copper (as Cu)	mg/l Max.	3.0	3.0	-
Zinc (as Zn)	mg/l Max.	5.0	15	-
Selenium (AS Se)	mg/l Max.	0.05	0.05	-
Nickel (as N)	mg/l Max.	3.0	3.0	-
Cyanide (as CN)	mg/l Max.	0.2	2.0	0.2
Fluoride (as F)	mg/l Max.	2.0	15	-

Dissolved Phosphates (P)	mg/l Max.	5.0	-	-
Sulphide (as S)	mg/l Max.	2.0	-	-
Phenolic compounds (C_6H_5OH)	mg/l Max.	1.0	5.0	-
Bio-assay test		**90%	**90%	**90%
Manganese (as Mn)		2 mg/l	2 mg/l	-
Iron (as Fe)		3 mg/l	3 mg/l	-
Vanadium (as V)		0.2 mg/l	0.2 mg/l	-
Nitrate Nitrogen		10 mg/l	-	-
Radioactive materials a) Alpha emitter b) Beta emitter	micro curie/ ml	 10^{-7} 10^{-6}	 10^{-7} 10^{-6}	 10^{-8} 10^{-7}
*3 days at 27°C **Survival of fish after 96 hours in 100% effluent				

7.2 General Emission Standards

Concentration Based Standards

Parameter	Standard concentration not to exceed (in mg/Nm^3)
Particulate Matter (PM)	150
Total Fluoride	25
Asbestos	4 Fibres/cc and dust should not be more than 2 mg/Nm^3
Mercury	0.2
Chlorine	15
Hydrochloric acid vapour and mist	35
Sulphuric Acid Mist	50
Carbon Monoxide	1% max. (v/v)
Lead	10

II. Equipment Based Standards

Steam Generation Capacity		Stack height
Less than 2 ton/hr	Less than 8.5 MT	9 meters
2 to 5 ton/hr	8.5 to 21 MT	12 meters
5 to 10 ton/hr	21 to 42 MT	15 meters
8 to 15 ton/hr	42 to 64 MT	18 meters
15 to 20 ton/hr	64 to 104 MT	21 meters
20 to 25 ton/hr	104 to 105 MT	24 meters
25 to 30 ton/hr	105 to 126 MT	27 meters
More than 30 ton/hr	More than 126 MT	30 meters or using the formula $H=14(Q)^{0.3}$
H – Physical height of the stack in meter Q – Emission rate of SO_2 in kg/hr.		

7.3 Industry Specific Water / Air Emissions Standards and Protocols

7.3.1 Sugar Industry[92]

Parameters	Standards
Effluents	All concentration values are in mg/l except for pH
pH	5.5 – 8.5
Total Suspended Solids (TSS)	100 (for disposal on land) 30 (for disposal in surface waters)
Biological Oxygen Demand, BOD [3 days at 27°C]	100 (for disposal on land) 30 (for disposal in surface waters)
Oil & Grease	10
Total Dissolved Solids (TDS)	2100
Final wastewater discharge limit	200 litre per ton of cane crushed
(Final treated effluent discharge restricted to 100 litre per ton of cane crushed and Waste water from spray pond overflow or cooling tower blow down to be restricted to 100 litre per ton of cane crushed and only single outlet point from unit is allowed.)	
Emissions	
The particulate matter emissions from the stack shall be less than 150 milligram per normal cubic meter	

Treated effluent Irrigation protocol & waste water conservation or waste water management in Sugar industries

Loading rates for different soil textures

Soil Texture	Loading rate in m^3/Ha/Day
Sandy	225 to 280
Sandy loam	170 to 225
Loam	110 to 170
Clay loam	55 to 110
Clay	35 to 55

Waste water conservation and pollution control management

1. Establishment of cooling arrangement and polishing tank for recycling the excess condensate water to process or utilities or allied units.
2. Effluent Treatment Plant to be stabilized one month prior to the start of the crushing season and continue to operate one month after the crushing season.
3. During no demand period for irrigation, the treated effluent to be stored in a seepage proof lined pond having 15 days holding capacity only.
4. Flow meter to be installed in all water abstraction points and usage of fresh water to be minimized.
5. Suitable Air pollution control devices to be installed to meet the particulate matter emission standard.

[92] *Substituted vide MoEF&CC notification no G.S.R. 35 (E) dated 14.01.2016*

CPCB has issued following directions u/s 18(1)(b) of the Water Act, 1974 to PPCB, to ensure the storage/handling of molasses generated from the sugar mills, in an environment sound manner[93]:

- Sugar mill shall ensure that the molasses generated by the unit is not leaked/discharged into surface water bodies/ground and shall be stored in proper tanks meant for the purpose.
- To ensure proper precautionary measures for the storage of excess molasses, if stored in kutcha lagoons/open tanks as per NOC of Excise Dept./concerned department.
- Molasses stored in such temporary storage tanks shall be properly utilized/consumed before approaching monsoon season. The sugar mills shall explore the utilization of molasses by other distilleries within the State or in the nearby State and legal formalities, if any, for such interstate movement may be facilitated on the request from the mills.
- To perform monitoring of water quality of receiving drain/river on regular basis to ensure timely corrective action to avoid any spill/accidental discharge from such temporary/illegal storage of molasses.
- An assessment of molasses stored at the sugar mails in the State shall be prepared including the available storage facilities and shall be provided to CPCB.
- Analyse the preparedness of all concerned stake holders in dealing with such accidental discharge.

7.3.2 All Integrated Textile Units, Units of Cotton/Woollen/Carpets / Polyester, Units having Printing/Dyeing/ Bleaching process or manufacturing and Garment Units[94]

Parameter	Standards
Treated Effluents	Maximum concentration values in mg/l except for pH, colour and SAR
pH	6.5 to 8.5
Suspended Solids	100
Colour P.C.U. (Platinum Cobalt Units)	150
Bio-chemical Oxygen Demand [3 days at 27°C]	30
Oil & Grease	10
Chemical Oxygen Demand (COD)	250
Total Chromium (as Cr)	2.0
Sulphide (as S)	2.0
Phenolic Compounds (as C_6H_5OH)	1.0
Total Dissolved Solids (TDS)	2100
Sodium Absorption Ratio (SAR)	26
Ammonical Nitrogen (as N)	50

Note:

- *In case of direct disposal into rivers and lakes, the Central Pollution Control Board (CPCB) or State Pollution Control Boards/Pollution Control Committees (SPCBs/PCCs) may specify more stringent standards depending upon the quality of recipient system.*
- *Standards for TDS and SAR shall not be applicable in case of marine disposal through proper marine outfall.*
- *The treated effluent shall be allowed to be discharged in the ambient environment only after exhausting options for reuse in industrial process/irrigation in order to minimize fresh water usage.*

[93] *CPCB letter No.B-410/PCI-III/DIST/2K16-2K17/2136 dated 25.05.2018*

[94] *Substituted vide MoEF&CC & notification No. GSR. 978(E) dated 10.10.2016*

- *Any textile unit attached with the Common Effluent Treatment Plant (CETP) shall achieve the inlet and treated effluent quality standards as specified in serial number 55 of Schedule-I to the Environmental (Protection) Rules, 1986 and shall also be jointly and severally responsible for ensuring compliance.*
- *The standalone Micro, Small and Medium Enterprises (MSMEs) as per the MSME Development Act, 2006 shall meet the values specified above.*
- *The standalone large scale units shall meet the values specified above, however, CPCB or SPCBs/PCCs with the approval of CPCB, may mandate Zero Liquid Discharge in Large scale units in environmentally sensitive/critical areas.*
- *The TDS value with respect to treated effluent shall be 2100 milligram per litre, however, in case where TDS in intake water is above 1100 milligram per litre, a maximum contribution upto 1000 milligram per litre shall be permitted provided the maximum value of 3100 milligram per litre is not exceeded in the treated effluent.*

7.3.3 Small Pulp & paper Industry

Parameter		Standards Concentration not exceed mg/l (except for pH and sodium absorption ratio)
*Discharge into inland surface water	pH	5.5-9.0
	Suspended Solids	100
	BOD	30
Disposal on land	pH	5.5-9.0
	Suspended Solids	100
	BOD	100
	Sodium Absorption Ratio	26
	Absorbable Organic Halogens (AOX) in effluent discharge	3.0 kg/ton of paper produced with effect from the date of publication of this notification. 2.0 Kg/ton of paper produced with effect from the 1st day of March, 2006.

Explanation: These standards shall apply to all small scale Pulp & Paper Mills having capacity below 24,000 MT per annum.

7.3.4 Large Pulp & paper Industry

Emission Standards

Sr. No.	Parameter	Standards
		Concentration in mg/m^3 (normal)
1	Particulate Matter	150
2	H_2S	10

7.3.5 Large Pulp & Paper News Print/Rayon Grade Plants (above 24000 MT/ Annum)

Effluent Standards

Sr. No.	Parameter	Standards
		Concentration in mg/l except pH and TOCL
1	pH	7.0-8.5
2	BOD [3 days at 27°C]	30
3	COD	350

4	Suspended Solids	50
5	[Absorbable Organic Halogens (AOX) in effluent discharge	1.0 kg/ton of product w.e.f. the 1st day of March, 2008.
6	**Flow (Total Waste Water Discharge)** (i) Large Pulp & Paper (ii) Large Rayon Grade Newspaper	 200 Cum/Ton of Paper produced 150 Cum/Ton of Paper produced

7.3.6 Thermal Power Plants

A. Effluent Standards

	Parameter	All standards except pH & Temp. in mg/l
Condenser 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
Boiler blowdown	Suspended solids	100
	Oil & Grease	20
	Copper (total)	1.0
	Iron (total)	1.0
Cooling tower blowdown	Free available chlorine	0.5
	Zinc	1.0
	Chromium (total)	0.2
	Phosphate	5.0
	Other corrosion inhibiting material	Limit to be established on case by case basis by Central Board in case of Union Territories and State Board in case of States
Ash pond effluent	pH	6.5-8.5
	Suspended solids	100
	Oil & Grease	20

- **Water Consumption Limit for Thermal Power Plants (Notified vide MoEF&CC Notification No.SO.3305 (E) dated 7.12.2015 and further modified vide Notification No. G S R 593 (E) dated 28th June, 2018**

I. All plants with Once Through Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption upto maximum of 3.5 m^3/MWh within a period of two years from the date of publication of the notification.

II. All existing CT based plants shall reduce specific water consumption upto maximum of 3.5 m^3/MWh within a period of two years from the date of publication of the notification.

III. Specific water consumption shall not exceed maximum of 3.0 m^3/MWh for new plants installed after 1st January, 2017 and these plants shall also achieve zero wastewater discharge.

Note: *Item No. I, II & III above, shall not be applicable to the Thermal Power Plants using sea water.*

B. Emission Standards for Thermal Power Plants (Notified vide MoEF&CC Notification No.SO.3305 (E) dated 7.12.2015. and further modified vide Notification No. G S R 593 (E) dated 28th June, 2018.

Parameter	Standards
TPPs (units) installed before 31st December, 2003	
Particulate Matter	100 mg/Nm^3
Sulphur Dioxide (SO_2)	600 mg/Nm^3 (Units smaller than 500 MW capacity units) 200 mg/Nm^3 (for Units having capacity of 500 MW and above)
Oxides of Nitrogen (NOx)	600 mg/Nm^3
Mercury (Hg)	0.03 mg/Nm^3 (for Units having capacity of 500 MW and above)
TPPs (units) installed after 1st January, 2004 upto 31st December, 2016	
Particulate Matter	50 mg/Nm^3
Sulphur Dioxide (SO_2)	600 mg/Nm^3 (Units smaller than 500 MW capacity units) 200 mg/Nm^3 (for Units having capacity of 500 MW and above)
Oxides of Nitrogen (NOx)	450 mg/Nm^3 #
Mercury (Hg)	0.03 mg/Nm^3
TPPs (units) installed after from 1st January, 2017 (Includes all the TPPs (units) which have been accorded environmental clearance and are under construction)	
Particulate Matter	30 mg/Nm^3
Sulphur Dioxide (SO_2)	100 mg/Nm^3
Oxides of Nitrogen (NOx)	100 mg/Nm^3
Mercury (Hg)	0.03 mg/Nm^3

Note: *All monitored values for SO_2, NOx and Particulate Matter shall be corrected to 6% oxygen on dry basis.*

(i) A task force shall be constituted by Central Pollution Control Board (CPCB) comprising of representative from Ministry of Environment and Forest and Climate Change, Ministry of Power, Central Electricity Authority (CEA) and CPCB to categorise thermal power plants in three categories as specified in the Table-I on the basis of their location to comply with the emission norms within the time limit as specified in column (4) of the Table-I, namely: -

Sr. No.	Category	Location/Area	Timelines for compliance	
			Non retiring units	Retiring units
(1)	(2)	(3)	(4)	(5)
1	Category A	Within 10 km radius of National Capital Region or cities having million plus population	Up to 31st December 2022	Up to 31st December 2022
2	Category B	Within 10 km radius of Critically Polluted Areas2 or Non-attainment cities2	Upto 31st December 2023	Upto 31st December 2025
3	Category C	Other than those included in category A and B	Upto 31st December 2024	Upto 31st December 2025

Subs. by G.S.R. 662(E), dated 19th October, 2020

Subs. for letters, brackets and words [*TPPs (units) shall meet the limits within two years from date of publication of this notification] by G.S.R. 243(E), dated 31st March, 2021,

(ii) the thermal power plant declared to retire before the date as specified in column (5) of Table-I shall not be required to meet the specified norms in case such plants submit an undertaking to CPCB and CEA for exemption on ground of retirement of such plant:

Provided that such plants shall be levied environment compensation at the rate of rupees 0.20 per unit electricity generated in case their operation is continued beyond the date as specified in the Undertaking;

(iii) there shall be levied environment compensation on the non-retiring thermal power plant, after the date as specified in column (4) of Table-I, as per the rates specified in the Table-II, namely: -

Non-Compliant operation beyond the Timeline	Environmental Compensation (Rs. per unit electricity generated)		
	Category A	Category B	Category C
0-180 days	0.10	0.07	0.05
181-365 days	0.15	0.10	0.075
366 days and beyond	0.20	0.15	0.10

C. Stack Height/Limit (as modified vide Notification No. GSR 593(E) dated 28th June, 2018)

Thermal Power Plants

Power generation capacity:	Stack Height/Limit in Meters
500 MW and above	275
200 MW/ 210 MW and above to less than 500 MW	220
Less than 200 MW/ 210 MW	H-14(Q)$^{0.3}$ where Q is emission rate of SO_2 in kg/hr. and H stack height in meters
Steam generation capacity:	
Less than 2 ton/hr.	½ times the neighbouring building height or 9 meters (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 ton/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=14 (Q)$^{0.3}$ (whichever is more), Q is emission rate of SO_2 in kg/hr and H is stack height in meters

Thermal Power Plants with wet Flue Gas Desulphurization (FGD)	Power Generation capacity	Stack Height limits (in meters)
	*100 MW and above	H=6.902 (QX0.277)$^{0.555}$ Or 100 meter minimum
	*Less than 100 MW	H=6.902 (QX0.277)$^{0.555}$ Or 30 m whichever is more
		Q= Emission rate of SO^2 in kg/hr. H= Physical stack height in meters *total of all units connected to stack. **Note:** ***These standards shall apply to coal/lignite based thermal power plants.***

7.3.7 Fermentation Industry (Distillery, Maltries and Breweries)

Parameter	Standards (conc. in mg/l except pH and Color & Odour)
pH	5.5.-9.0
Colour & Odour	All efforts should be made to remove colour and unpleasant odour as far as practicable.
Suspended Solids	100
[BOD (3 days at 27°C)] - Disposal into inland surface waters or river/streams - Disposal onto land or for irrigation	 30 100

7.3.8 Tanneries

Parameter	Standards (applicable for all modes of disposal*)
Treated Effluent	Max. permissible values (mg/l, except pH)
pH	6 to 9
Biochemical Oxygen Demand (BOD)3 at 27 °C	20
Chemical Oxygen Demand (COD)	250
Total Suspended Solids (TSS)	50
Total Dissolved Solids (TSS)	2100**
Sulphides (as S)	2.0
Total Chromium (as Cr)	2.0
Hexavalent Chromium(as Cr^{+6})	0.1
Oil and Grease	10

Notes:

1. **In case of direct disposal into rivers and lakes, the Central Pollution Control Board (CPCB) or State Pollution Control Boards / Pollution Control Committees (SPCBs / PCCs) may specify more stringent standards depending upon the quality of the recipient system.*
2. ***Standards for TDS shall not be applicable in case of marine disposal through proper marine outfall.*
3. ***TDS limit with respect to treated effluent shall be 2100 mg/l; however, in case where TDS in intake water is above 1100 mg/l, a maximum contribution up to 1000 mg/l shall be permitted provided the maximum limit of 3100 mg/l is not exceeded in the treated effluent.*
4. *Standards are equally applicable to all types of stand-alone tanneries irrespective of their scale of production.*
5. *Chrome tanning units shall ensure installation of 'Chrome Recovery Plant' for treatment of spent chrome liquor so as to recover chromium sulphate.*
6. *The tannery shall ensure salt recovery through soak liquor segregation.*
7. *The treated effluent shall be allowed to be discharged in the ambient environment only after exhausting options for reuse in industrial process / irrigation in order to minimize freshwater usage.*
8. *The standalone units shall meet prescribed discharge norms; however, SPCB / PCC shall mandate recycle / reuse of the treated water in water scarce / environmentally sensitive / critical areas.*
9. *In case of discharge of treated effluent on land for irrigation, the impact on soil and groundwater quality shall be monitored twice a year (pre- and post- monsoon) by the tannery unit.*
10. *Management, handling and disposal of Sludge and other wastes shall be undertaken as per the provisions made in the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.*
11. *The units shall follow the guidelines prescribed by CPCB and SPCB/ PCC on "Best Available Technologies for Environmentally SoundManagement of the Process and Treatment of Wastes".*

Maximum specific water consumption for processing hides/ skins: (monthly average values)	
Raw-to-Wet blue/white	20 m^3 per ton of hides /skins
Post-tanning process	20 m3 per ton of hides /skins
Raw-to-finished	40 m^3 per ton of hides /skins
Maximum wastewater discharge = 85% of maximum water consumption.	
Factors to re-calculate Finished leather into Wet blue/white andHide: **Shoe upper leather:** 15 ton of Raw hides/skins=7.84 ton of Wet blue=2.94 ton of finishedleather **Upholstery leather:** 15 ton of Raw hides/skins=5.08 ton of Wet blue=1.48 ton of finishedleather.]	

7.3.9 Electroplating, Anodizing Industries

Parameter	Standards
A. - Effluent Standards	
	Limiting concentration in mg/l, except for pH and Temperature
(i) Compulsory Parameters	
pH	6.0 to 9.0
Temperature	shall not exceed 5 °C above the ambient temperature of the receiving body
Oil & Grease	10
Suspended Solids	100
Total Metal*	10
Trichloroethane	0.1
Trichloroethylene	0.1
(ii) Specific Parameters as per process	
a. Nickel and Chrome plating	
Ammonical Nitrogen, as N	50
Nickel, as Ni	3
Hexavalent Chromium, as Cr	0.1
Total Chromium, as Cr	2
Sulphides, as S	2
Sulphates, as SO_4^{2-}	400
Phosphates, as P	5
Copper as Cu	3
b. Zinc plating	
Cyanides, (as CN^-)	0.2
Ammonical Nitrogen, as N	50
Total Residual Chlorine, as Cl	1
Hexavalent Chromium, as Cr	0.1
Total Chromium, as Cr	2
Zinc, as Zn	5
Lead, as Pb	0.1
Iron, as Fe	3

c. Cadmium plating	
Cyanides, (as CN^-)	0.2
Ammonical Nitrogen, as N	50
Total Residual Chlorine, as Cl	1
Hexavalent Chromium, as Cr	0.1
Total Chromium, as Cr	2
Cadmium, as Cd	2
d. Anodizing	
Ammonical Nitrogen, as N	50
Total Residual Chlorine, as Cl	1
Aluminium	5
Fluorides, as F	15
Sulphates, as SO_4^{2-}	400
Phosphates, as P	5
e. Copper, Tin plating	
Cyanides, (as CN^-)	0.2
Copper, as Cu	3
Tin	2
f. Precious Metal plating	
Cyanides, (as CN-)	0.2
Total Residual Chlorine, as Cl	1
B. - Emission Standards*	
	Limiting concentration in mg/m^3, Unless stated
(i) Compulsory parameters	
Acid mist (HCl & H_2SO_4)**	50
(ii) Specific parameters as per process	
a. Nickel & Chromium plating	
Nickel**	5
Hexavalent Chromium**	0.5
b. Zinc, Copper or Cadmium plating	
Lead**	10
Cyanides, (Total)**	5
* 'Total Metal' shall account for combined concentration of Zn+Cu+Ni+Al+Fe+Cr+Cd+Pb+Sn+Ag in the effluent. + Emission standards shall be applicable to electroplating units having water consumption at least 5m3 /day. These units shall channelize their emission through a stack or chimney having height at least 10 meters above ground level or 3 meters above top of shed or building of the unit, whichever is more. ** The existing units shall comply with the norms of asterisked pollutants by 1st January 2013. However, new units shall comply with the norms with effect from commissioning of plant.	
C. Storm water	
Note: *i. Storm water for a unit (having plot size atleast 200 square metres) shall not be allowed to mix with scrubber water, effluent and/or floor washings.* ii. *Storm water within the battery limits of a unit shall be channelized through separate drain/pipe passing through a High Density Polyethylene (HDPE) lined pit having holding capacity of ten minutes (hourly average) of rainfall].*	

7.3.10 Cement Plants (without co-processing), Standalone Clinker Grinding Plant or Blending Plant

(Substituted vide Ministry of Environment & Forest & Climate Change notification No.G.S.R.612 (E) dated 25.8.2014)

A. Emission Standards

Parameter	Standards		
	(i) Rotary Kiln – without co-processing		
	Date of Commissioning	Location	Concentration not to exceed, in mg/Nm^3
Particulate Matter	On or after the date notification	Anywhere in the country	30 (with effect from01.01.2016)
	Before the date of notification	Critically polluted area or urban centers with population above 1.0 Lakh or within its periphery of 5.0 kilometre radius	50 (with effect from 01.01.2015)
			30 (with effect from 01.01.2016)
		Other than critically polluted area or urban centres	100 (with effect from 01.01.2015)
			30 (with effect from 01.01.2016)
**Sulphur Dioxide (SO_2)	Irrespective of date of commissioning	Anywhere in the country	100, 700 and 1000 when pyritic sulphur in the limestone is less than 0.25%, 0.25 to 0.5% and more than 0.5%, respectively.
** Nitrogen Dioxide (NO_2)	On 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 kilns using mixed stream of ILC, Separate Line Calciner (SLC) and suspension preheater technology or SLC technology alone or without calciner

** Substituted vide MoEF&CC Notification No. GSR 496(E) dated 9.5.2016.

Parameter	Standards		
	(ii) Vertical Shaft Kiln – (without co-processing)		
	Date of Commissioning	Location	Concentration not to exceed, in mg/Nm^3
Particulate Matter (PM)	On or after the date notification	Anywhere in the country	50 (with effect from 01.06.2016)
	Before the date of notification	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 (SO_2)	-	-	200 (with effect from 01.01.2016)
Nitrogen Dioxide (NO_2)	-	-	500 (with effect from 01.01.2016)

Note:

- *The height of each stack including Clinker Grinding Plant, Coal Mill, Raw Mill, Grinding, Packaging Section etc. shall be of a minimum of 30 meters or, as per the formula $H=14\ (Q)^{0.3}$, whichever is more, where "H" is the height of stack in meters and "Q" is the maximum quantity of SO_2 expected to be emitted in kg/hr through the stack at 100 per cent rated capacity of the plant and calculated as per the forms of gaseous emissions.*
- *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 & Control of Pollution) Act, 1981.*
- *All monitored values for SO_2 and NOx shall be corrected to 10% oxygen on dry basis. The norms for SO_2 and NOx shall be applicable to stacks attached to kilns.*
- *Scrubber meant for scrubbing emissions shall not be used as quencher. Plants having separate stack for gaseous emissions for the scrubbing units, the height of the stack shall be at least equal to the main stack.*

B. Service Wastewater

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:

Parameters	Concentration not to exceed mg/l (except pH and temperature)
pH	5.5-9.0
Suspended Solids	100
Oil and Grease	10
Temperature	Not more than 5°C higher than the intake water temperature

C. Storm water

- *Storm water shall not be allowed to mix with effluent, treated sewage, scrubber water and/or floor washings.*
- *Storm water 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."*

Load/Mass based emission standards for cement plants (Without co-processing)

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 1.1.2017)
Vertical shaft kiln based plants (Particulate matter from raw mill and kiln put together)	0.50 Kg/tonne of clinker (with effect from 1.1.2017)

Note: *For effluent/emissions standards in cements plants (with co-processing), refer 7th Edition of Pollution Control Acts, Rules and Notifications issued thereunder published by CPCB in April, 2021 vide No. PCLS/02/2021-2022.*

7.3.11 Slaughter House or Meat Processing units or both/Sea Food Industry

A. Slaughter House or Meat Processing units or both	
Parameter	**Standards**
Effluents	Maximum Concentration values are in mg/l except for pH
pH	6.5 to 8.5
Bio-chemical Oxygen Demand (BOD) [3 days at 27 ˋC]	30
Chemical Oxygen Demand (COD)	250
Suspended Solids	50
Oil and Grease	10

B. Sea Food Industry*	
Bio-chemical Oxygen Demand (BOD) [3 days at 27 `C]	30
Suspended Solids	50
Oil and Grease	10
*The emission standards from Boiler House of Slaughterhouses or Meat Processing Units or both and Sea Food Industry shall conform to the standards prescribed vide notification No. G.S.R. 742 (E), dated 30.08.1990 as amended from time to time under the Environment (Protection) Act, 1986 ***Note:*** *i) For Slaughter houses operating in local bodies/ municipalities, where the treated effluent is discharged into municipal sewers leading to full-fledged Sewage Treatment Plant, the BOD may be relaxed to 100mg/l.* *ii) All Slaughter houses/ meat processing units shall ensure safe and proper disposal of solid waste {Type I (Vegetable matter such as rumen, stomach and intestinal contents, dung, agriculture residues etc) and Type II (Animal matter such as inedible offal, tissues, meat trimmings, waste and condemned meat, bones etc.)} through suitable technology approved by SPCBs/PCCs.]*	

7.3.12 Dairy

Parameter	Standards	
	Concentration not exceed, mg/l	Quantum per product processed
pH	6.5-8.5	-
*BOD [3 days at 27°C]	100	-
**Suspended Solids	150	-
Oil & Grease	10	-
Waste Water Generation	-	3 m^3/Kl of milk
Note:* *BOD may be made stringent upto 30 mg/l if the recipient fresh water body is a source for drinking water supply. BOD shall be upto 350 mg/l for the chilling plant effluent for applying on land provide the land is designed and operated as a secondary treatment system with suitable monitoring facilities. The drainage water from the land after secondary treatment has to satisfy a limit of 30 mg/l of BOD and 10 mg/l of nitrate expressed as 'N'. The net addition to the groundwater quality should not be more than 3 mg/l of BOD and 3 mg/l of nitrate expressed as 'N'. This limit for applying on land is allowed subject to the availability of adequate land for discharge under the control of industry, BOD value is relaxable upto 350 mg/l, provide the wastewater is discharged into a town sewer leading to secondary treatment of the sewage.* *** Suspended solids limit is relaxable upto 450 mg/l, provide the waste water is discharged into town sewer leading to secondary treatment of the sewage.*		

7.3.13 Pharmaceutical (Manufacturing & Formulation) Industry

Parameter	Standards
Effluent Standards	Limiting concentration in mg/l, except for pH
Compulsory Parameters	
pH	6.0-8.5
Oil & Grease	10
BOD (3 days 27oC)	100*
Total Suspended Solids	100
Bioassay Test	90% survival of fish after first 96 hours in 100% effluent.**
Additional Parameters	
Mercury	0.01
Arsenic	0.20
Chromium (Cr6+)	0.10
Lead	0.10
Cyanide	0.10

Phenolics (C_6H_5OH)	1.0
Sulphides (as S)	2.0
Phosphate (as P)	5.0
**The BOD and COD limits shall be 30 mg/l and 250 mg/l, respectively, if treated effluent is discharged directly into a fresh water body i.e. stream, canal, river or lake.* ***The Bioassay Test shall be conducted as per IS:6582-1971* *(i) Parameters listed as 'Additional Parameters' shall be prescribed depending upon the process and product.* *(ii) Limits for total dissolved solids in effluent shall be prescribed by the concerned pollution control board/pollution control committee depending upon the recipient water body.*	

Emissions from Incinerator

	Limiting concentration in mg/Nm^3, unless stated	Sampling duration (in minutes) unless stated
Particulate Matter	50	30 or more (for sampling about 300 litre emission)
HCl	50	30
SO_2	200	30
CO	100	Daily average
Total Organic Carbon	20	30

Total Organic Carbon

Total Dioxins and Furans*	Existing Incinerator	0.2 ngTEQ/ Nm^3	8 hours
	New Incinerator	0.1 ngTEQ/ Nm^3	8 hours
Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V + Cd + Th + Hg and their compounds		1.5	2 hours

The existing plant shall comply with norms for dioxins and furans – as 0.1 ng/TEQ/Nm^3 within 5 years from the date of notification.

Notes:

- *All monitored values shall be corrected to 11% oxygen and dry basis.*
- *The CO_2 concentration in tail gas shall not be less than 7%.*
- *In case, halogenated organic waste is less than 1% by weight in input waste, all the facilities in twin chamber incinerator shall be designed so as to achieve a minimum temperature of 850+25oC in primary chamber and 950oC in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.*

  Or

  All the facilities in single chamber incinerator for gaseous hazardous waste shall be designed so as to achieve a minimum temperature of 950°C in the combustion chamber with a gas residence time not less than 2 (two seconds)
- *In case, halogenated organic waste is more than 1% by weight in input waste, waste shall be incinerator only in twin chamber incinerators and all the facilities shall be designed to achieve a minimum temperature of 850+25oC in primary chamber and 1100oC in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 (two) seconds.*
- *Scrubber meant for scrubbing emissions shall not be used as quencher.*
- *Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, as to achieve Total Organic Carbon (TOC) content in the incineration ash and residue less than 3%, and their loss on ignition is less than 5% of the dry weight. In case of non-conformity, ash and /or residue shall be re-incinerated.*

  The incinerator shall have a chimney of at least thirty-meter height.

A. Effluent from Incinerator

- Effluent from scrubber(s) and floor washing shall flow through closed conduit/pipe network.
- Storm water shall not be allowed to mix with scrubber water and/or floor washing.
- Storm water shall be channelized through separate drains passing through a HDPE lined pit having holding capacity of 10 minutes (hourly average) of rainfall.
- The built up in Total Dissolved Solids (TDS) in wastewater of floor washings shall not exceed 1000 mg/l over and above the TDS of raw water used.
- Effluent shall not be stored in holding tank(s) in such manner which may cause pollution to groundwater.
- Effluent (scrubber water and floor washings) shall be discharged into receiving water conforming to the norms prescribed under Schedule VI: General standards for Discharge of Environment Pollution (Part A : Effluents) notified under the Environmental (Protection) Act, 1986.]

7.3.14 Food and Fruit processing industry

Sr. No.	Category	Parameter	Standards	
		Effluents	Concentration not to exceed mg/l except pH	Quantum gm/ MT of product
A.	**Soft Drinks**			
(a)	Fruit based/Synthetic (more than 0.4 MT/day) bottles and tetra pack.	pH	6.5-8.5	-
		Suspended solids	100	-
		Oil and Grease	10	
		BOD [3 days at 27°C]	30	
(b)	Synthetic (less than 0.4 MT/day)		Disposal via septic tank	-
B.	**Fruit & Vegetables**			
(a)	Above 0.4 MT/day	pH	6.5-8.5	
		Suspended Solids	50	
		Oil & Grease	10	
		BOD [3 days at 27°C]	30	
(b)	0.1-0.4 MT/day (10 MT/year)		Disposal via septic tank	-
C.	**Bakery**			
(a)	Bread and Bread & Biscuits			
	(i) Continuous process (more than 20 T/day)	pH	6.5-8.5	
		BOD [3 days at 27°C]	200	25
	(ii) Non-Continuous process (less than 20 T/day)	-	Disposal via septic tank	-
(b)	Biscuit Production			
	(i) 10 T/day & above	pH	6.5-8.5	-
		BOD [3 days at 27°C]	300	35
D.	**Confectionaries**			
(a)	4 T/day and above	pH	6.5-8.5	
		Suspended Solids	50	
		Oil & Grease	10	

		BOD [3 days at 27°C]	30	
(b)	Below 4 T/day	-	Disposal via septic tank	

To ascertain the category of 'unit fails' the average of daily production and waste water discharge for the preceding 30 operating days from the date of sampling shall be considered.
**The emission from the boiler house shall conform to the standards already prescribed under E (P) Act, 1986 vide Notification No. G.S.R. 742(E) dated 30.8.90*

7.3.15 Edible Oil & Vanaspati Industry

Effluents

Temperature ambient temperature	Not more than 5°C above of the recipient water body
pH	6.5-8.5
Suspended Solids	150 mg/l
Oil & Grease	20 mg/l.
BOD (3 days at 27°C)	100 mg/l
COD	200 mg/l
Wastewater Discharge	
(i) Solvent Extraction (ii) Refinery/Vanaspati (iii) Integrated unit of extraction & refinery/ vanaspati (iv) Barometric cooling water/Domestic effluent-Odoriser water	(i) 2.0 cum/tonne of product (oil) (ii) 2.0 cum/tonne of product (iii) 4.0 cum/tonner of refined Vanaspati product (iv) 15.0 cum/tonne of refined oil/ vanaspati.
(i) The above standards shall be applicable to waste water from processes and cooling. (ii) BOD shall be made stringent upto 30 mg/l if the recipient fresh water body in source of drinking water supply. (iii) The standards for boiler emissions shall be applicable as prescribed under Schedule I of these rules.	

7.3.16 Fertilizer Units

Parameter	Standards	
A - Effluents Standards		
(i) Straight Nitrogenous Fertilizer Plant/Ammonia (Urea Plant), Calcium Ammonium Nitrate and Ammonium Nitrate Fertilizers		
	Limiting concentration not to exceed milligram/litre (mg/l), except for pH	
pH	6.5-8.5	
Suspended Solids	100	
Oil and Grease	10	
Ammonical Nitrogen as N	50	
Total Kjeldahl Nitrogen (TKN) as N	75	
Free Ammonical Nitrogen as N	2.0	
CN concentration	0.1	
Nitrate Nitrogen as N	Urea Plant	10
	Other than Urea Plant	20

(ii) Straight Phosphatic Fertilizer Plant		
pH	6.5 to 8.5	
Suspended Solids	100	
Oil and Grease	10	
Fluoride	10	
Dissolved Phosphate as P	5.0	
(iii) Complex Fertilizer Plant and / or NP/NPK (N-Nitrogen, P-Phosphorus and K-Potassium)		
pH	6.5 to 8.5	
Suspended Solids	100	
Oil and Grease	10	
Ammonical Nitrogen as N	50	
Total Kjeldahl Nitrogen (TKN) as N	75	
Free Ammonical Nitrogen as N	4.0	
Nitrate Nitrogen as N	20	
Dissolved Phosphate as P	5.0	
Fluoride as F^-	10	
Note: *(i) Chromium salt shall not be used in cooling tower as algaecide.* *(ii) The effluent shall be analyzed for Vanadium and Arsenic once in a year and analysis report shall be submitted to the concerned State Pollution Control Board / Pollution Control Committee.*		
B - Emission Standards		
(i) Straight Nitrogenous		
(a) Ammonia Plant- Reformer		
Oxides of Nitrogen (as NO_2)	400 mg/Nm^3	
(b) Urea Plant – Prilling Tower		
Particulate matter	Pre 1982 units	150 mg/Nm^3
	Post 1982 units	50 mg/Nm^3 **
(ii) Ammonium Nitrate/ Calcium Ammonium Nitrate/NPK plant		
Particulate Matter	Existing Plant	150 mg/Nm^3
	New Plant	100 mg/ Nm^3
Ammonium as NH_3	Existing Plant	300 mg/Nm^3
	New Plant	150 mg/Nm^3
Total Fluoride as F-	<10 mg/Nm^3 (only for NPK plant)	
(iii) Phosphatic Fertilizer Plants – Phosphoric Acid Plants/Rockgrinding and Acidulation SSP Plants		
Particulate Matter	125 mg/Nm^3	
Total Fluoride as F	20 mg/Nm^3	
(iv) Nitric Acid Plant		
Oxides of Nitrogen (as NO_2)	400 mg/Nm^3	

*Values to be reported at 3% O_2

** Total emission of 0.5 kg/ tonne of product.

Note:

i. *Fluoride norms shall be applicable only for NPK plant.*

ii. *Plant commissioned on or after the date of notification, shall be treated as "New Plant".*

iii. *The height of the stack emitting Sulphur Dioxide, Oxides of Nitrogen or Oxides of Phosphorus or acid mist shall be 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 SO_2, NO_x or P_2O_5 equivalent expected to be emitted in kg/hr through the stack at 100 percent rated capacity of the tail gas plant(s) and calculated as per the norms of gaseous emission.*

iv. *Tail Gas plants having more than one stream or unit of Sulphuric Acid, Nitric Acid or Phosphoric Acid at one location, the combined capacity of all the streams or units for a particular acid shall be taken into consideration for determining the stack height and applicability of emission standards individually.*

v. *Tail gas plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be equal to main stackor 30 metres, whichever is higher.]*

Load/Mass based standards

	Parameter	Standard
Plants commissioned prior to 01.01.1982	Particulate Matter (PM)	2 kg/tonne of product
Plants commissioned after 01.01.1982	Particulate Matter (PM)	0.5 kg/tonne of product

7.3.17 Copper, Lead or Zinc Smelting Plant

Parameter	**Standards**		
Emission standards			
Particulate Matter (mg/Nm^3)	a. Concentrator	Existing Unit	New Unit
		100	75
	b. Sulphur Dioxide Recovery Unit Limiting Concentration in mg/Nm3 Plant capacity for 100% convertible concentration of Sulphuric Acid (tonne/day)	Existing Unit	New Unit
Sulphur Dioxide (SO_2)	Upto 300	1370	1250
	Above 300	1250	950
Acid Mist/Sulphur Trioxide	Upto 300	90	70
	Above 300	70	50

Note:

1. *Capacity in above stipulation means the installed capacity of Sulphuric Acid plant.*
2. *Scrubbing units shall have on-line pH meters with auto recording facility.*
3. *Plant commissioned on or after the date of notification, shall be termed as'New Unit'*
4. *The height of the Stack emitting Sulphur Dioxide or acid mist shall be a minimum of 30 meters or as per the formula H=14 $(Q)^{0.3}$ (whichever is more), where 'H' is the height of stack in meters; and 'Q' is the maximum quantity of SO_2 in kg/hr, expected to be emitted through the stack at 110 percent rated capacity of the Tail Gas plant(s) and calculated as per the norms of gaseous emission.*
5. *Tail Gas plants having more than one stream or unit of Sulphuric Acid at one location, the combined capacity of all the streams or units shall be taken into consideration for determining the stack height and applicabilityof emission standards*
6. *Tail Gas plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be equal to main stack or 30 metres, whichever is higher].*

Load/Mass Based Standards

Sulphur Dioxide (SO_2)	**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

7.3.18 Chlor Alkali (Caustic Soda)

Chlor Alkali (Caustic Soda)	Emissions	Concentration in mg/m^3(Normal)
Mercury Cell	Mercury (from hydrogen gas holder stack)	0.2
All processes	Chlorine (from hypo tower)	15.0
All processes	Hydro chloric acid vapours andmist (from hydro chloric acid plant)	35.0

7.3.19 Battery Manufacturing Industry

(i) Lead Acid battery manufacturing Industries: emission Standards

Source	Pollutant	Concentration based Standards (mg/Nm^3)
Grid casting	Lead	10
	Particulate matter	25
Oxide manufacturing	Lead	10
	Particulate matter	25
Paste Mixing	Lead	10
	Particulate matter	25
Assembling	Lead	10
	Particulate matter	25
PVC Section	Particulate matter	150

- 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 equipment viz. Bag filter/ventury scrubber is also recommended.
- The minimum stack height shall be 30 m.

Liquid Effluent Discharge Standards Pollutants	Concentration based standards
pH	6.5 to 8.5
Suspended Solids	50 mg/l
Lead	0.1 mg/l

(ii) 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

7.3.20 Hotel/ Motel/ Restaurant/ Lodge/ INN/ Guest House/ Banquet Hall/ Marriage Palace[95]

Hotel or a Banquet Hall with minimum floor area of 100 m^2 or a Restaurant with minimum seating capacity of 36		
A. EFFLUENT STANDARDS		
	Limiting concentration in mg/l except the pH	
	Inland Surface Water	**Onto land for Irrigation**
pH	5.5-9.0	5.5-9.0
BOD (3 days at 27°C)	30	100
Total Suspended Solids	50	100

[95] *PPCB Office Order No. SEE(HQ-1)/F.244/2011/271 dated 10.10.2011*

Oil & Grease	10	10
Phosphate as P	1.0	-

Note:

If, the effluent is discharged into a municipal sewer leading to a Sewage Treatment Plant, the hotel or restaurant or banquet hall, as the case may be, shall provide a proper Oil & Grease Trap for effluent arising from its kitchen and laundry and shall have to comply with the 'General Standards for Discharge of Environmental Pollutants Part-A 'Effluents' notified under Schedule

B. SPECIFICATIONS FOR D.G. SETS INSTALLED

The project proponent shall provide an acoustic enclosure (canopy) with D.G. set so as to contain the sound pressure level within the standards laid down by the MoEF&CC vide notification NO.371(E) dated 17.5.2002 as amended from time to time.

C. SOLID WASTE MANAGEMENT

(i) In case the hotel/ motel/ restaurant/ lodge/ inn/ guest house/ banquet hall/ marriage palace is located within M.C. limits, the project proponent shall obtain permission from the concerned Municipal Corporation/Municipal Council/Nagar Panchayat/Notified Area Committee for the management and handling of the solid waste.

(ii) In case the hotel/ motel/ restaurant/ lodge/ inn/ guest house/ banquet hall/ marriage palace is located outside the municipal limit, the project proponent shall provide adequacy facility for the management and handling of the solid waste in an environmentally sound manner within/adjoining the premises of the establishment

Note:

In case of any of the above provision which is/will be rendered contrary to any notification/law/rules/guidelines issued by the Ministry of Environment & Forest & Climate Change, Govt. of India, the latter shall prevail.

7.3.21 Automobile Service Station, Bus Depot or Workshop

Parameters	Standards
Effluent Standard (Concentration not to exceed, in mg/l except for pH	
Inland Surface water/land for irrigation/Public Sewer	
pH	6.5-8.5
Total Suspended Solids	50
Chemical Oxygen Demand	150
Oil and Grease	10

Note:

(i) For Service Stations, Bus Depots and Workshops with metal pre-treatment facilities, limit of 5 mg/l of dissolved phosphates (as P) and 5 mg/l of zinc shall also apply.

(ii) Solid Wastes/ Hazardous Waste, if any, shall be disposed off as per the Solid Waste Management Rules 2016, and the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

7.3.22 Sewage Treatment Plants (STPs)[96]

Parameters	Prescribed standards at the outlet of STP
pH	6.5-9
Bio Chemical Oxygen Demand (BOD)	30
Total Suspended Solids (TSS)	<100
Faecal Coliform (FC) (Most Probable Number per 100 millilitre, MPN/100 ml	<1000
All values in mg/l except for pH and Faecal Coliform	

[96] *PPCB Office Order No. SEE(HQ-2)/2019/F.No. Standards/188 dated 28.03.2019*

Note:-

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

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

(iii) 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 the date of MoEF&CC notification dated 13.10.2017.

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

7.3.23 Common Effluent Treatment Plants (CETP)[97]

Industry	Parameter	Standards		
A. Inlet Quality Standards	For each Common Effluent Treatment Plant (CETP), the State Board will prescribe Inlet Quality Standards for General Parameters, Ammonical Nitrogen and Heavy metals as per design of the Common Effluent Treatment Plant (CETP) and local needs & conditions.			
B. Treated Effluent Quality Standards		**Max. permissible values** (in mg/l except for pH and Temperature)		
		Into inland surface water	On land for irrigation	Into sea
	General Parameters			
	pH	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0
	Biological Oxygen Demand (BOD 3 days, 27°C)	30	100	100
	Chemical Oxygen Demand (COD)	250	250	250
	Total Suspended Solids (TSS)	100	100	100
	Fixed Dissolved Solids (FDS)	2100	2100	NS
	Specific Parameters			
	Temperature, °C	Shall not exceed more than 5°C above ambient water temperature	Shall not exceed more than 5oC above ambient water temperature	Shall not exceed more than 5oC above ambient water temperature
	Oil & Grease	10	10	10
	Ammonical - Nitrogen	50	NS*	50
	Total Kjeldahl Nitrogen (TKN)	50	NS*	50
	Nitrate - Nitrogen	10	NS*	50
	Phosphates, as P	5	NS*	NS*
	Chlorides	1000	1000	NS*
	Sulphates, as SO_4	1000	1000	NS*
	Fluoride	2	2	15
	Sulphides, as S	2	2	5
	Phenolic compounds (as C6 H5 OH)	1	1	5
	Total Res. Chlorine	1	1	1

[97] *MoEF&CC notification no. S.O. 4 (E) dated 01.01.2016*

Zinc	5	15	15
Iron	3	3	3
Copper	3	3	3
Trivalent Chromium	2	2	2
Manganese	2	NS*	2
Nickel	3	NS*	3
Arsenic	0.2	NS*	0.2
Cyanide, as CN	0.2	NS*	0.2
Vanadium	0.2	NS*	0.2
Lead	0.1	NS*	0.1
Hexavalent Chromium	0.1	NS*	0.1
Selenium	0.05	NS*	0.05
Cadmium	0.05	NS*	0.05
Mercury	0.01	NS*	0.01
Bio-assay test	As per industry specific standards	As per industry specific standards	As per industry specific standards

*NS-Not specified

Notes:

1. **Discharge of treated effluent into sea shall be through proper marine outfall. The existing shore discharges shall be converted to marine outfalls. In cases where the marine outfall provides a minimum initial dilution of 150 times at the point of discharge and0 a minimum dilution of 1500 times at a point 100 m away from discharge point, then, the State Board may relax the Chemical Oxygen Demand (COD) limit provided that the maximum permissible value for Chemical Oxygen Demand (COD) in treated effluent shall be 50 milligram/litre*
2. **Maximum permissible Fixed Dissolved Solids (FDS) contribution by constituent units of a Common Effluent Treatment Plant (CETP) shall be 1000 milligram/litre. In cases where Fixed Dissolved Solids (FDS) concentration in raw water used by the constituent units is already high (i.e. it is more than 1100 milligram/litre) then the maximum permissible value for Fixed Dissolved Solids (FDS) in treated effluent shall be accordingly modified by the State Board.*
3. *In case of discharge of treated effluent on land for irrigation, the impact on soil and ground water quality shall be monitored twice a year (pre- and post-monsoon) by Common Effluent Treatment Plant (CETP) management. For combined discharge of treated effluent and sewage on land for irrigation, the mixing ratio with sewage shall be prescribed by State Board.*
4. Specific parameters for some important sectors, selected from sector-specific standards

Sector	**Specific Parameters**
Textile	Bio-assay test, Total Chromium, Sulphide, Phenolic compounds
Electroplating Industries	Oil & Grease, Ammonia-Nitrogen, Nickel, Hexavalent Chromium, Total Chromium, Copper, Zinc, Lead, Iron, Cadmium, Cyanide, Fluorides, Sulphides, Phosphates, Sulphates,
Tanneries	Sulphides, Total Chromium, Oil & Grease, Chlorides
Dye & Dye Intermediate	Oil & Grease, Phenolic compounds, Cadmium, Copper, Manganese, Lead, Mercury, Nickel, Zinc, Hexavalent Chromium, Total Chromium, Bio-assay test, Chlorides, Sulphides.

	Organic chemicals manufacturing industry	Oil & Grease, Bio-assay test, Nitrates, Arsenic, Hexavalent Chromium, Total Chromium, Lead, Cyanide, Zinc, Mercury, Copper, Nickel, Phenolic compounds, Sulphides.
	Pharmaceutical industry	Oil & Grease, Bio-assay test, Mercury, Arsenic, Hexavalent Chromium, Lead, Cyanide, Phenolic compounds, Sulphides, Phosphates.

Note: *All efforts should be made to remove colour and unpleasant odour as far as possible.*

7.3.24 Boilers (Small)

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/multi cyclone 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) These limits shall supersede the earlier limits notified under Schedule I at serial number 34 of Environmental (Protection) Act, 1986 vide notification GSR 742(E) dated 30th August, 1990.

(iii) 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 – $H= 14\ Q^{0.3}$

Where H – Total Stack Height in meters from the ground level

Q=SO_2 emission rate in kg/hr.

In no case, the stack height shall be less than 11 meters.

Where providing all stacks are not feasible using above formula, the limit of 400 mg/ Nm^3 for SO_2 emissions shall be met by providing necessary control equipment with a minimum stack height of 11 meters.

7.3.25 Boiler using Agriculture Waste as fuel

Parameter	Standards
Step Grate Particulate matter	250 mg/Nm^3
Horse Shoe/Pulsating Particulate matter	500 mg/Nm^3 (12% of CO_2)
Spreader stroker Particulate matter	500 mg/Nm^3 (12% of CO_2)

7.3.26 Guidelines for Pollution Control in Ginning Mills

Measures for Noise Control

(i) Creating separate soundproof enclosures for the fans within the ginning area.

(ii) Keeping the fans outside the ginning room in separate enclosures.

(iii) Roller gins may be covered by sound proof enclosures and use of pneumatic feeding of raw cotton while suction of ginned cotton is introduced to considerably reduce the dust pollution level.

Measures for Dust Control

(i) The fugitive emission can be largely controlled by employing mechanical or pneumatic handling of raw material and ginned material through covered ducts and providing overhead hoods connected to exhaust through ducts and filters; use of lifting platforms for bale formers.

(ii) The overhead hoods with exhaust arrangement can be provided at:

a) The saw-ginning machine where manual handling to maintain proper feeding in the machine.

b) At the feeding point of the roller ginning machine when manual feeding is carried out.

c) At the collection points of ginned cotton from saw ginning condenser.

7.3.27 Refractory Industry

Parameter		Standards
A. Emission Standards		
(i) Down Draft Kiln (Fuel: Coal)		
	Category *	**Limiting concentration(mg/Nm^3)**
Particulate matter	small/medium /large	350
Stack height		Minimum (metres)
	small medium Large	15 18 21
(ii) Other than Down Draft Kiln (Fuel: Coal)		
	Category *	**Limiting concentration(mg/Nm^3)**
Particulate matter	small medium large	300 200 150
Stack height		Minimum (metre)
	Small medium large	15 18 21
(iii) Box, Tunnel, Down Draft Kiln, etc. (Fuel: Natural Gas/ Producer Gas/LPG or a combination of Fuels/Furnace Oil asSecondary Fuel)		
	Category *	**Limiting concentration(mg/Nm^3)**
Particulate matter	Small medium/large	200 150
Stack height		Minimum (metre)
	Small medium large	12 15 18
	Category*	**Production (TPA)**
	small kiln	<15,000
	medium kiln	15,001-50,000
	large kiln	above 50,000

(iv) Rotary Kiln (Fuel: Furnace Oil)		
	Category *	**limiting concentration(mg/Nm^3)**
Particulate matter	Small medium/large	200 150
Stack height		Minimum (metre)
	small medium large	35 45 60
	Category*	**Production (TPD)**
	Small rotary kiln	<50
	medium rotary kiln	51-100
	large rotary kiln	above 100

Notes:

(i) All values of particulate matter are to be corrected at 6 percent Carbon Dioxide.

(ii) Fugitive emission shall not exceed 10 mg/m3 from any process or plant.

(iii) Each stack shall be at least 2 meter above the top most point of the building, shed or plant in the industry excluding bucket elevator, mill house and vibrating screen.

(iv) If more than one kiln is connected to single stack, sum of the production capacity of all the kilns would be considered for determining the capacity of the kiln and accordingly depending upon the total capacity, emission standard and stack height would be implemented.

(v) *Monitoring of stack shall be carried out at the time of charging and after the completion of charging and average of these two results shall be considered as emission level.*

	B. Effluent Standards		
	Limiting value for concentration (mg/l, except for pH)		
	Inland Surface Water	Public Sewer	Land for Irrigation
pH	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
Oil and Grease	10	20	10
BOD (3 days, 27 °C)	30	250	100
COD	250	-	-
Suspended Solids	100	600	200
Phenols	1.0	5.0	-
Cyanide as CN	0.2	2.0	0.2
Cr (Hexavalent)	0.1	2.0	1.0
Cr (Total)	2.0	2.0	2.0]

7.3.28 SO_2 and NO_X standards for Industrial Boilers (fuel wise)

	SO_2	NO_X
Agro Based Fuel*	-	-
Natural Gas*	-	-
Other Fuels**	600 mg/ Nm^3 at 6% dry O2, for solid fuel and 3% dry O2 for liquid fuel	300 mg/ Nm^3 at 6% dry O2, for solid fuel and 3% dry O2 for liquid fuel

The boiler used in the industries, namely (1) sugar (2) cotton textiles (3) composite woollen mills (4) synthetic rubber (5) pulp and paper (6) distilleries (7) leather industries (8) calcium carbide (9) carbon black (10) natural rubber (11) asbestos (12) caustic soda (13) small boilers (14) aluminium plants (15) tannery (16) inorganic chemical and other such industries using boilers, shall adhere to emission norms in the said notification.

* It is required to meet stack height criteria notified vide G.S.R. 176(E), dated the 2nd April, 1996.
** The emissions from such industries need to be monitored and, all such industries would be required to install online monitoring system as per online monitoring mechanism put in place by Central Pollution Control Board from time to time.

Note:

- *For captive power plants using Solid fuels such as coal, lignite, etc. the emission limit notified for Thermal Power Plants vide notification no S.O. 3305 (E), dated 7th December, 2015 shall be applicable.*
- *The standards set herein will not apply to any ban or restriction put in place by Competent Authority and for non-attainment cities, State Pollution Control Board or Pollution Control Committee may regulate or ban use of Pet Coke and Furnace Oil on the basis of available data].*

7.3.29 Re-Heating (Reverberatory Furnaces)

Capacity:	Emissions Conc. in mg/m^3		
	Particulate matter	SO_2	NOx
All sizes	150 (Sensitive area) 450 (Other area)	300*	1000*

* Inserted vide MoEF&CC notification no. G.S.R. 263 (E) dated 22.03.2018

Note: *To meet stack height criteria prescribed by SPCB.*

7.3.30 Foundry Industries

(a) Cupola Furnace

Furnace Capacity (Melting Rate)	Emissions Conc. in mg/m^3 (Normal)		
	Particulate matter	SO_2	NOx
Less than 3 mt/hr.	450	300*	400*
3 mt/hr. and above	150	300*	400*

*** Inserted vide MoEF&CC notification no. G.S.R. 263 (E) dated 22.03.2018**

Note: *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.*

(b) Arc Furnaces: Capacity : All sizes : Particulate matter Conc. in mg/ Nm^3 - 150

(c) Induction Furnaces: Capacity : All sizes : Particulate matter Conc. in mg/ Nm^3 - 150

Note: *In respect of Arc Furnaces and Induction Furnaces provision has to be made for collecting the fumes before discharging the emissions through the stack.*

Guidelines for Operation of the Induction Furnaces

To reduce the pollution at source from the induction furnaces and to improve the air quality in the State of Punjab, the Board vide its No: GPC/Guidelines/RS/SP/F-/2018/290 Dated: 15.6.2018 has issued following action points to be complied by all the induction furnace units of Punjab:

- The industry shall get its Air Pollution Control Device (APCD) along with its collection system evaluated from Punjab State Council for Science & Technology, Chandigarh regarding efficacy, along with the side hood design within 15 days.
- After evaluation, APCD and its collection system including hood shall be upgraded /replaced by the industry as per the advice of Punjab State Council for Science & Technology.
- The industry shall appoint dedicated staff for operation/maintenance of APCD/ collection system, within one month.

- The industry shall implement the Standard Operating Procedures (SOPs) prepared by Punjab State Council for Science & Technology for APCD in toto so as to achieve the prescribed standards on a regular basis.

Standard Operating Practices (SOPs) for efficient operation of Air Pollution Control System

Charging & Melting

Scrap is the major raw material in induction furnace units in Punjab. It has been observed that majority of induction furnace unit feed unprocessed scrap or non-shredded scrap which is fed with the charge mix mainly by magnet or in few cases through manual charging mechanism. Further it has also been observed that the induction furnace units were overfilling the furnace above coil height. Due to this charging practice, the bulk density of the scrap charge is low which results is air pockets (voids) between the scrap pieces that subsequently leads to low power density, ultimately increasing the heat/cycle time, low furnace efficiency and high pollution levels.

The size and shape of scrap plays an important role in running the electric induction furnace at full power/load, which is the best operating practice. The more the electric induction furnace runs at full power, lower will be total energy losses leading to lower specific energy consumption. The best practice for better and efficient operation of melting, charge should:

- Be clean (free from oil, grease, rust, paint etc.)
- Be as dense as possible for faster melt rate, lesser energy consumption and less pollution levels
- The furnace should be filled up to the desired coil height for effective & faster heat transfer leading to reduction in specific energy consumption (2-3%) with less pollution levels
- Be segregated for harmful ingredients like explosives
- The length of the scrap being charged into the furnace should be less than the size of the crucible.
- Have less sharp pointed edges, particularly in case of heavy and bulky scrap.

Air Pollution Control System

In Pulse jet filtration technology, the dust is collected on outside of the bags and has airflow from outside to inside the bags. Reconditioning of bags will be accomplished by the pulse of high-pressure air (6-7 kg/cm^2), which rapidly pressurizes and inflates the bag causing it to snap away from the spotting cage, breaking the dust cake and dislodge the accumulated dust from the fabric. The dust will be taken out of the bottom hopper by operating the rotary air lock valve proposed at the bottom.

Bag Filter Maintenance

Differential Pressure

During operation of air pollution control system, differential pressure across the bag house is a major concern. A sudden drop in the pressure may indicate a leak in the system. A rise in pressure may indicate that the filter bags have become blinded or caked with particulate. The differential pressure across the filter bags needs to be monitored with the help of U-Tube manometer. By operating the bag house at a stable and optimum differential pressure, the over and under cleaning of the filter bag can be avoided. The benefits accrued are:

- Check pressure drop after hood and before spark arrestor regularly.
- Maintain optimum pressure drop 3-6” wc across the bag house.
- The pressure drop in excess of 6” indicates choking of the bag filter and less of 3” indicates puncture of bags.
- The filter bags shall be inspected as per preventive maintenance schedule indicated at Annexure-A.

Temperature

The temperature of the flue gas should be monitored by temperature gauge and maintained in the range of 100-120 °C. The temperature in excess to 140 °C would lead to burning of the bags.

Compressor

An adequate volume of clean, dry and oil free compressed air of sufficient pressure (6-7 kg/cm2) must be applied to ensure efficient cleaning of bags. Therefore, oil & moisture filter of air compressor should be checked at regular intervals.

- Check Hour meter reading of compressor on daily basis
- Check moisture trap drain of compressor on daily basis
- Check compressed air pressure on weekly basis
- Check / replace oil filter of compressor as recommended by the manufacturer
- Check / replace air filter of compressor as recommended by the manufacturer.

Fan Maintenance

Fan selection is based on the design volume and pressure required to ventilate the process. Check the mechanical condition of the fan as per preventive maintenance schedule indicated at place below.

Preventive maintenance schedule for ID fan of Induction furnace

	Date							
	Time							
	Operator							
Daily								
1.	Check visible suction at hood							
2.	Check visible stack emissions							
3.	Record differential pressure across filter bags (inches)							
4.	Record differential pressure across ID fan (inches)							
5.	Record differential pressure at hood (inches)							
6.	Check operation of solenoid valves							
7.	Hour meeting reading of compressor							
8.	Check air filter clog indicator of compressor							
9.	Check moisture trap drain of compressor							
10.	Dust collection from spark arrester & bag filter (kg)							
Weekly								
1.	Record compressed air pressure (kg/cm^2)							
2.	Clean compressed air filter							
Monthly								
1.	Check bag house for leaks							
2.	Check flanges at duct joints/bends for leaks							
3.	Check underground trench for cleaning							
Semi-Annually								
1.	Check/replace oil filter of compressor after recommended running hours (2000 hrs)							
2.	Check/replace air filter of compressor after recommended running hours (2000 hrs)							

3.	Check fan blades for dust build up							
4.	Check condition of bags							
5.	Check fan, V-belts etc.							
6.	Check electronic sequence controller for pulse duration							
Annually								
1.	Check duct for dust build up							
2.	Check/replace separator element of compressor after recommended running hours (4000 hrs)							
3.	Check/replace oil – air lube XD after recommended running hours (4000 hrs)							

- The induction motor with the ID fan should be installed as recommended by the fan manufacturer.
- Keep the fan clean - Even a thin layer of dirt on air flow surfaces can reduce the performance of the fan.
- Check pressure drop across (inlet as well as at outlet) ID fan regularly as per preventive maintenance schedule.
- Fan speed - Be sure to check the fan manufacturer's recommendations for the maximum safe RPM.
- Fan Vibration – The noise from the fan is the indicator for the same.
- Fan Motor - Motor shall be checked for winding temperature and current.

Collection & Disposal of Dust

- The rotary air lock should be provided in the hopper of spark arrestor, cyclone(s) and bag house for collection of dust.
- Dust should be removed periodically as per preventive maintenance schedule to prevent re-entrainment of dust

It has been observed that most of the industries do not have proper arrangement for the storage of dust. As a result, part of the dust flies back into the environment because of the cross currents. The dust is being filled in HDPE bags and should be disposed off as per the recommendation of Punjab Pollution Control Board.

Training to The Operating Staff

Dedicated staff should be employed for the effective operation and maintenance of the air pollution control system. The operators involved in the operation and maintenance of the pollution control system shall be trained to perform thorough trouble shooting inspections.

General

- Use of Man cooler should be stopped.
- Sheds should be covered to the maximum extent possible to avoid cross winds.
- The rotation of hood should not be with the magnet and should be motorized to maintain its size and shape.
- Hood should be placed near the furnace as recommended in the report for adequate suction.
- The ducts especially at the bends, housing of bag filter, inlet & outlet connections of fan should be checked regularly (once in a month) to prevent air leakages.
- Solenoid valves should be checked at least once in a week for their operation.

Interlocking of Air Pollution Control Devices with Manufacturing Process

The induction furnace unit (s) shall interlock its Air Pollution Control Device (s) (APCDs) with its manufacturing process to ensure the regular operation of APCDs.

8. Hazardous Wastes Management

Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016[98] : Rules framed for handling of hazardous and other waste in an environmentally sound manner.

8.1 Applicability (Rule-2)

Apply to the management of hazardous and other wastes as specified in the Schedules appended to these rules but shall not apply to:

- ✓ Waste-water and exhaust gases as covered under the provisions of the Water Act, 1974 and the Air Act, 1981 and the rules made thereunder and as amended;
- ✓ Wastes arising out of the operation from ships beyond five kilometres of the relevant baseline as covered under the provisions of the Merchant Shipping Act, 1958 and the rules made thereunder and as amended;
- ✓ Radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 and the rules made thereunder and as amended from time to time;
- ✓ Bio-medical wastes covered under the BMW Rules made under the Act and as amended
- ✓ Wastes covered under the SWM Rules, made under the Act as amended.

8.2 Important Definitions (Rule-3)

Actual user: An occupier who procures and processes hazardous and other waste for reuse, recycling, recovery, pre-processing, utilization including co-processing;

Authorisation: Permission for generation, handling, collection, reception, treatment, transport, storage, reuse, recycling, recovery, pre-processing, utilization including co-processing and disposal of hazardous wastes granted under sub-rule (2) of rule 6;

Captive treatment, storage and disposal facility: A facility developed within the premises of an occupier for treatment, storage and disposal of wastes generated during manufacture, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of hazardous and other wastes;

Common treatment, storage and disposal facility: A common facility identified and established individually or jointly or severally by the State Government, occupier, operator of a facility or any association of occupiers that shall be used as common facility by multiple occupiers or actual users for treatment, storage and disposal of the hazardous and other wastes;

Co-processing: Use of waste materials in manufacturing processes for the purpose of energy or resource recovery or both and resultant reduction in the use of conventional fuels or raw materials or both through substitution;

Disposal: Any operation which does not lead to reuse, recycling, recovery, utilization including co-processing and includes physio-chemical treatment, biological treatment, incineration and disposal in secured landfill.

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[98] *MoEF&CC notification no. G.S.R No. 395 (E) dated 04.04.2016*
1st amendment - notification no. G.S.R. 670 (E) dated 06.07.2016
2nd amendment - notification no. G.S.R. 177(E) dated 28.02.2017
3rd amendment - notification no. G.S.R. 544(E) dated 11.06.2018
4th amendment - notification no. G.S.R. 178(E) dated 01.03.2019

Hazardous waste: Any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances, and shall include:

- ✓ waste specified under column (3) of Schedule I **(Annexure-8-A)**;
- ✓ waste having equal to or more than the concentration limits specified for the constituents in class A and class B of Schedule II or any of the characteristics as specified in class C of Schedule II.
- ✓ wastes specified in Part A of Schedule III in respect of import or export of such wastes or the wastes not specified in Part A but exhibit hazardous characteristics specified in Part C of Schedule III;

Occupier: In relation to any factory or premises, means a person who has, control over the affairs of the factory or the premises and includes in relation to any hazardous and other wastes, the person in possession of the hazardous or other waste;

Other wastes: Wastes specified in Part B and Part D of Schedule III **(Annexure-8-B1 & Annexure-8-B2)** for import or export and includes all such waste generated indigenously within the country;

8.3 Responsibilities of the occupier for management of hazardous and other wastes (Rule-4)

- ✓ To follow steps, namely prevention, minimization, reuse, recycling, recovery, utilisation including co-processing & safe disposal.
- ✓ To send or sale the hazardous and other wastes generated in the establishment to an authorised actual user or to dispose it off in an authorised disposal facility.
- ✓ To transport the hazardous and other waste from the establishment to an authorised actual user or to an authorised disposal facility in accordance with the provisions of these rules.

8.4 Authorisation under HoW (M&TM) Rules, 2016 (Rule-6)

8.4.1 For Hazardous Waste

Every occupier of the facility (including that of Common Treatment, Storage and Disposal Facility) who is engaged in handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilization, offering for sale, transfer or disposal of the hazardous and other wastes shall be required to obtain authorisation from the PPCB under the provisions of HoWM Rules, 2016.

8.4.2 Exemption from Obtaining Authorisation for White Category Units[99]

An occupier of white category units shall not be required to obtain an authorisation under these rules from the SPCB in case the consent to establish or consent to operate is not required from the SPCB under the Water Act, 1974 and Air Act, 1981. #

 # Provided that the Hazardous and Other Waste generated by the occupier shall be given to the actual user, waste collector or operator of the disposal facility in accordance with the CPCB guidelines.

[99] *MoEF&CC/CPCB/PPCB notification no. G.S.R. 178(E) dated 01.03.2019*

8.4.3 Procedure for Obtaining Authorisation (including applications for actual users)

- ✓ New Users: Registration through OCMMS Portal (https://pbocmms.nic.in)
- ✓ Already Registered Users: Login and apply for authorisation by using user ID & password.
- ✓ Detailed procedure is available in the OCMMS User Manual for Entrepreneurs. (https://pbocmms.nic.in/OCMMS-0.1/SPCB_DOCUMENTS/HWM.pdf).

8.4.4 Documents Required for Obtaining Authorisation

- ✓ CTE and CTO granted by the PPCB under Water Act, 1974 & Air Act, 1981
- ✓ Site Plan of the industry showing the location of hazardous waste storage area / room.
- ✓ Partnership Deed / Memorandum of Article of Association / Proprietorship certificate
- ✓ Resolution of Board of Director/ partners regarding authorized signatory.
- ✓ Manufacturing process details with flow chart.
- ✓ Agreement signed with Common Facility (TSDF), actual user (Re-processor / Co-processor) of hazardous waste (as the case may be)
- ✓ Annual return in Form – IV as prescribed under the Rules.
- ✓ Compliance of SOPs prescribed by CPCB (wherever applicable)
- ✓ In case of renewal of authorisation, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorisation for hazardous and other wastes provided that an application for renewal of authorisation may be made 3 months before the expiry of such authorisation.

Note: *No processing fee is to be deposited with the authorisation application.*

8.4.5 Validity Period of Authorisation

Authorisation shall be valid for a period of five years.

8.4.6 Passbook to be Maintained by the Actual User

Authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook to be issued by the SPCB along with the authorisation. Handing over of the hazardous and other wastes to the authorized actual user shall be only after making the entry into the passbook of the actual user. The passbook shall be provided with dedicated registration number, issue date, validity, type and quantity of hazardous waste to be processed and shall be duly signed by authorized officer of the concerned Zonal Office. This passbook shall be attached / issued while granting authorisation under the HoWM Rules, 2016 and special mention for such issuance shall be made while granting the authorisation.

Documents required for issuance of passbook[100]

- ✓ Request letter
- ✓ Compliance of the conditions of CTO granted under the Water Act, 1974 & the Air Act, 1981 as well as authorisation issuance under the HOW (M & TM) Rules, 2016, in annotated form.
- ✓ Compliance of industry specific SOPs framed by CPCB, in annotated form.

[100] *PPCB Office Order No. 259 dated 10.05.2019 and 523 dated 17.09.2020*

- ✓ Certificate of installed capacity as per registration issued by the District Industries Centre or any other authorized Government agency.
- ✓ Process description including process flow sheet indicating equipment details, inputs and outputs (input wastes, chemicals, products, by-products, waste generated, emissions, waste water etc.). Attach separate sheets, if required.
- ✓ Details of pollution control systems such as Effluent Treatment Plant, scrubber, etc. including mode of disposal of waste.
- ✓ Details of occupational health and safety measures.
- ✓ Application processing fee as applicable in the shape of Demand Draft payable in favor of Environmental Engineer, Regional Office _____ (concerned Regional Office with whom the application is being submitted).

Note: *The competency to decide applications for authorisation of actual users lies with the Chairman.*

8.5 Storage of hazardous and other wastes (Rule-8)

Occupiers of facilities may store the hazardous and other wastes for a period not exceeding ninety days and shall maintain a record of sale, transfer, storage, recycling, recovery, pre-processing, co-processing and utilisation of such wastes and make these records available for inspection.

8.6 Utilization of Hazardous and Other Waste (Rule-9)

- ✓ Utilization of hazardous and other wastes as a resource or after pre-processing either for co-processing or for any other use, including within the premises of the generator (if it is not part of process), shall be carried out only after obtaining authorisation from the PPCB in respect of waste on the basis of standard operating procedures or guidelines provided by the CPCB. The SOPs prescribed by CPCB are available on the CPCB website (cpcb.nic.in) at link https://cpcb.nic.in/sop-for-hw-specific/ and https://cpcb.nic.in/SOP-General-Application-Processing/.
- ✓ Where standard operating procedures or guidelines are not available for specific utilization, the approval has to be sought from CPCB which shall be granting approval on the basis of trial runs and thereafter, standard operating procedures or guidelines shall be prepared by CPCB.
- ✓ No trial runs shall be required for co-processing of waste in cement plants for which guidelines by the CPCB are already available; however, the actual users shall ensure compliance to the standards notified under the Environment (Protection) Act,1986, for cement plants with respect to co-processing of waste.
- ✓ The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the SPCB along with the authorisation.
- ✓ Handing over of the hazardous and other wastes to the authorized actual user shall be only after making the entry into the passbook of the actual user.

8.7 Import and Export of Hazardous and Other Wastes (Rule-11, 12)

8.7.1 Nodal Agency for Transboundary Movement

Ministry of Environment, Forest and Climate Change is the nodal Ministry to deal with the transboundary movement of the hazardous and other wastes.

8.7.2 Conditions for Import and Export of Hazardous and Other Wastes

- ✓ No import of the hazardous and other wastes from any country to India for disposal shall be permitted.
- ✓ Import of hazardous and other wastes from any country shall be permitted only for recycling, recovery, reuse and utilization including co-processing.

- ✓ Import of hazardous waste in Part A of Schedule III may be allowed to actual users with prior informed consent of the exporting country and shall require the permission of the MoEF&CC.
- ✓ Import of other wastes in Part B of Schedule III may be allowed to actual users with the permission of the MoEF&CC.
- ✓ Import of other wastes in Part D of Schedule III will be allowed as per procedure given in rule 13 and as per the note below the said Schedule.
- ✓ No import of the hazardous and other wastes specified in Schedule VI shall be permitted.
- ✓ Export of hazardous and other wastes from India listed in Part A and Part B of Schedule III and Schedule VI shall be with the permission of MoEF&CC.
- ✓ Import & export of hazardous and other wastes not specified in Schedule III, but exhibiting the hazardous characteristics outlined in Part C of Schedule-III shall require prior written permission of MoEF&CC before it is imported to or exported from India, as the case may be.

8.7.3 Procedure for Import of Hazardous and Other Wastes (Rule-13)

Hazardous waste

- ✓ Actual User intending to import or transit for trans boundary movement of hazardous and other wastes specified in Part A and Part B of Schedule III shall apply in **Form 5** to the MoEF&CC for the proposed import together
  - ✓ Documents listed by MoEF&CC
  - ✓ Prior informed consent of the exporting country in respect of Part A of Schedule III waste,
- ✓ Send a copy of the application, simultaneously, to the concerned SPCB for information.
- ✓ Acknowledgement from SPCB shall be submitted to the MoEF&CC along with the application.

Other Wastes

- ✓ For the import of other wastes listed in Part D of Schedule III, the importer shall not require the permission of the MoEF&CC.
- ✓ Importer to furnish the required information as per Form 6 to the Customs authorities, accompanied with the following documents in addition to those listed in Schedule VIII, wherever applicable:
  - ✓ Import license from Directorate General of Foreign Trade, if applicable;
  - ✓ Valid consents under the Water Act, 1974 & the Air Act, 1981.
  - ✓ Authorisation under the HoW (M&TM) Rules, 2016 and under the E-Waste Rules, 2016.
  - ✓ Importer who is a trader, importing waste on behalf of actual users, shall obtain one time authorisation (OTA) from the PPCB online at https://pbocmms.nic.in.

Procedure of obtaining one-time authorisation (OTA) for Traders of other wastes (on behalf of actual user)[101]

- ✓ New Users: Registration through OCMMS Portal (https://pbocmms.nic.in)
- ✓ Already Registered Users: Login and apply for authorisation(OTA) by using user ID & password.
- ✓ Detailed procedure is available in the OCMMS User Manual for Entrepreneurs. **(**https://pbocmms.nic.in/OCMMS-0.1/SPCB_DOCUMENTS/HWM.pdf**).**
- ✓ Documents to be submitted with online OTA application
  - Copy of TIN / VAT / GST Number
  - Copy of Import / Export License issued from Directorate General of Foreign Trade

[101] *PPCB Office Order No. 349 dated 08.06.2021*

- Site Plan/Location Plan of the Godown
- Land documents of storage godown such as Registration deed/Jamabandi/ Rent Deed/ Lease Deed indicating details of the property
- Certificate/ NOC from the Concerned Authority regarding suitability of location for godown to be used for the storage of scrap / other waste, if not falls in industrial zones or the areas admissible as per Master Plan (From Municipal Authorities in case godown is within M.C. limit and District Town Planner in case godown is outside M.C limit)
- Online fee deposit amounting to Rs. 5000/-

✓ Upon successful issuance of OTA, the trader shall submit the request for permission to release the consignment at least one month in advance, along with a fee of Rs. 30/- per MT of other waste to be imported.

✓ Trader shall submit the quarterly report of the actual material imported and fee deposited for each quarter, by the 7th of proceeding month, to Environmental Engineer of the concerned RO.

✓ All the traders are required to register and obtained OTA with the Board through online system at OCMMS Portal (https://pbocmms.nic.in).

✓ In case, One Time Authorisation (OTA) / permission to release the consignment is not issued within 21 days it can be auto generated from the system itself.

8.7.4 Procedure for Export of Hazardous and Other Wastes (Rule-14)

Any occupier intending to export waste specified in Part A of Schedule III, Part B of Schedule III and Schedule VI, shall make an application in Form 5 along with insurance cover to the MoEF&CC for the proposed transboundary movement of the hazardous and other wastes together with the prior informed consent in writing from the importing country in respect of wastes specified in Part A of Schedule III and Schedule VI.

8.8. Packaging, Labelling, and Transport of Hazardous and Other Wastes

8.8.1 Packaging and Labelling (Rule-17)

✓ Any occupier handling hazardous or other wastes and operator of the treatment, storage and disposal facility shall ensure that the hazardous and other wastes are packaged in a manner suitable for safe handling, storage and transport as per the guidelines issued by the CPCB. The labelling shall be done as per Form 8 (Annexure-8-C).

✓ Label shall be of non-washable material, weather proof and easily visible.

8.8.2 Transportation of Hazardous and Other Wastes (Rule-18)

✓ Transport of the hazardous and other waste shall be in accordance with the provisions of these rules and the rules made by the Central Government under the Motor Vehicles Act, 1988 and the guidelines issued by the CPCB from time to time.

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

✓ In case of transportation of hazardous and other waste for recycling or utilization including co-processing, the sender shall intimate both the SPCBs before handing over the waste to the transporter.

- ✓ In case of transit of hazardous and other waste for recycling, utilization including co-processing or disposal through a State other than the States of origin and destination, the sender shall give prior intimation to the concerned SPCB of the States of transit before handing over the wastes to the transporter.
- ✓ In case of transportation of hazardous and other waste, the responsibility of safe transport shall be either of the sender or the receiver whosoever arrange the transport and has the necessary authorisation for transport from the concerned SPCB. This responsibility should be clearly indicated in the manifest.
- ✓ Authorisation for transport shall be obtained either by the sender or the receiver on whose behalf the transport is being arranged.

8.8.3 Manifest system (Movement Document) for Hazardous and Other Wastes to be used within Country (Rule-19)

Sender of the waste shall prepare seven copies of the manifest in **Form 10 (Annexure-8-E**) comprising of colour code indicated below and all seven copies shall be signed by the sender:

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

8.9 Records and returns (Rule-20)

- ✓ Occupier handling hazardous or other wastes and operator of disposal facility shall maintain records of such operations in Form 3 (Annexure-8-G).
- ✓ Occupier handling hazardous and other wastes and operator of disposal facility shall submit annual returns to the PPCB online through OCMMS portal (https://pbocmms.nic.in).

8.10 Accident reporting (Rule-22)

Where an accident occurs at the facility of the occupier handling hazardous or other wastes and operator of the disposal facility or during transportation, the occupier or the operator or the transporter shall immediately intimate the SPCB through telephone, e-mail about the accident and subsequently send a report in **Form 11 (Annexure-8-F)**.

8.11 Common Facility for Storage, Treatment and Disposal of Hazardous Waste in the State of Punjab at Vill. Nimbua, Tehsil Dera Bassi, Distt. SAS Nagar

Nimbuan Greenfield (Punjab) Limited (NGPL) has been promoted by a group of nine companies on the initiative of Govt. of Punjab and implement the project for creation of a common facility for

storage, treatment and disposal of hazardous waste being generated in the State. The site is located at Vill. Nimbua about 10 Km Dera Bassi and has been developed on a land measuring about 22 acres. The project was commissioned on 3rd October 2007 M/s Ramky Enviro Engineers Limited (REEL), Hyderabad is operating this facility.

8.12 Liability of Occupier, Importer or Exporter and Operator of a Disposal Facility

- ✓ Occupier, importer or exporter and operator of the disposal facility shall be liable for all damages caused to the environment or third party due to improper handling and management of the hazardous and other waste.
- ✓ Occupier and the operator of the disposal facility shall be liable to pay financial penalties as levied for any violation of the provisions under these rules by the SPCB with the prior approval of the CPCB.

8.13 Appeal

Any person aggrieved by an order of suspension or cancellation or refusal of authorisation or its renewal passed by the SPCB may, within a period of thirty days from the date on which the order is communicated to him, prefer an appeal in Form 12 **(Annexure-8-H)** to the Appellate Authority, namely, the Environment Secretary of the State.

8.14 List of the Schedules Appended with the rules

Sr. No.	Description of Schedule	Reference	Schedule No.
1	List of processes generating hazardous waste	Rule-3(1)(17)(i)	Schedule-I
2	List of waste constituents with concentration limit	Rule-3(1)(17)(ii)	Schedule-II
3	List of Hazardous and Other waste applicable for import and export (Part –A, B, C & D).	Rule-3(1)(17)(iii), 3(23), 12, 13 and 14	Schedule-III
4	List of commonly recyclable hazardous waste	Rule- (1)(ii) and 6(2)	Schedule-IV
5	Specification of used oil suitable for recycling and specification of fuel derived from waste oil (Part –A & B)	Rule-3(36) and 3(39)	Schedule-V
6	List of hazardous and other wastes prohibited for import	Rule-12(6), 12(7) and 14(1)	Schedule-VI
7	List of authorities and corresponding duties	Rule-13(6) and 21	Schedule-VII
8	List of documents for verification by customs and import of other wastes specified in Part D of Schedule -III	Rule-13(2), 13(4)	Schedule-VIII

SCHEDULE-I *[See rule* 3 (1) (17) (i)]

List of processes generating hazardous wastes

S.No.	Processes	Hazardous Waste*
1.	Petrochemical processes and pyrolytic operations	1.1 Furnace or reactor residue and debris 1.2 Tarry residues and still bottoms from distillation 1.3 Oily sludge emulsion 1.4 Organic residues 1.5 Residues from alkali wash of fuels 1.6 Spent catalyst and molecular sieves 1.7 Oil from wastewater treatment
2.	Crude oil and natural gas production	2.1 Drill cuttings excluding those from water based mud 2.2 Sludge containing oil 2.3 Drilling mud containing oil
3.	Cleaning, emptying and maintenance of petroleum oil storage tanks including ships	3.1 cargo residue, washing water & sludge containing oil 3.2 cargo residue and sludge containing chemicals 3.3 Sludge and filters contaminated with oil 3.4 Ballast water containing oil from ships
4.	Petroleum refining or re- processing of used oil or recycling of waste oil	4.1 Oil sludge or emulsion 4.2 Spent catalyst 4.3 Slop oil 4.4 Organic residue from processes 4.5 Spent clay containing oil
5.	Industrial operations using mineral or synthetic oil as lubricant in hydraulic systems or other applications	5.1 Used or spent oil 5.2 Wastes or residues containing oil 5.3 Waste cutting oils
6.	Secondary production and / or industrial use of zinc	6.1 Sludge and filter press cake arising out of production of Zinc Sulphate and other Zinc Compounds. 6.2 Zinc fines or dust or ash or skimmings in dispersible form 6.3 Other residues from processing of zinc ash or skimmings 6.4 Flue gas dust and other particulates
7.	Primary production of zinc or lead or copper and other non-ferrous metals except aluminium	7.1 Flue gas dust from roasting 7.2 Process residues 7.3 Arsenic-bearing sludge 7.4 Non-ferrous metal bearing sludge and residue. 7.5 Sludge from scrubbers
8.	Secondary production of copper	8.1 Spent electrolytic solutions 8.2 Sludge and filter cakes 8.3 Flue gas dust and other particulates
9.	Secondary production of lead	9.1 Lead bearing residues 9.2 Lead ash or particulate from flue gas 9.3 Acid from used batteries
10.	Production and/or industrial use of cadmium and arsenic and their compounds	10.1 Residues containing cadmium and arsenic
11.	Production of primary and secondary aluminium	11.1 Sludges from off-gas treatment 11.2 Cathode residues including pot lining wastes 11.3 Tar containing wastes 11.4 Flue gas dust and other particulates 11.5 Drosses and waste from treatment of salt sludge

		11.6 Used anode butts 11.7 Vanadium sludge from alumina refineries
12.	Metal surface treatment, such as etching, staining, polishing, galvanizing, cleaning, degreasing, plating, etc.	12.1 Acidic and alkaline residues 12.2 Spent acid and alkali 12.3 Spent bath and sludge containing sulphide, cyanide and toxic metals 12.4 Sludge from bath containing organic solvents 12.5 Phosphate sludge 12.6 Sludge from staining bath 12.7 Copper etching residues 12.8 Plating metal sludge
13.	Production of iron and steel including other ferrous alloys (electric furnace; steel rolling and finishing mills; Coke oven and by products plant)	13.1 Spent pickling liquor 13.2 Sludge from acid recovery unit 13.3 Benzol acid sludge 13.4 Decanter tank tar sludge 13.5 Tar storage tank residue 13.6 Residues from coke oven by product plant.
14.	Hardening of steel	14.1 Cyanide-, nitrate, or nitrite-containing sludge 14.2 Spent hardening salt
15.	Production of asbestos or asbestos-containing materials	15.1 Asbestos-containing residues 15.2 Discarded asbestos 15.3 Dust or particulates from exhaust gas treatment.
16.	Production of caustic soda and chlorine	16.1 Mercury bearing sludge generated from mercury cell process 16.2 Residue or sludges and filter cakes 16.3 Brine sludge
17.	Production of mineral acids	17.1 Process acidic residue, filter cake, dust 17.2 Spent catalyst
18.	Production of nitrogenous and complex fertilizers	18.1 Spent catalyst 18.2 Carbon residue 18.3 Sludge or residue containing arsenic 18.4 Chromium sludge from water cooling tower
19.	Production of phenol	19.1 Residue or sludge containing phenol 19.2 Spent catalyst
20.	Production and/or industrial use of solvents	20.1 Contaminated aromatic, aliphatic or 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 & bases 32.3 Process sludge containing adsorbable organic halides(AO_X)
33.	Handling of hazardous chemicals and wastes	33.1 Empty barrels/containers/liners contaminated with hazardous chemicals/wastes 33.2 Contaminated cotton rags or other cleaning materials
34.	De-contamination of barrels / containers used for handling of hazardous wastes/chemicals	34.1 Chemical-containing residue arising from decontamination. 34.2 Sludge from treatment of waste water arising out of cleaning / disposal of barrels /containers
35.	Purification and treatment of exhaust 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 pyro metallurgical operations, mine tailings and ore beneficiation rejects are excluded from the category of hazardous wastes. Separate guidelines on the management of these wastesshall be issued by Central Pollution Control Board.*

Schedule-III
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, excludingthose 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 Dof 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 usedcatalysts 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 packagingand 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 forconstruction
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 fromcathode-ray tubes and other activated glasses
B2030	Ceramic wastes in non-dispersible form: - Cermet wastes and scrap (metal ceramic composites) - Ceramic based fibers
B2040	Other wastes containing principally inorganic constituents: - Partially refined calcium Sulphate produced from flue gasdesulphurization (FGD) - Waste gypsum wallboard or plasterboard arising from the demolitionof 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 (excludinganode 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 orfiltration processes
B2130	Bituminous material (asphalt waste) from road construction andmaintenance, not containing tar (note the related entry in Schedule VI, A3200)
B3	**Wastes containing principally organic constituents, which may contain metals and inorganic materials**
B3027	Self-adhesive label laminate waste containing raw materials used in label material production
B3030	Textile wastes The following materials, provided they are not mixed with other wastes andare prepared to a specification: - Silk waste (including cocoons unsuitable for reeling, yarn waste and garneted stock) • not carded or combed • other - Waste of wool or of fine or coarse animal hair, including yarn wastebut excluding garneted stock • noils of wool or of fine animal hair

	• other waste of wool or of fine animal hair • waste of coarse animal hair - Cotton waste (including yarn waste and garneted stock) • yarn waste (including thread waste) • garneted stock • other - Flax tow and waste - Tow and waste (including yarn waste and garneted stock) of true hemp (Cannabis sativa L.) - Tow and waste (including yarn waste and garneted stock) of jute and other textile waste fibres (excluding flax, true hemp and ramie) - Tow and waste (including yarn waste and garneted stock) of sisal and other textile fibres of the genus Agave
	- Tow, noils and waste (including yarn waste and garneted stock) of coconut - Tow, noils and waste (including yarn waste and garneted stock) of abaca (Manila hemp or Musa textilis Nee) - Tow, noils and waste (including yarn waste and garneted stock) of ramie and other vegetable textile fibres, not elsewhere specified or included - Waste (including noils, yarn waste and garneted stock) of man- made fibres • of synthetic fibres • of artificial fibres - Worn clothing and other worn textile articles - Used rags, scrap twine, cordage, rope and cables and worn out articles of twine, cordage, rope or cables of textile materials • sorted • other
B3035	Waste textile floor coverings, carpets
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 usedas 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 toresource 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 anextent 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) up to an annual quantity limit indicated in registration letter. Zinc ash and skimmings containing less than 65% zinc and lead and cadmium equal to or more than 1.25% and 0.1% respectively and hard zinc smelter 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).

Schedule-III
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
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 finaldisposal

	- 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.
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 - laminated paperboard - unsorted scrap
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.*

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

Annexure-8-C

FORM 8

[See rules 17 (1) and 18 (2)]

LABELLING OF CONTAINERS OF HAZARDOUS AND OTHER WASTE

Handle with care

Waste category and characteristics as per Part C of Schedules II and III of these rules ……	Incompatible wastes and substances ……
Total quantity ……	Date of storage
Physical State of the waste (Solid/Semi-solid/liquid):	
Sender's name and address	Receiver's name and address
Phone……	Phone……
E-mail……	E-mail……
Tel. and Fax No……	Tel. and Fax No……
Contact person……	Contact person……
In case of emergency please Contact ……	

Note:

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

Annexure-8-D

FORM 9

[See rule 18 (2)]

TRANSPORT EMERGENCY (TREM) CARD

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

1. Characteristics of hazardous and other wastes:

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

2. Procedure to be followed in case of fire

3. Procedure to be followed in case of spillage/accident/explosion

4. For expert services, please contact

(i) Name and Address

(ii) Telephone No.

(Name, contact number and signature of sender)

Date……..

Place……..

Annexure-8-E

FORM 10

[See rule 19 (1)]

MANIFEST FOR HAZARDOUS AND OTHER WASTE

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

Annexure-8-F

FORM 11

[See rule 22]

FORMAT FOR REPORTING ACCIDENT

[To be submitted by the facility or sender or receiver or transporter to the SPCB]

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

Date: **Signature:**
Place: **Designation:**

(Annexure-8-G)

FORM 3

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

FORMAT FOR MAINTAINING RECORDS OF HAZARDOUS AND OTHER WASTES

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

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

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

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

Signature of occupier

Date……..Place…….

Annexure-8-H

FORM 12

[See rule 24 (1)]

APPLICATION FOR FILING APPEAL
AGAINST THE ORDER PASSED BY SPCB

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

Signature……..

Name and address…….

……

Date: _____

9. Bio Medical Waste Management

Bio Medical Waste Management Rules, 2016[102] : Rules framed for handling of Bio Medical Waste in an environmentally sound manner.

9.1 Applicability (Rule-2)

All 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.

9.2 Important Definitions (Rule-3)

- **Authorisation:** 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.
- **Bio-medical waste:** Any waste, which is generated during the diagnosis, treatment or immunization 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.
- **Bio-medical Waste Treatment and Disposal Facility:** 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 (CBWTFs).
- **Health Care Facility (HCF):** A place where diagnosis, treatment or immunisation of human beings or animals is provided irrespective of type and size of health treatment system, and research activity pertaining thereto.
- **Occupier:** A person having administrative control over the institution and the premises generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, 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.
- **Operator of a Common Bio-Medical Waste Treatment Facility:** A person who owns or controls a CBWTF for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste.
- **Prescribed Authority:** Punjab Pollution Control Board.

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[102] *MoEF&CC notification G.S.R. no. 343 (E) dated 28.03.2016*
1st amendment - notification no. G.S.R. 234 (E) dated 16.03.2018
2nd amendment - notification no. G.S.R. 129(E) dated 19.02.2019
3rd amendment - notification no. G.S.R. 360(E) dated 10.05.2019

9.3 Important duties of the Occupier of the Health Care Facility (HCF) (Rule-4)

- Make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in coloured bags or containers in a manner as specified in Schedule-I **(Annexure-9-A)**
- No secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals
- Pre-treatment or neutralization prior to mixing with other effluent
- Treatment and disposal of liquid waste to achieve the prescribed standards
- Not to use chlorinated plastic bags, gloves and blood bags
- Not to mix bio-medical waste with municipal solid waste
- Establish a Bar- Code System for bags or containers containing bio-medical waste to be sent out of the premises or place
- Maintain all record for operation of incineration, hydro or autoclaving etc.
- Make available the annual report on its web-site
- Inform the prescribed authority immediately in case the operator of a facility does not collect the bio-medical waste within the intended time
- Provide training to all its health care workers and others at the time of induction and thereafter at least once every year
- Occupational safety of all its health care workers by providing appropriate and adequate personal protective equipment's

9.4 Important Duties of the operator of a CBWTF (Rule-5)

- Bio-medical waste collected from the occupier is transported, handled, stored, treated and disposed of, without any adverse effect to the human health and the environment
- Timely collection of bio-medical waste from the occupier as prescribed under these rules
- Establish bar coding &global positioning system for handling of bio-medical waste within one year
- Assist the occupier in training conducted by them for bio-medical waste management
- Supply non-chlorinated plastic coloured bags to the occupier on chargeable basis
- Inform the prescribed authority immediately regarding the occupiers which are not handing over the segregated bio-medical waste in accordance with these rules

9.5 Treatment and disposal of Bio-medical Waste (Rule-7)

- Treated and disposed of in accordance with Schedule I & in compliance with the standards provided in Schedule-II by the HCFs and CBWTFs.
- Occupier shall hand over segregated waste as per the Schedule I to CBWTF for treatment, processing and final disposal:
- Provided that the lab and highly infectious bio-medical waste generated shall be pre-treated by equipment like autoclave or microwave.
- No occupier shall establish on-site treatment and disposal facility, if a service of common bio-medical waste treatment facility is available at a distance of seventy-five kilometres.
- In cases where service of the common bio-medical waste treatment facility is not available, the Occupiers shall set up requisite biomedical waste treatment equipment like incinerator, autoclave or microwave, shredder prior to commencement of its operation, as per the authorisation given by the prescribed authority.

9.6 Effluent & Emission Standards (Schedule-II)

9.6.1 Effluent standards

Parameters	Permissible limits before discharge into sewer without terminal STP or not connected to public sewers	Permissible limits before discharge into public sewers with terminal STP (General standards as per EPA, 1986)
pH	6.5-9.0	5.5-9.0
Suspended Solids	100 mg/l	600 mg/l
Oil & Grease	10 mg/l	20 mg/l
BOD	30 mg/l	350 mg/l
COD	250 mg/l	-
Bio-assay	90% survival of fish after 96 hrs in 100% effluent	90% survival of fish after 96 hrs in 100% effluent

- *Sludge from ETP shall be given to CBWTF for incineration or to TSDF for disposal.*
- *Non-bedded occupiers shall dispose infectious liquid wastes only after treatment by disinfection as per Schedule – II (6) of the principal rules*
- *Chemical liquid waste after disinfection/pre-treatment with 1-2% sodium hypo-chlorite solution shall be mixed with other waste water generated in HCF and the combined discharge shall conform to the above standards after final treatment*[103]

9.6.2 Standards for Incineration/incinerators

A. Operating Standards

1	Combustion efficiency (CE)	• At least 99% • C.E. = $\frac{\%CO_2}{\%CO_2 + \%\ CO} \times 100$
2	Minimum temperature	
3	Secondary chamber gas residence time	at least two seconds
4	Minimum stack height	30 meters above the ground with necessary monitoring facilities

Emission Standards

Parameter	Standards	
	Limiting concentration in mg/Nm^3 unless stated	Sampling Duration
Particulate matter	50	30 minutes or 1 Nm^3 of sample volume, whichever is more
Nitrogen Oxides NO and NO_2 expressed as NO_2	400	30 minutes for online sampling or grab sample
HCl	50	30 minutes or 1 Nm^3 of sample volume, whichever is more
Total Dioxins and Furans	0.1 ng TEQ/ Nm^3 (at 11% O_2)	8 hours or 5 Nm^3 of sample volume, whichever is more
Hg and its compounds	0.05	2 hours or 1 Nm^3 of sample volume, whichever is more

Note:

- ✓ *Wastes to be incinerated shall not be chemically treated with any chlorinated disinfectants.*
- ✓ *Ash from incineration of biomedical waste shall be disposed of at TSDF.*
- ✓ *Only low Sulphur fuel like LDO or LSHS or Diesel, CNG, LNG or LPG to be used in incinerator.*

[103] *1st amendment - notification no. G.S.R. 234 (E) dated 16.03.2018*

- ✓ *All monitored values shall be corrected to 11% Oxygen on dry basis.*
- ✓ *Monitor the stack gaseous emissions (under optimum capacity of the incinerator) once in three months through a laboratory approved under the EPA, 1986 and record of such analysis results shall be maintained and submitted to the prescribed authority. In case of dioxins and furans, monitoring should be done once in a year.*
- ✓ *Install CEMS for the parameters as stipulated by SPCB in authorisation and transmit the data real time to the servers at SPCB and CPCB.*
- ✓ *Incinerators (combustion chambers) shall be operated with such temperature, retention time and turbulence, as to achieve TOC content in the slag and bottom ashes less than 3% or their loss on ignition shall be less than 5% of the dry weight.*
- ✓ *Occupier or operator of a Common Bio-Medical Waste Incinerator shall use combustion gas analyser to measure CO_2, CO and O_2.*

9.7 Authorisation for generation, collection, storage, reception, treatment and disposal of Bio-Medical Waste (Rule-10)

- Every occupier of a HCF or operator of CBWTF handling bio-medical waste, irrespective of the quantity shall make an application in Form II to the SPCB, for grant of authorisation
- Prescribed authority shall grant the provisional authorisation in Form III and the validity of such authorisation shall be synchronized with the validity of the consents. The authorisation shall be one time for non-bedded occupiers.

Procedure for obtaining Authorisation (BMW)

New Users: Registration in OCMMS Portal (https://pbocmms.nic.in)

- Already Registered Users: To login and applies for authorisation by using user's ID & password.
- Detailed procedure is available in the OCMMS User Manual for Entrepreneurs. **https://pbocmms.nic.in/OCMMS-0.1/SPCB_DOCUMENTS/bmw.pdf.**

Documents required

A.	**With bed capacity less than 20 beds & non-bedded HCFs**
	Location Plan / Google Location of HCF
	Agreement with CBWTF
	Self- declaration for bed capacity / ownership / liquid waste treatment (Annexed with online application form)
	Manifests of lifting of waste by CBWTF for last 7 days of the previous month
B.	**Additional documents for HCFs having bed capacity more than 20 beds**
	Site Plan
	Compliance Report of previous Authorisation (wherever applicable)
	Annual Report (wherever applicable)
C.	**For Common Facility (CBWTF)**
	Fresh Case
	Site Plan / Location Plan
	Self Declaration for ownership
	Compliance Report of previous Water & Air Consent.
	Environmental Clearance under EIA Notification 2006 (in case of new facility / expansion case).
	Feasibility Report of ETP & APCD (in case of new facility / modification of existing pollution control device)
	Latest test report of color coded bags from CIPET Lab, Amritsar
	Renewal case
	Compliance Report of previous Authorisation

	Analysis Report of effluent & stack emissions from PPCB/ EPA approved Lab.
	Annual Report

9.8 Fee for authorisation under Bio-Medical Waste Rules

a. No application processing fee is applicable w.e.f. 01.04.2016[104].

b. Authorisation application processing fee for previous years for the period before 01.04.2016 is applicable under the BMW Rules, 1998. However, it is not to be obtained from the non-bedded HCFs and up to 2 chaired dental clinics[105].

c. Authorisation application processing fee for previous years applicable before 01.04.2016 are as under:

Table-1

S. No.	Category		Fees per annum	
			w.e.f. 06.08.2001	w.e.f. 24.10.2014
1	Occupier of Bedded/Chaired HCFs			
	A	With less than 50 beds	500	1000
	B	With 50 beds and above but less than 200 beds	3000	6000
	C	With 200 beds and above but less than 500 beds	5000	10000
	D	With 500 beds and above	10000	20000
2	Government Dispensaries/Private Clinics (non-bedded institutions)		250	500
3	Blood Banks, Veterinary Institutions, Research & Pathological Laboratories			
	No. of patient or samples			
	A	upto 5000 in a year	500	
	B	upto 10000 in a year	1000	
	C	upto 20000 in a year	2000	
	D	more than 20000 in a year	4000	
4	Slaughter Houses			
	A	Number of Animals slaughtered upto 5000 in a year	500	
	B	Number of Animals slaughtered upto 10000 in a year	1000	
	C	Number of Animals slaughtered upto 20000 in a year	2000	
	D.	Number of Animals slaughtered more than 20000 in a year	4000	

Note: *Institutions mentioned at Sr. No. 2,3 and Pathological Laboratories, Blood Banks mentioned at Sr. No. 4 shall be exempted from taking authorisation if the number of patients/samples are less than 1000 per month.*

Table-2

w.e.f. 14.10.2014

S. No.	Category		Fees per annum
1	Occupier of Bedded/Chaired HCFs		
	A	With less than 50 beds	1000
	B	With 50 beds and above but less than 200 beds	6000
	C	With 200 beds and above but less than 500 beds	10000
	D	With 500 beds and above	20000

[104] *PPCB Office Order no. 299 dated 01.07.2016*

[105] *PPCB Office letter no. 5298-5321 dated 18.12.2017*

2	Government Dispensaries/Private Clinics (non-bedded institutions)		500
3	Blood Banks, Veterinary Institutions, Research & Pathological Laboratories		
	A	Number of Patients or samples equal to or more than 12000 in a year	1000
	B	Number of Patients or samples upto 20000 in a year	4000
	C	Number of Patients more than 20000 in a year	8000
4	Slaughter Houses		
	A	Number of Animals slaughtered equal to or more than 12000 in a year	1000
	B	Number of Animals slaughtered upto 20000 in a year	4000
	C	Number of Animals slaughtered more than 20000 in a year	8000
5	Operator of Common Bio-Medical Waste Facility		20000

Note: *Institutions mentioned at Sr. No. 2 and Pathological Laboratories, Blood Banks mentioned at Sr. No. 4 shall be exempted from taking authorisation if the number of patients/samples are less than 1000 per month.*

9.9 Auto-grant and renewal of authorisation of HCFs upto 20 beds

- Simplified procedure for obtaining authorisation by small HCFs upto 20 beds by allowing auto-grant and auto-renewal of authorisation within 7 days
- No inspection of the HCF
- Applicable only to those HCFs against whom that no action is pending against the concerned health care facility for violation of the Bio-Medical Waste Management Rules, 2016, Water Act, 1974, Air Act, 1981, EPA, 1986 and various rules made there-under[106]

Competency to decide Authorisation applications under the Bio-Medical Rule, 2016

▪ Upto 50 beds HCEs and lab and Blood Banks, Pathological Lab, Veterinary Institutions/ Animal House etc.	Environmental Engineer
▪ More than 50 beds but upto 200 beds	Senior Environmental Engineer
▪ More than 200 beds but upto 500 beds	Chief Environmental Engineer
▪ More than 500 beds	Member Secretary through EPA Cell
▪ Common Bio-medical Waste, Treatment and Disposal Facility	Chairman through EPA Cell

9.10 Authorized CBWTF operators in the State

List of authorized CBWTF operators are as under:

Table-5

S. No	Name of CBWTF Operator	Contact Person Name & Number
1	M/s Amritsar Enviro-Care Systems Pvt. Ltd., Village Ibban Kalan, Chabhal Road, Amritsar	Dr. Inderpal Singh Pasricha, Owner (9780793284)
2	M/s Rainbow Environments Pvt. Ltd., Village Balyali, Mohali	Sh. Sarabjeet Singh, Owner (9815075782)
3	M/s Medicare Environmental Management Pvt. Ltd., Opp. Central Jail, Tajpur Road, Ludhiana.	Sh. Sunil Aggarwal, GM (98148-01375)
4	M/s BMWT Plant, Village Pangoli, Defence Road, Pathankot	Sh. Daulat Verma, Plant Manager (94176-07440)
5	M/s Med-waste Solutions Pvt. Ltd., Village Bidowali, Tehsil Gidderbaha District Sri Muktsar Sahib	Sh. Deepak Jindal, Manager (94782-00011)

[106] *PPCB Office Order no. 04 dated 10.04.2018*

9.11 Rates being charged by CBWTF operator for collection, transportation, treatment and disposal of bio-medical waste from HCFs [107]

Table-6

S.No	No. of Beds/Patients	Rates in Rupees (As on 01.01.2014)	Rates in Rupees (As on 01.01.2022)
1	OPD/ Clinics/ Labs/ Nursing homes/ HCEs upto 10 beds*	Rs. 1000/- per month	Rs. 1718 /- per month
2	HCFs from 11-20 beds*	Rs. 4.20/- per bed/day	Rs. 7.21 /- per bed/day
3	HCFs from 21 beds and above*	Rs. 5.40/- per bed/day	Rs. 9.27/- per bed/day
4	Dental Clinics	Rs 750/- per month	Rs 750/- per month
5	Basic Laboratories	Rs 750/- per month	Rs 750/- per month
6	Ayurvedic doctors which are members of National Integrated Medical Association	Rs 750/- per month	Rs 750/- per month

*** There is an increase of 7% on the above rates mentioned at Sr. No. 1, 2 & 3 w.e.f. 1st January every year.**

9.12 Consent to Establish/Operate by HCF and CBWTF under Water Act and Air Act,

Every HCF (whether bedded or non-bedded) and CBWTF has to obtain consent to establish/operate under Water Act, 1974 and Air Act, 1981. Documents required and procedure for filling, processing and granting these applications has already been given in chapter-6.

9.13 State Level Advisory Body and District Level Monitoring Committee[108] (Rule-11)

In Compliance of the Rules, Govt. of Punjab has constituted State Level Advisory Body and District Level Monitoring Committee under the chairmanship of Principal Secretary, Health & Family Welfare and Deputy Commissioner respectively to oversee the implementation of the Rules at the State level and district level.

9.14 Annual report (Rule-13)

Every occupier or operator of common bio-medical waste treatment facility shall furnish an annual report online at OCMMS portal of PPCB at (https://pbocmms.nic.in) to the Board in **Form IV** on or before the 30th June of every year.

Frequency of Visits to HCFs and CBWTFs

a. Once in a year for HCFs ≤ 50 beds
b. Twice in a year for HCFs 51-199 beds
c. Quarterly for HCFs > 200 beds
d. Quarterly for CBWTFs

[107] *PPCB letter no. EPA/2014/No.3742-45 dated 15.10.2014*

[108] *Department of Health vide office order no. PHSC/BMW(Vol-III)/17/60-192 dated 09.05.2017*

SCHEDULE I

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

PART-1

Biomedical Wastes Categories: Segregation, Collection, Treatment, Processing & Disposal Options

Category	Type of Waste	Type of Bag or Container to be used	Treatment and Disposal options
Yellow	**a) Human Anatomical Waste:** Human tissues, organs, body parts and foetus 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 0C or to common bio-medical waste treatment facility or hazardous waste treatment, storage and disposal facility for incineration at >12000C Or Encapsulation or Plasma Pyrolysis at >12000C. 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,	Separate collection system leading to effluent	After resource recovery, the chemical liquid waste shall be pre-treated before mixing with other wastewater. The combined

	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.	treatment system	discharge shall conform to the discharge norms given in Schedule-III
	g) Discarded linen, mattresses, beddings contaminated with blood or body fluid	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 microorganisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures	Autoclave safe plastic bags or containers	Pre-treat to sterilize with non-chlorinated chemicals on-site as per National AIDS Control Organisation or World Health Organisation guidelines thereafter for Incineration
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 vacutainers 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	Cardboard boxes 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	Cardboard boxes 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 Schedule-III. 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

- All plastic bags shall be as per BIS standards as and when published, till then the prevailing Plastic Waste Management Rules shall be applicable.
- Chemical treatment using at least 10% 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.
- Mutilation or shredding must be to an extent to prevent unauthorized reuse.
- There will be no chemical pre-treatment before incineration, except for microbiological, lab and highly infectious waste.
- 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.
- Dead Foetus 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.
- 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°C.
- 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. 16
- 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.
- 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.
- 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.

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.

10. Solid Waste Management

10.1 The Solid Waste Management Rules, 2016[109]

Rules framed to improve the collection, segregation, recycling, treatment and disposal of solid waste in an environmentally sound manner.

10.2 Applicability (Rule-2)

Applicable to

- ✓ every Urban Local Body (ULB),
- ✓ outgrowths in urban agglomerations,
- ✓ census towns as declared by the Registrar General and Census Commissioner of India (villages with population more than 3000)
- ✓ 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 organizations
- ✓ places of pilgrims, religious & historical importance as may be notified by respective state government from time to time
- ✓ every domestic, institutional, commercial and any other non-residential solid waste generator 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.

10.3 Important definitions (Rule-3)

Authorisation: The permission given by the SPCB to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste;

Biodegradable Waste: Any organic material that can be degraded by micro-organisms into simpler stable compounds.

Brand Owner: Who sells any commodity under a registered brand label.

Bulk Waste Generator: 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;

Composting: a controlled process involving microbial decomposition of organic matter;

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[109] *MoEF&CC Notification no. G.S.R. 317(E) dated 29.3.2016*
Amended vide notification no. G.S.R. 298(E) dated 10.4.2019 and vide S.O. 1152(E) dated 19th March, 2020

Co-processing: Use of non-biodegradable and non-recyclable solid waste having calorific value exceeding 1500 kcal/kg as raw material or as a source of energy or both;

Disposal: Final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land as specified in Schedule I;

Domestic Hazardous Waste: 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;

Door to Door Collection: Collection of solid waste from the door step of households, shops, commercial establishments, offices, institutional or any other non-residential premises and includes collection of such waste from entry gate or a designated location on the ground floor in a housing society, multi storied building or apartments, large residential, commercial or institutional complex or premises;.

Dry Waste: Waste other than bio-degradable waste and inert street sweepings and includes recyclable and non-recyclable waste, combustible waste and sanitary napkin and diapers, etc.

Dump Sites: A land utilised by local body for disposal of solid waste without following the principles of sanitary land filling;

Facility: Any establishment wherein the solid waste management processes namely segregation, recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out;

Inerts: Wastes which are not bio-degradable, recyclable or combustible street sweeping or dust and silt removed from the surface drains;

Local Body: for the purpose of these rules means and includes the municipal corporation, nagar nigam, municipal council, nagar palika, nagar 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;

Materials Recovery Facility (MRF) : A facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting and recovery of recyclables from various components of waste by authorised informal sector of waste pickers, informal recyclers or any other work force engaged by the local body or entity mentioned in rule 2 for the purpose before the waste is delivered or taken up for its processing or disposal;

Non-Biodegradable Waste: Any waste that cannot be degraded by microorganisms into simpler stable compounds;

Primary Collection: Collecting, lifting and removal of segregated solid waste from source of its generation including households, shops, offices and any other non-residential premises or from any collection points or any other location specified by the local body;

Processing: Any scientific process by which segregated solid waste is handled for the purpose of reuse, recycling or transformation into new products;

Recycling: Process of transforming segregated non-biodegradable solid waste into new material or product or as raw material for producing new products which may or may not be similar to the original products;

Refused derived fuel (RDF): Fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste;

Residual Solid Waste: Waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing;

Sanitary Land Filling: Final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion;

Sanitary Waste: Wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste;

Segregation: 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;

Solid Waste: 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;

Waste Generator: Every person or group of persons, every residential premises and non-residential establishments including Indian Railways, defence establishments, which generate solid waste;

10.4 Important Duties of Waste Generators (Rule-4)

- Every waste generator including bulk waste generator shall:
  - ✓ Segregate and store the waste generated by them in three separate streams namely bio-degradable, non-biodegradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste pickers or waste collectors. Bulk waste generator shall process the bio-degradable waste, treat and disposed off through composting or bio-methanation within the premises as far as possible. The residual or agency as directed by the Local body.
  - ✓ Wrap securely the used sanitary waste like diapers, sanitary pads etc., in the pouches provided by the manufacturers or brand owners of these products or in a suitable wrapping material as instructed by the local authorities and shall place the same in the bin meant for dry waste or non- bio-degradable waste;
  - ✓ store separately construction and demolition waste, as and when generated, in his own premises and shall dispose off as per the Construction and Demolition Waste Management Rules, 2016; and
  - ✓ store horticulture waste and garden waste generated from his premises separately in his own premises and dispose of as per the directions of the local body from time to time.
- 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.
- All waste generators shall pay such user fee for solid waste management, as specified in the bye-laws of the local bodies.
- No person shall organise an event or gathering of more than one hundred persons at any unlicensed place without intimating the local body, at least three working days in advance and such person or the organiser of such event shall ensure segregation of waste at source and handing over of segregated waste to waste collector or agency as specified by the local body.

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

10.5 Duties and responsibilities of local authorities and village Panchayats of census towns and urban agglomerations (Rule-15)

The local authorities and Panchayats shall

- prepare a solid waste management plan as per state policy and strategy on solid waste management and submit a copy to respective departments of State Government or agency authorised by the State Government;
- arrange for door to door collection of segregated solid waste from all households including slums and informal settlements, commercial, institutional and other non-residential premises.
- frame bye-laws incorporating the provisions of these rules and ensure timely implementation;
- setup material recovery facilities or secondary storage facilities with sufficient space for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors to separate recyclables from the waste and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from the source of generation or from material recovery facilities; Bins for storage of bio-degradable wastes shall be painted green, those for storage of recyclable wastes shall be printed blue and those for storage of other wastes shall be printed black;
- establish waste deposition centres for domestic hazardous waste and give direction for waste generators to deposit domestic hazardous wastes at this centre for its safe disposal;
- direct street sweepers not to burn tree leaves collected from street sweeping and store them separately and handover to the waste collectors or agency authorised by local body;
- collect horticulture, parks and garden waste separately and process in the parks and gardens, as far as possible;
- transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on site processing of such waste;
- transport non-bio-degradable waste to the respective processing facility or material recovery facilities or secondary storage facility;
- facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own or with private sector participation or through any agency for optimum utilisation of various components of solid waste adopting suitable technology as mentioned in the rules. Preference shall be given to decentralised processing to minimize transportation cost and environmental impacts;

- undertake on their own or through any other agency construction, operation and maintenance of sanitary landfill and associated infrastructure as per Schedule 1 for disposal of residual wastes in a manner prescribed under these rules;
- make an application in Form-I for grant of authorisation / renewal of authorisation for setting up waste processing, treatment or disposal facility, if the volume of waste is exceeding five metric tones per day including sanitary landfills from the PPCB.
- prepare and submit annual report in Form IV on or before the 30th April of the succeeding year to the Commissioner or Director, Municipal Administration or designated Officer. The annual report shall be sent to the PPCB by the 30th June of every year;
- ensure that provisions for setting up of centers for collection, segregation and storage of segregated wastes, are incorporated in building plan while granting approval of building plan of a group housing society or market complex; and
- frame bye-laws and prescribe criteria for levying of spot fine for persons who litters or fails to comply with the provisions of these rules and delegate powers to officers or local bodies to levy spot fines as per the bye laws framed; and
- allow only the non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and pre-processing rejects and residues from waste processing facilities to go to sanitary landfill and the sanitary landfill sites shall meet the specifications as given in Schedule–I, however, every effort shall be made to recycle or reuse the rejects to achieve the desired objective of zero waste going to landfill;
- investigate and analyse all old open dumpsites and existing operational dumpsites for their potential of bio-mining and bio-remediation and whosesoever feasible, take necessary actions to bio-mine or bio-remediate the sites;
- Collect and transport bio-degradable, non-bio-degradable and domestic hazardous waste from households including slums and informal settlements, commercial, institutional and other non-residential premises, multi-story buildings, large commercial complexes, malls, housing complexes and the like in compartmentalised and covered vehicle to the respective processing facility.

10.6 Duties of manufacturers or brand owners of disposable products and sanitary napkins and diapers (Rule-17)

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

10.7 Duties of the industrial units located within one hundred km from the refused derived fuel and waste to energy plants based on solid waste (Rule-18)

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

10.8 Criteria for Duties regarding setting-up of solid waste processing and treatment facility (Rule-19)

- Department in- charge of the allocation of land assignment shall be responsible for providing suitable land for setting up of the solid waste processing and treatment facilities and notify such sites by the State Government.
- Operator of the facility shall design and set up the facility as per the technical guidelines issued by the Central Pollution Control Board in this regard from time to time and the manual on solid waste management prepared by the Ministry of Housing and Urban Affairs.
- Operator of the facility shall obtain necessary approvals from the PPCB.
- Operator of the solid waste processing and treatment facility shall submit annual report in Form III each year by 30th April to the PPCB as well as to the local body.

10.9 Criteria for waste to energy process (Rule-21)

- Non-recyclable waste having calorific value of 1500 Kcal/kg or more shall not be disposed of on landfills and 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.
- High calorific wastes shall be used for co-processing in cement or thermal power plants.
- Local body or an operator of facility or an agency designated by them proposing to set up waste to energy plant of more than five tones per day processing capacity shall submit an application in Form-I to the PPCB, as the case may be, for authorisation.
- PPCB on receiving such application for setting up waste to energy facility, shall examine the same and grant permission within sixty days.

10.10 Time frame for implementation (Rule-22)

- Necessary infrastructure for implementation of these rules shall be created by the local bodies and other concerned authorities, as the case may be, on their on, by directly or engaging agencies within the specified time frame.
- Hon'ble NGT in OA No. 606 of 2018 has directed to impose Environmental Compensation (EC) for non-achievement of targeted timelines.

10.11 Annual report (Rule-24)

- Operator of facility shall submit the annual report to the local body in Form-III on or before the 30th day of April every year.

- Local body shall submit its annual report in Form-IV to PPCB and the Secretary-in-Charge of the Department of Urban Development of the concerned State in case of metropolitan city and to the Director of Municipal Administration or Commissioner of Municipal Administration or Officer in -Charge of Urban local bodies in the state in case of all other local bodies of state on or before the 30th day of June every year.
- Each State Pollution Control Board as the case may be, shall prepare and submit the consolidated annual report to the Central Pollution Control Board and Ministry of Housing and Urban Affairs on the implementation of these rules and action taken against non-complying local body by the 31st day of July of each year in Form-V.

10.12 Monitoring of Solid Waste Processing and Treatment Facility

Officers of the Board will visit the facility at least twice a year and prepare a visit report on the operation of the compost pit in the format prescribed under the rules.

10.13 Construction & Demolition Waste Management Rules, 2016[110]

For the management of Construction & Demolition Waste Management in an environmentally sound manner, the Govt. of India has notified the Construction & Demolition Waste Management Rules, 2016.

10.13.1 Applicability (Rule-2)

Applicable to every waste resulting from construction, re-modelling, 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.

10.13.2 Important Definitions (Rule-3)

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

"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;

"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.

10.13.3 Duties of the Waste Generator (Rule-4)

- 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.
- Generator shall ensure that other waste (such as solid waste) does not get mixed with this waste and is stored and disposed separately.

[110] *MoEF&CC vide notification no. G.S.R. 317 (E) dated 29.03.2016*

- 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 remodelling 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.
- 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.
- 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.

10.13.4 Duties of Service Provider and their Contractors (Rule-5)

- Service providers shall prepare a comprehensive waste management plan covering segregation, storage, collection, reuse, recycling, transportation and disposal of construction and demolition waste generated within their jurisdiction.
- Service providers shall remove all construction and demolition waste and clean the area every day, if possible, or depending upon the duration of the work, the quantity and type of waste generated, appropriate storage and collection, a reasonable timeframe shall be worked out in consultation with the concerned local authority.
- In case of the service providers have no logistics support to carry out the work specified in sub rules (1) and (2), they shall tie up with the authorised agencies for removal of construction and demolition waste and pay the relevant charges as notified by the local authority.

10.13.5 Criteria for storage, processing or recycling facilities for construction and demolition waste and application of construction and demolition waste and its products (Rule-7)

- Site for storage and processing or recycling facilities for construction and demolition waste shall be selected as per the criteria given in Schedule I;
- Operator of the facility shall apply in Form I for authorisation from State Pollution Control Board or Pollution Control Committee.
- Operator of the facility shall submit the annual report to the State Pollution Control Board in Form II.
- Application of materials made from construction and demolition waste in operation of sanitary landfill shall be as per the criteria given in Schedule II.

11. Plastic Waste Management

Plastic Waste Management Rules, 2016[111] Rules framed to give thrust on Plastic Waste minimization, source segregation, recycling and adopt polluter pay principle.

11.1 Applicability (Rule-2)

Applicable to every waste generator, local body, Gram Panchayat, Manufacturer, Importers, Brand Owner and producer.

11.2 Definitions (Rule-3)

Brand owner: A person or company who sells any commodity under a registered brand label;

Carry bags: 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.

Compostable plastics: Plastic that undergoes degradation by biological processes during composting to yield CO_2, 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.

Extended producer's responsibility: The responsibility of a producer for the environmentally sound management of the product until the end of its life.

Importer: A person who imports or intends to import and holds an Importer - Exporter Code number, unless otherwise specifically exempted.

Manufacturer: A person or unit or agency engaged in production of plastic raw material to be used as raw material by the producer.

Multi-layered packaging: 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, metalized layers or aluminium foil, either in the form of a laminate or co-extruded structure.

Non-woven plastic bag: means Non-woven plastic bag made up of plastic sheet or web structured fabric of entangled plastic fibres 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;"

Plastic: 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.

Producer: Persons engaged in manufacture or import of carry bags or multi-layered packaging or plastic sheets or like, and includes industries or individuals using plastic sheets or like or covers made of plastic sheets or multi-layered packaging for packaging or wrapping the commodity.

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.

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[111] *MoEF&CC notification no. G.S.R. 320 (E) dated 18.03.2016*
Amended vide no. G.S.R. 285 (E) dated 27.03.2018 and G.S.R. 571(E) dated 12.08.2021

Recycling: The process of transforming segregated plastic waste into a new product or raw material for producing new products.

Registration: Registration with the State Pollution Control Board or Pollution Control Committee concerned, as the case may be.

Single-use plastic commodity: mean a plastic item intended to be used once for the same purpose before being disposed of or recycled.

Thermoset plastic: means a plastic which becomes irreversibly rigid when heated and hence cannot be remoulded into desired shape.

Thermoplastic: means a plastic which softens on heating and can be moulded into desired shape.

Waste generator: Includes every person or group of persons or institution, residential and commercial establishments including Indian Railways, Airport, Port and Harbour and Defense establishments which generate plastic waste.

11.3 Ban on manufacture, stock, distribution, recycling, sale or use of plastic carry bags

The Government of Punjab, Department of Local Government vide notification no. 5/18/2016-4lg4/692717/1 dated 18/02/2016 and Department of Rural Development & Panchayats vide notification no. SO 438/P.A.9/1994/S30/2016 dated 29th March, 2016, under the Punjab Plastic Carry Bags (Manufacture, Usage and Disposal) Control Act, 2005 as amended in 2016, has completely prohibited manufacture, stock, distribution, recycling, sale or use of plastic carry bags in the jurisdiction of all the Municipal Corporations, Municipal Councils and Nagar Panchayats and Gram Panchayats in the State of Punjab, with effect from 1st April, 2016.

The Punjab Plastic Carry Bags (Manufacture, Usage and Disposal) Control Act, 2005 aims to restrict the disposal of non-biodegradable plastic waste in public places, drains and sewers and the matters connected therewith or incidental thereto.

Though, Govt. of India (MoEF&CC) has allowed the manufacturing and usages of plastic carry bags of specified thickness and with certain conditions but in view of the ban imposed by the Punjab Govt. on manufacture, stock, distribution, recycling, sale or use of plastic carry bags, the conditions relating to the plastic carry bags have not been described in the chapter. However, other plastic commodities such as plastic sheets and packing material etc. allowed by the Central Govt. with certain conditions as prescribed in the following paragraphs.

11.4 Important conditions for manufacturing of plastic sheets and compostable carry bags

Plastic sheet or like, which is not an integral part of multilayered packaging and cover made of plastic sheet used for packaging, wrapping the commodity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product;

- Manufacturer shall not sell or provide or arrange plastic to be used as raw material to a producer, not having valid registration from the concerned State Pollution Control Boards or Pollution Control Committee;
- Provision of thickness for carry bags as provided in these rules, shall not be applicable to carry bags and commodities made up of compostable plastic. Carry bags and commodities made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carry bags and commodities or both shall obtain a certificate from the Central Pollution Control Board before marketing or selling.

11.4.1 Restriction on Single Use Plastic by Govt. of India[112]

The manufacture, import, stocking, distribution, sale and use of following single use 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.
- The above provisions shall not apply to commodities made of compostable plastic.
- 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 multilayered 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.

11.5 Responsibilities of Local Bodies (Rule-6)

- 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.
- Setting up, operationalization and coordination of the waste management system and to perform associated functions and to ensuring:
  - ✓ segregation, collection, storage, transportation, processing and disposal of plastic waste;
  - ✓ ensuring that the provisions of these rules, as amended, are adhered to
  - ✓ channelization of recyclable plastic waste fraction to recyclers;
  - ✓ processing and disposal on non-recyclable fraction of plastic waste in accordance with the guidelines issued by the Central Pollution Control Board;
  - ✓ no damage is caused to the environment during this process;
  - ✓ no open burning of plastic waste shall take place.
  - ✓ Creating awareness among all stakeholders about their responsibilities;
  - ✓ Engaging civil societies or groups working with waste pickers.
  - ✓ Seeking assistance of producers for setting up for plastic waste management system.
  - ✓ Frame bye-laws incorporating the provisions of these rules.

[112] *MoEF&CC notification no. G.S.R. 571 (E) dated 12.08.2021*

11.6 Responsibilities of the Gram Panchayat (Rule-7)

- Every gram panchayat either on its own or by engaging an agency shall set up, operationalize and co-ordinate for waste management in the rural area under their control and for performing the associated functions ensuring:
  - ✓ segregation, collection, storage, transportation, plastic waste and channelization of recyclable plastic waste fraction to recyclers having valid registration
  - ✓ ensuring that the provisions of these rules, as amended, are adhered to
  - ✓ no damage is caused to the environment during this process
  - ✓ no open burning of plastic waste shall take place
  - ✓ creating awareness among all stakeholders about their responsibilities

11.7 Responsibilities of the Waste Generator (Rule-8)

- The waste generator shall:
  - ✓ take steps to minimize generation of plastic waste and segregate plastic waste at source
  - ✓ 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;
- Institutional generators of plastic waste, shall segregate and store the waste generated by them in accordance with the SWM Rules, 2016 (as amended) and handover segregated wastes to authorized waste processing or disposal facilities or deposition centers either on its own or through the authorized waste collection agency.
- Shall pay such user fee or charge as may be specified in the byelaws of the local bodies for plastic waste management such as waste collection or operation of the facility thereof, etc.
- Every person responsible for organizing an event in open space, which involves service of food stuff in plastic or multilayered packaging shall segregate and manage the waste generated during such events in accordance with the SWM Rules, 2016 (as amended).

11.8 Responsibilities of Producers, Brand-Owners and Importers (Rule-9)

- Work out modalities for waste collection system based on Extended Producers Responsibility and involving State Urban Development Departments, either individually or collectively, through their own distribution channel or through the local body concerned as per guidelines issued specified in SCHEDULE-II[113]
- Primary responsibility for collection of used multi-layered plastic sachet or pouches or packaging is of Producers, Importers and Brand Owners who introduce the products in the market. They need to establish a system for collecting back the plastic waste generated due to their products. This plan of collection to be submitted to the SPCB while applying for Consent to

[113] *MoEF&CC notification no. G.S.R. 133 (E) dated 16.02.2022*

Establish or Operate or Renewal. The Brand Owners whose consent has been renewed before the notification of these rules shall submit and implement such plan immediately

- Phase out manufacture and use of multi-layered plastic which is non - recyclable or non - energy recoverable or with no alternate use of plastic if any
- Apply online to the SPCB for grant of registration
- Not to manufacture or use any plastic or multilayered packaging for packaging of commodities without registration from the Board
- Maintain a record of details of the person engaged in supply of plastic used as raw material to manufacture carry bags or plastic sheet or like or cover made of plastic sheet or multi-layered packaging.

11.9 Registration (Rule-13)

- No person shall manufacture multi-layered packaging Industrial / packaging unless the person has obtained a registration from the State Pollution Control Board or the Centre Pollution Control Board prior to the commencement of production.
- Every producer or brand-owner shall, for the purpose of registration or for renewal of registration, make an application in **Form-I** to:
  - ✓ "The State Pollution Control Board (online), if operating in one or two States or Union Territories"; or
  - ✓ "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 make an online application to the SPCB, for grant of registration or renewal of registration for the recycling unit, in Form II.
- Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the SPCB for the grant of registration or for the renewal of registration, in Form III.
- The SPCB shall not issue or renew registration to plastic waste recycling or processing units unless the unit possesses a valid consent under the Water Act, 1974 and the Air Act, 1981 along with a certificate of registration issued by the District Industries Centre or any other Government agency authorized in this regard.
- The State Pollution Control Board shall not renew registration of producer unless the producer possesses and action plan endorsed by the Secretary in charge of Urban Development of the concerned State or Union Territory for setting of plastic waste management system.

Note: *As per notification dated 16.02.2022 issued by MoEF&CC, the Producers, Importers & Brand-Owners shall have to register through the online centralized portal developed by Central Pollution Control Board. The certificate of registration shall be issued using portal.*

Documents required for registration under plastic waste rules:

- PAN, GST, CIN, IEC (for importer) of the Company
- Aadhar/PAN of Authorized person
- DIC Registration (if unit registered with DIC)
- Process flow diagram (for producers only)

- Consents issued by SPCB/PCC (if unit has a production facility)
- Scanned copy of signatures of authorised persons.
- Covering letter
- Document regarding any other information which the unit wishes to provide.

Separate applications need to be filed in case a Brand-owner is also a Producer of importer and vice-versa

Duration of grant of registration

The registration granted under this rule shall initially be granted for a period of one year, and shall subsequently be renewed for three years;

Competency to decide/process registration applications received in PPCB.

Registration under the PWM Rules,2016	Competency to decide the case
• Registration as Manufacturer/Recycler	As per powers delegated for CTE/CTO under the Water Act, 1974 and Air Act, 1981
• Registration as Producer/Brand-Owner/Importer	Member Secretary, PPCB and file for registration shall be routed through EPA cell by the concerned Regional Office of the Board

11.10 Marking or labelling (Rule-11)

- Each compostable plastic carry bags, plastic packaging and multi-layered packaging shall have the following information printed in English namely,
  - ✓ name and registration number of the manufacturer in case of multi-layered packaging; and
  - ✓ name and certificate number in case of carry bags made from compostable plastic
- Each carry bag made from compostable plastics shall bear a label “compostable” and shall conform to the Indian Standard: IS or ISO 17088:2008 titled as Specifications for “Compostable Plastics”.

11.11 Frequency of visits to manufacturer, producer, brand-owner and recycler

The Ro of the Board shall visit manufacturer, producer, brand-owner and recycler twice in a year.

11.12 Annual Report (Rule-17)

- Every person engaged in recycling or processing of plastic waste shall prepare an annual report in Form-IV and submit to the local body concerned under intimation to the SPCB online by the 30th April, of every year.
- Every local body shall prepare and submit an annual report in Form –V to the concerned Secretary-in-charge of the Urban Development Department under intimation to the SPCB by the 30th June, every year.

11.13 Permission for manufacture, marketing and selling of Compostable carry bags

The interested manufacturer/seller of compostable plastic carry bags/products shall apply to CPCB for obtaining permission in Form-A (Manufacturer) and Form-B (Seller), along with the prescribed documents.

12. E-Waste Management

The E-Waste (Management) Rules, 2016[114]

12.1 Applicability (Rule-2)

Apply to every manufacturer, producer, consumer, bulk consumer, collection centers, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment listed in Schedule-I **(Annexure-12-A)**, including their components, consumables, parts and spares which make the product operational but shall not apply to:

(a) used lead acid batteries as covered under the Batteries (Management and Handling) Rules, 2001 made under the Act;

(b) micro enterprises as defined in the Micro, Small and Medium Enterprises Development Act, 2006, and

(c) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 and rules made there under.

12.2 Important definitions (Rule-3)

Authorisation: Permission for generation, handling, collection, reception, storage, transportation, refurbishing, dismantling, recycling, treatment and disposal of e-waste, granted to manufacturer, dismantler, refurbisher and recycler;

Bulk Consumer: Bulk users of electrical and electronic equipment such as Central Government or State Government Departments, public sector undertakings, banks, educational institutions, multinational organizations, international agencies, partnership and public or private companies that are registered under the Factories Act, 1948 (63 of 1948) and the Companies Act, 2013 (18 of 2013) and health care facilities which have turnover of more than one crore or have more than twenty employees;

Collection Centre: A center or a collection point or both established by producer individually or as association jointly to collect e-waste for channelizing the e-waste to recycler and play such role as indicated in the authorisation for Extended Producer Responsibility granted to the producer and having facilities as per the guidelines of CPCB, including the collection center established by the dismantler or refurbisher or recycler which should be a part of their authorisation issued by the SPCB where the facility exists;

Consumer: Any person using electrical and electronic equipment excluding the bulk consumers;

Dealer: Any individual or firm that buys or receives electrical and electronic equipment as listed in Schedule I of these rules and their components or consumables or parts or spares from producers for sale

Dismantler: Any person or organization engaged in dismantling of used electrical and electronic equipment into their components and having facilities as per the guidelines of CPCB and having authorisation from concerned SPCB

End-of-life of the product: Time when the product is intended to be discarded by the user;

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[114] *MoEF&CC vide G.S.R. 338(E) dated 23.03.2016 and amended vide no. G.S.R. 261 (E) dated 22.03.2018 (Also refer CPCB Implementation Guidelines for E-Waste (Management) Rules 2016).*

Electrical and electronic equipment: Equipment which are dependent on electric current or electro-magnetic field in order to become functional;

E-retailer: An individual or company or business entity that uses an electronic network such as internet, telephone, to sell its goods'

E-waste: Electrical and electronic equipment, whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes;

Extended Producer Responsibility (EPR): Responsibility of any producer of electrical or electronic equipment, for channelization of e-waste to ensure environmentally sound management of such waste. Extended Producer Responsibility may comprise of implementing take back system or setting up of collection centres or both and having agreed arrangements with authorized dismantler or recycler either individually or collectively through a Producer Responsibility Organization recognized by producer or producers in their Extended Producer Responsibility - Authorisation;

Extended Producer Responsibility Authorisation: A permission given by CPCB to a producer, for managing EPR with implementation plans and targets outlined in such authorisation including detail of Producer Responsibility Organization and e-waste exchange, if applicable;

Extended Producer Responsibility Plan: A plan submitted by a producer to CPCB, at the time of applying for Extended Producer Responsibility - Authorisation in which a producer shall provide details of e-waste channelization system for targeted collection including detail of Producer Responsibility Organization and e-waste exchange, if applicable;

Historical E-waste: E-waste generated from electrical and electronic equipment as specified in Schedule I, which was available on the date from which these rules come into force;

Manufacturer: A person or an entity or a company as defined in the Companies Act, 2013 or a factory as defined in the Factories Act, 1948 or Small and Medium Enterprises as defined in Micro, Small and Medium Enterprises Development Act, 2006, which has facilities for manufacture of electrical and electronic equipment;

Orphaned Products: Non-branded or assembled electrical and electronic equipment as specified in Schedule 1 or those produced by a company, which has closed its operation;

Producer: Any person who, irrespective of the selling technique used such as dealer, retailer, e-retailer, etc.;

- ✓ manufactures and offers to sell electrical and electronic equipment and their components or consumables or parts or spares under its own brand; or
- ✓ offers to sell under its own brand, assembled electrical and electronic equipment and their components or consumables or parts or spares produced by other manufacturers or suppliers; or
- ✓ offers to sell imported electrical and electronic equipment and their components or consumables or parts or spares;

Producer Responsibility Organization: A professional organization authorized or financed collectively or individually by producers, which can take the responsibility for collection and channelization of e-waste generated from the 'end-of-life' of their products to ensure environmentally sound management of such e-waste;

Recycler: Any person who is engaged in recycling and reprocessing of waste electrical and electronic equipment or assemblies or their components and having facilities as elaborated in the guidelines of CPCB;

Refurbishment: Repairing of used electrical and electronic equipment as listed in Schedule I for extending its working life for its originally intended use and selling the same in the market or returning to owner;

Refurbisher' for the purpose of these rules: Any company or undertaking registered under the Factories Act, 1948 or the Companies Act, 1956 or both or district industries centre engaged in refurbishment of used electrical and electronic equipment.

12.3 Responsibilities of the Manufacturer (Rule-4)

- collect e-waste generated during the manufacture of any electrical and electronic equipment and channelize it for recycling or disposal;
- apply online for authorisation in Form 1 (a) from the concerned SPCB (application available on PPCB website at www.pbocmms.nic.in).
- ensure that no damage is caused to the environment during storage and transportation of e-waste;
- maintain records of the e-waste generated, handled and disposed in Form-2 and make such records available for scrutiny by the concerned State Pollution Control Board;
- file annual returns in Form-3 to the concerned State Pollution Control Board on or before the 30th day of June following the financial year to which that return relates (return form is available on PPCB website at www.pbocmms.nic.in).

12.4 Responsibilities of the Producer (Rule-5)

- Implementing the EPR with the following frameworks, namely:-
  - ✓ collection and channelization of e-waste generated from the 'end-of-life' of their products or 'end-of-life' products with same electrical and electronic equipment code and historical waste available on the date from which these rules come into force as per Schedule I in line with the targets prescribed in Schedule III **(Annexure-12-B)** in EPR Authorisation;
  - ✓ mechanism used for channelization of e-waste from 'end-of-life' products including those from their service centers to authorized dismantler or recycler shall be in accordance with the EPR Authorisation. In cases of fluorescent and other mercury containing lamps, where recyclers are not available, channelization may be from collection center to Treatment, Storage and Disposal Facility;
  - ✓ for disposal in Treatment, Storage and Disposal Facility, a pre-treatment is necessary to immobilize the mercury and reduce the volume of waste to be disposed off;
  - ✓ ERP Authorisation should comprise of general scheme for collection of waste Electrical and Electronic Equipment from the Electrical and Electronic Equipment placed on the market earlier, such as through dealer, collection centers, Producer Responsibility Organization, through buy-back arrangement, exchange scheme, Deposit Refund System, etc. whether directly or through any authorized agency and channelizing the items so collected to authorized recyclers;
  - ✓ providing contact details such as address, e-mail address, toll-free telephone numbers or helpline numbers to consumer(s) or bulk consumer(s) through their website and product user documentation so as to facilitate return of end-of-life electrical and electronic equipment;

- ✓ creating awareness through media, publications, advertisements, posters, or by any other means of communication and product user documentation accompanying the equipment, with regard to information on contact details, hazardous constituents of the product; hazards of improper handling, disposal, accidental breakage, damage or improper recycling of e-waste. Producer shall also create awareness regarding instructions for handling and disposal of the equipment after its use, along with the Do's and Don'ts; affixing a visible, legible and indelible symbol given below on the products or product user documentation to prevent e-waste from being dropped in garbage bins containing waste destined for disposal and about means and mechanism available for their consumers to return e-waste for recycling including the details of Deposit Refund Scheme, if applicable.
- ✓ opt to implement EPR individually or collectively. In individual producer responsibility, producer may set up his own collection centre or implement take back system or both to meet EPR. In collective system, producers may tie-up as a member with a Producer Responsibility Organization or with e-waste exchange or both. It shall be mandatory upon on the individual producer in every case to seek EPR Authorisation from CPCB.

- to provide information on the implementation of Deposit Refund Scheme to ensure collection of end-of-life products and their channelization to authorized dismantlers or recyclers, if such scheme is included in the Extended Producer Responsibility Plan
- Provided that the producer shall refund the deposit amount that has been taken from the consumer or bulk consumer at the time of sale, along with interest at the prevalent rate for the period of the deposit at the time of take back of the end-of-life product;
- import of electrical & electronic equipment shall be allowed only to producers having EPR authorisation;
- maintaining records in Form-2 (Annexure-12-C) of the e-waste handled and make such records available for scrutiny by the CPCB or the concerned SPCB;
- filing annual returns in Form-3, to the CPCB on or before the 30th day of June following the financial year to which that return relates. In case of the Producer with multiple offices in a State, one annual return combining information from all the offices shall be filed (return form is available on PPCB website at www.pbocmms.nic.in);
- Producer shall apply to the CPCB for authorisation in Form 1, which shall thereafter grant the EPR Authorisation in Form 1.
- Operation without EPR Authorisation by any producer, as defined in this rule, shall be considered as causing damage to the environment.

12.5 Responsibilities of Collection Centres (Rule-6)

- collect e-waste on behalf of producer or dismantler or recycler or refurbisher including those arising from orphaned products; Provided the collection centres established by producer can also collect e-waste on behalf of dismantler, refurbisher and recycler including those arising from orphaned products
- maintain records in Form-2 of the e-waste handled as per the guidelines of CPCB and make such records available for scrutiny by the CPCB or the concerned SPCB as and when asked for
- ensure that
  - ✓ facilities are in accordance with the standards or guidelines issued by CPCB;
  - ✓ e-waste collected by them is stored in a secured manner till it is sent to authorized dismantler or recycler as the case may be;
  - ✓ no damage is caused to the environment during storage and transportation of e-waste;

12.6 Responsibilities of Dealers (Rule-7)

- in the case the dealer has been given the responsibility of collection on behalf of the producer, the dealer shall collect the e-waste by providing the consumer a box, bin or a demarcated area to deposit e-waste, or through take back system and send the e-waste so collected to collection centre or dismantler or recycler as designated by producer;
- E-waste thus generated is safely transported to authorized dismantlers or recyclers;
- Dealer or retailer or e-retailer shall refund the amount as per take back system or Deposit Refund Scheme of the producer to the depositor of e-waste;

12.7 Responsibilities of the Refurbisher (Rule-8)

- collect e-waste generated during the process of refurbishing and channelize the waste to authorized dismantler or recycler through its collection centre;
- make an application in Form 1(a) to the concerned SPCB for grant of one-time authorisation (application available on PPCB website at www.pbocmms.nic.in);
  - ✓ concerned SPCB shall authorize the Refurbisher on one-time basis as per Form 1 (bb) and authorisation would be deemed as considered if not objected to within a period of thirty days;
  - ✓ authorized Refurbisher shall be required to submit details of e-waste generated to the concerned SPCB on yearly basis;
- ensure that:
  - ✓ no damage is caused to the environment during storage and transportation of e-waste;
  - ✓ refurbishing process do not have any adverse effect on the health and the environment;
  - ✓ e-waste thus generated is safely transported to authorized collection centres or dismantlers or recyclers;
- file annual returns in Form-3 to the concerned SPCB, on or before the 30th day of June following the financial year to which that return relates (return form is available on PPCB website at www.pbocmms.nic.in);
- maintain records of the e-waste handled in Form-2 and such records should be available for scrutiny by the appropriate authority.

12.8 Responsibilities of Consumer or Bulk Consumer (Rule-9)

- consumers or bulk consumers of electrical and electronic equipment listed in Schedule I shall ensure that e-waste generated by them is channelized through collection center or dealer of authorized producer or dismantler or recycler or through the designated take back service provider of the producer to authorized dismantler or recycler;
- bulk consumers of electrical and electronic equipment listed in Schedule I shall maintain records of e-waste generated by them in Form-2 and make such records available for scrutiny by the concerned SPCB;
- consumers or bulk consumers of electrical and electronic equipment listed in Schedule I shall ensure that such end-of-life electrical and electronic equipment are not admixed with e-waste containing radioactive material as covered under the provisions of the Atomic Energy Act, 1962 and rules made there under;
- bulk consumers of electrical and electronic equipment listed in Schedule I shall file annual returns in Form-3, to the concerned SPCB on or before the 30th day of June following the

financial year to which that return relates. In case of the bulk consumer with multiple offices in a State, one annual return combining information from all the offices shall be filed to the concerned SPCB on or before the 30th day of June following the financial year to which that return relates (return form is available on PPCB website at www.pbocmms.nic.in).

12.9 Responsibilities of the Dismantler (Rule-10)

- make application in Form 4 to obtain authorisation from the concerned SPCB (application form is available on PPCB website at www.pbocmms.nic.in).
- ensure that:
  - ✓ facility and dismantling processes are in accordance with the standards or guidelines prescribed by CPCB from time to time;
  - ✓ no damage is caused to the environment during storage and transportation of e-waste;
  - ✓ dismantling processes do not have any adverse effect on the health and the environment;
  - ✓ dismantled e-waste are segregated and sent to the authorized recycling facilities for recovery of materials;
  - ✓ non-recyclable or non-recoverable components are sent to authorized treatment storage and disposal facilities;
- maintain record of e-waste collected, dismantled and sent to authorized recycler in Form-2 and make such record available for scrutiny by the SPCB or the concerned SPCB;
- file a return in Form-3, to the concerned SPCB as the case may be, on or before 30th day of June following the financial year to which that return relates (return form is available on PPCB website at www.pbocmms.nic.in).
- not process any e-waste for recovery or refining of materials, unless he is authorized with concerned SPCB as a recycler for refining and recovery of materials;
- operation without Authorisation by any dismantler, as defined in this rule, shall be considered as causing damage to the environment.

12.10 Responsibilities of the Recycler (Rule-11)

- make application in Form 4 to obtain authorisation from concerned SPCB (application form is available on PPCB website at www.pbocmms.nic.in).
- maintain record of e-waste collected, dismantled, recycled and sent to authorized recycler in Form-2 and make such record available for scrutiny by the CPCB or the concerned SPCB;
- ensure that
  - ✓ facility and recycling processes are in accordance with the standards or guidelines prescribed by the CPCB;
  - ✓ no damage is caused to the environment during storage and transportation of e-waste;
  - ✓ recycling processes do not have any adverse effect on the health and the environment;
  - ✓ fractions or material not recycled in its facility is sent to respective authorized recyclers;
  - ✓ residue generated during recycling process is disposed of in an authorized treatment storage disposal facility;
- file annual returns in Form-3, to the concerned SPCB as the case may be, on or before 30th day of June following the financial year to which that return relates (return form is available on PPCB website at www.pbocmms.nic.in);

- may accept waste electrical and electronic equipment or components not listed in Schedule-I for recycling provided that they do not contain any radioactive material and same shall be indicated while taking the authorisation from concerned State Pollution Control Board;
- operation without Authorisation by any recycler, as defined in this rule, shall be considered as causing damage to the environment.

12.11 Details of Authorized Dismantlers / Recyclers

Details of authorized dismantlers / recyclers in the State of Punjab is available at the website of the Board under the link https://ppcb.punjab.gov.in/en/waste-management/e-waste-rules.

12.12 Transportation of E-Waste (Rule-19)

Transportation of e-waste shall be carried out as per the manifest system whereby the transporter shall be required to carry a document (three copies) prepared by the sender, giving the details as per Form-6 **(Annexure-12-D),** provided that the transportation of waste generated from manufacturing or recycling destined for final disposal to a treatment, storage and disposal facility shall follow the provisions under HWM Rules, 2016.

12.13 Liability of Manufacturer, Producer, Importer, Transporter, Refurbisher, Dismantler & Recycler

- All damages caused to the environment or third party due to improper handling and management of the e-waste;
- To pay financial penalties as levied for any violation of the provisions under these rules by the SPCB with the prior approval of the CPCB.

12.14 Appeal

Any person aggrieved by an order of suspension or cancellation or refusal of authorisation or its renewal passed by the CPCB or SPCB may, within a period of thirty days from the date on which the order is communicated to him, prefer an appeal in Form-7 to the Appellate Authority comprising of the Environment Secretary of the State.

Annexure-12-A

SCHEDULE I

[See rules 2, 3(j), 3(y), 3(aa) and 3(ff); 5; 9; 11(10); 13 (1) (i), 13 (1) (vii) and 16(1), 16(11)]

Categories of electrical and electronic equipment including their components, consumables, parts and spares covered under the rules

Sr. No.	Categories of electrical and electronic equipment	Electrical and electronic equipment code
I	**Information technology and telecommunication equipment :**	
	Centralized data processing: Mainframes, Minicomputers	ITEW1
	Personal Computing: Personal Computers (Central Processing Unit with input and output devices)	ITEW2
	Personal Computing: Laptop Computers(Central Processing Unit with input and output devices)	ITEW3
	Personal Computing: Notebook Computers	ITEW4
	Personal Computing: Notepad Computers	ITEW5
	Printers including cartridges	ITEW6
	Copying equipment	ITEW7
	Electrical and electronic typewriters	ITEW8
	User terminals and systems	ITEW9
	Facsimile	ITEW10
	Telex	ITEW11
	Telephones	ITEW12
	Pay telephones	ITEW13
	Cordless telephones	ITEW14
	Cellular telephones	ITEW15
	Answering systems	ITEW16
ii	**Consumer electrical and electronics:**	
	Television sets (including sets based on (Liquid Crystal Display and Light Emitting Diode technology)	CEEW1
	Refrigerator	CEEW2
	Washing Machine	CEEW3
	Air-conditioners excluding centralized air conditioning plants	CEEW4
	Fluorescent and other Mercury containing lamps	CEEW5

Annexure-12-B

SCHEDULE III

[See rules 5(1) (a) and 13(1) (ii), (xii), (xiii), (xiv), (xv]

Time lines for collection of e-waste by the producers

Sr. No	Year	E-Waste Collection Target (Weight)
1.	2017-2018	10% of the quantity of waste generation as indicated in EPR Plan.
2.	2018-2019	20% of the quantity of waste generation as indicated in EPR Plan.
3.	2019-2020	30% of the quantity of waste generation as indicated in EPR Plan.
4.	2020-2021	40% of the quantity of waste generation as indicated in EPR Plan
5.	2021-2022	50% of the quantity of waste generation as indicated in EPR Plan
6.	2022-2023	60% of the quantity of waste generation as indicated in EPR Plan
7.	2023 onwards	70% of the quantity of waste generation as indicated in EPR Plan

Annexure-12-C

FORM

[See rules 4(4), 5(4), 6(5), 8(7), 9(2), 10(7), 11(8), 13 (1) (xi), 13(2)(v), 13(3)(vii) and 13 (4)(v)]

FORM FOR MAINTAINING RECORDS OF E-WASTE HANDLED OR GENERATED

Generated Quantity in Metric Tonnes (MT) per year

1.	Name & Address: Producer or Manufacturer or Refurbisher or Dismantler or Recycler or Bulk Consumer*		
2.	Date of Issue of Extended Producer Responsibility Authorisation*/ Authorisation*		
3.	Validity of Extended Producer Responsibility Authorisation*/ Authorisation*		
4.	Types & Quantity of E-waste handled or generated**	Category	Quantity
		Item Description	
5.	Types & Quantity of e-waste stored	Category	Quantity
		Item Description	
6.	Types & Quantity of e-waste sent to collection center authorized by producer/ dismantler/recycler / refurbisher or authorized dismantler /recycler or refurbisher**	Category	Quantity
		Item Description	
7.	Types & Quantity of e-waste transported*	Category	Quantity
		Quantity	
	Name, address and contact details of the destination		
8.	Types & Quantity of e-waste refurbished*	Category	Quantity
		Item Description	
	Name, address and contact details of the destination of refurbished materials		
9.	Types & Quantity of e-waste dismantled*	Category	Quantity
		Item Description	
	Name, address and contact details of the destination		
10.	Types & Quantity of e-waste recycled*	Category	Quantity
	Types & Quantity of materials recovered	Item Description	
		Quantity	
	Name, address and contact details of the destination		
11.	Types & Quantity of e-waste sent to recyclers by dismantlers	Category	Quantity
		Item Description	
	Name, address and contact details of the destination		
12.	Types & Quantity of other waste sent to respective recyclers by dismantlers/recyclers of e-waste	Category	Quantity
		Item Description	
	Name, address and contact details of the destination		
13.	Types & Quantity of e-waste treated & disposed	Category	Quantity
		Item Description	
	Name, address and contact details of the destination		

(1) * Strike off whichever is not applicable

(2) Provide any other information as stipulated in the conditions to the authorizer

(3) ** For producers this information has to be provided state-wise

Annexure-12-D

Form-6

[See rule 19]

E-WASTE MANIFEST

1.	Sender's name and mailing address (including Phone No.) :	
2.	Sender's authorisation No, if applicable :	
3.	Manifest Document No:	
4.	Transporter's name and address : (including Phone No.)	
5.	Type of vehicle :	(Truck or Tanker or Special Vehicle)
6.	Transporter/s registration No. :	
7.	Vehicle registration No. :	
8.	Receiver's name & address:	
9.	Receiver's authorisation No, if applicable:	
10.	Description of E-Waste (Item, Weight/ Numbers) :	
11.	Name and stamp of Sender (Manufacturer or Producer or Bulk Consumer or Collection Centre or Refurbisher or Dismantler): Signature: Month Day Year	
12.	Transporter acknowledgement of receipt of E-Wastes	
	Name and stamp: Signature: Month Day Year	
13.	Receiver (Collection Centre or Refurbisher or Dismantler or Recycler) certification of receipt of E-waste	
	Name and stamp: Signature: Month Day Year	

Copies of manifest to be given / retained

Copy number with colour code	Purpose
Copy 1 (Yellow)	To be retained by the sender after taking signature on it from the transporter and other three copies will be carried by transporter.
Copy 2 (Pink)	To be retained by the receiver after signature of the transporter.
Copy 3 (Orange)	To be retained by the transporter after taking signature of the receiver.
Copy 4 (Green)	To be returned by the receiver with his/her signature to the

13. Noise Pollution Control

The Noise Pollution (Regulation and Control) Rules, 2000[115] : Rules for the regulation and control of noise producing and generating sources.

13.1 Important Definitions (Rule-3)

Act: The Environment (Protection) Act, 1986

Authority: Any authority or officer authorized by Central Govt. or as the case may be, State Govt. and includes a District Magistrate, Police Commissioner or any other officer not below the rank of Deputy Superintendent of Police.

Public Place: Any place to which the public have excess.

Night Time: The period between 10.00 pm to 6.00 am.

Explanations

- An area comprising not less than 100 mts. around hospitals, educational institutions courts may be declared by the State Govt. as silence area/ zone for the purpose of these rules.
- State Govt. 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 p.m. to 12.00 midnight) on or during any cultural, religious or festive occasion of a limited duration not exceeding fifteen days in all during a calendar year and the concerned State Govt. or District Authority in respect of its jurisdiction as authorized by the concerned State Govt. shall generally specify in advance, the number and particulars of the days on which such exemption should be operative.
- "festive occasion'' shall include any National function or State function as notified by the Central Govt. or State Govt.; and
- "National function or State function "shall include-
  - ✓ Republic Day;
  - ✓ Independence Day;
  - ✓ State Day; or
  - ✓ such other day as notified by the Central Govt. or the State Govt.

13.2 Guidelines for Control of Noise issued by the State Government[116]

In exercise of the powers conferred under the Noise Pollution (Regulation and Control) Rules, 2000 and in accordance with the provisions of the Punjab Instruments (Control of Noise) Act, 1956, the Govt. of Punjab has notified following guidelines:

13.2.1 Authority for Enforcement of Noise Pollution Control Guidelines

Authority for enforcement of noise pollution control measures and for ensuring due compliance of the ambient air quality standards in respect of noise shall be as below:

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[115] *MoEF&CC notification no. S.O. 123 (E) dated 14.2.2000 as amended vide no. S.O. 1046 (E) dated 22.11.2000, S.O.50 (E) dated 12.1.2010 and MoEF&CC notification no. S.O. 2555(E) dated 10.08.2017*

[116] *Govt. of Punjab, Deptt. of STE notification no. 3/100/2013-STE (4)/145 dated 26/2/2014*

District Administration: District Magistrate, Additional District Magistrate, Sub Divisional Magistrate and Executive Magistrate posted in the revenue District/ Sub Divisions of the State of Punjab within their respective jurisdictions.

Police Commissionerate: Commissioner Police, Deputy Commissioner Police, Additional Deputy Commissioner police, Senior Superintendent of Police, Superintendent of Police (HQ), Deputy Superintendent Police posted in the police Districts/ sub division of the State of Punjab within their respective jurisdictions.

Punjab Pollution Control Board: Assistant Environmental Engineers / Environmental Engineers / Environmental Engineers / Senior Environmental Engineers and officers senior to them within their respective jurisdictions.

Deptt. of Local Govt.: Commissioner and Asstt. Commissioner of Municipal Corporations and Executive Officers of Municipal Committees of the State of Punjab within their respective Jurisdictions.

13.2.2 Area Categorization into Industrial, Commercial, Residential Area, Silence Area/ Zone

- All the areas falling within or outside Municipal Council limits areas shall be categorized into 4 viz. industrial, commercial, residential and silence Zone for the purpose of maintaining Noise Standards within different zones.
- Following authorities shall be responsible for categorization:
  - ✓ Within Municipal Council limits: Commissioner Corporation/ Executive Officer of Municipal Committee/ or with the help of District Town Planner/ Municipal Town Planner.
  - ✓ Outside Municipal Council limits: District Town Planner of district concerned.
  - ✓ Designated areas: The authority incharge of the area of PUDA/ GLADA/ GMADA/ PSIEC etc.

Note: *1. An area comprising 100 meters around hospitals, educational institutions and courts shall be declared as silence area / zone.*

2. Above authorities shall put up Notice Board prominently displaying "Silence Zone"

13.2.3 Maintenance of Ambient Air Quality Standards for Noise within Different Zones

Category of Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence zone	50	40

Note: *1. Day time shall mean form 6.00 a.m. to 10.00 p.m.*

14. Night time shall mean from 10.00 pm to 6.00 a.m.

13.2.4 Regulation on use of Loudspeakers, Permissions etc.

- No loudspeaker shall be allowed to be operated except after obtaining prior written permission from the authority concerned. Copies of the permission shall be sent to the authorities notified for regulation of guidelines.

- Distt. Magistrate, Sub Divisional Magistrate or Executive Magistrate or any other officer designated by the Distt. Magistrate/ Commissioner Police shall grant permission for use of loud speakers/ public address systems in public functions/ Marriage Palaces, Religious Places and Religious congregations/ other places etc. in accordance with the provisions of the Noise Pollution (Regulation & Control) Rules, 2000 as well as the Punjab Instruments (Control of Noises) Act, 1956.
- In addition to the restrictions imposed under Rules 5 and 5-A of Noise Pollution (Regulation & Control) Rules, 2000, following restrictions shall also be imposed:
  - ✓ Loudspeaker shall not be allowed to be operated during night time i.e. after 10 PM and before 6 AM.
  - ✓ Loud speakers should not be used or let out without sound limiter for the purpose of use in open air.
  - ✓ In the interest of large number of students, during examination time, no open air function where loudspeakers are used should be allowed for a period lasting between 3 days prior to examinations such as board exams., secondary examinations, senior secondary examinations, competitive exams like IIE, JEE, CPMT till the time that such examinations are over.
  - ✓ Management of marriage palaces/ DJ parties/ owners of privately owned sound system or sound producing instruments etc. shall display the permissible timings and noise limits at a prominent place.
  - ✓ During the permissions time of the use of loudspeaker, the prescribed ambient noise levels shall be maintained i.e. use of loud speaker should be done in such a manner that the noise levels are not in excess of parameters prescribed for the zone concerned.
  - ✓ During the time of any function, the barricading of streets should be restricted so as not to create any traffic jam.
- A District Magistrate or Police Commissioner or any other officer empowered to impose Section 144 Cr.P.C. may pass such order under his area of jurisdiction, prohibiting the use of loud speakers / public address systems in public functions/ marriage palaces etc., in violation of the Noise Pollution (Regulation and Control) Rules, 2000. In case of any violation of such order, the authorized officer should proceed in terms of Section 188 IPC against the person violating such order.

13.2.5 Restriction on sale and use of fireworks

- Fireworks, generating sound level exceeding 125 dB(AI) or 145 dB(C) pk 1. Fireworks, generating sound level exceeding 125 dB(AI) or 145 dB(C) pkds noise from four-meter distance from the point of bursting, should not be allowed for sale or use for any purpose.
- All fire cracker manufacturers/ dealers should be directed to point the noise level in decibel in the carton/ packet of the fire cracker.

13.2.6 Restriction on use of Horns / Sirens in the Vehicles

- No motor vehicle shall be fitted any multitone horn or other sound producing devices as prescribed in Motor Vehicle Act,1998.
- Sirens/ hooters are allowed for ambulance, fire fighting vehicles and other vehicles are specified in Motor Vehicle Act, 1998.

13.3 Guidelines issued by CPCB for control of noise from the operation of DG sets[117]

- Salient features of these guidelines relevant to noise control are:
  - ✓ Any generator set having engines not engraved with manufacture's name and date of manufacturing not be allowed to operate on or after 01.06.2015.
  - ✓ Any diesel generator set without certified acoustic enclosure as per GSR 371 (E), dated 17.05.2002 not to be allowed to operate on or after 01.06.2015.
  - ✓ Generator sets manufactured on or after 17.05.2002 be scrapped and dismantled after its useful life i.e. 15 years from the date of manufacturing or 50,000 hours of operation, whichever is earlier.
  - ✓ Gen sets be installed with standalone or isolated foundation with proper anti-vibration packing / pad etc.
  - ✓ Smoke of gen sets be channelized / emitted in a manner that it is not a nuisance in the neighbourhood.
  - ✓ Gen set be installed in the basement, roof top, ground floor, front/ back offset of the premises/ building, in, in order of priority. However, due care be taken so that it is not a nuisance in the neighbourhood.
  - ✓ Developer for new market / malls, high rise building or a gated green field colony shall necessarily install a source of standby power backup and installation of gen set by individuals be prohibited. Developer shall necessarily install a system to harvest solar or wind energy as applicable as a source of electricity apart from solar geysers.

13.4 Ban on use of multi tone horns / pressure horns and cracker sound emitting silencers / devices with motor-cycles / motor vehicles[118]

- No person / agency shall manufacture, sale, purchase, fit or use multi tone horns / pressure horns and cracker sound emitting silencers / devices with motor-cycles / motor vehicles in the State of Punjab with effect from 1/10/2017.
- Board has delegated powers to its Environmental Engineers (Incharge Regional Offices) and higher officers for affording opportunity of personal hearing and / or taking other appropriate action against the person / agency found violating the above directions[119].

13.5 Advisory to marriage palaces / Banquet halls etc. for control of noise pollution[120]

- Marriage Palace owners and D.J. operators shall setup & play DJ and other loud sound producing musical systems only inside the halls of Marriage Palaces and the sound level of the DJ / loud speaker systems be kept at a level that it does not become audible beyond the battery limits of the marriage palaces.
- Above advisory is applicable for control of noise pollution generated in marriage palaces or anywhere else like hotels / banquet halls or any other such place. [121]

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[117] *CPCB letter no. B-12013/30/2009/PCI-II/4844 dated 20.11.2014*

[118] *PPCB office order no. 621 dated 6/9/2017*

[119] *PPCB office order no. CEE(HQ)/2017/1032 dated 1/11/2017*

[120] *PPCB* office order *no. PPCB/Air Lab/196 dated 30.04.2018*

[121] *Clarification issued vide PPCB no. SEE(HQ-2)/2018/350 dated 24.07.2018*

14. Batteries Management

Batteries (Management & Handling) Rules, 2001 as Amended in 2010[122] : Rules for the management of used lead acid batteries in an environmentally sound manner.

14.1 Applicability (Rule-2)

To every manufacturer, importer, re-conditioner, assembler, dealer, recycler, auctioneer, consumer and bulk consumer involved in manufacture, processing, sale, purchase and use of batteries or components thereof.

14.2 Important Definitions (Rule-3)

- **Assem**bler: A person who manufactures lead acid batteries by assembling various components;
- Battery: Lead acid battery which is a source of electrical energy and contains lead metal.
- Bulk Consumer: A consumer such as the Departments of Central Government like Railways, Defence, Telecom, Posts and Telegraph, the Department of State Government, the Undertakings, Boards and other agencies or companies who purchase hundred or more than hundred batteries per annum.
- Consumer: A person using lead acid batteries excluding bulk consumers.
- Dealer: A person who sells and receives lead acid batteries or components thereof to and from the consumers or other dealers or retailers on behalf of the manufacturers, importers, assemblers and re-conditioners or otherwise.
- Re-conditioner: A person involved in repairing of lead acid batteries for selling the same in market.
- Recycler: An occupier who processes used lead acid batteries or components thereof for recovering lead.
- Used **Batteries**: Used, damaged and old lead acid batteries or components thereof.

14.3 Responsibilities of manufacturer, importer, assembler and re-conditioner (Rule-4)

It shall be the responsibility of a manufacturer, importer, assembler and re-conditioner to:

- ensure that used batteries of similar type and specifications are collected back as per Schedule against new batteries sold excluding those sold to original equipment manufacturer & bulk consumer(s);
- file a half-yearly return of their sales and buy-back to the State Board in Form- I (Annexure-14-A) latest by 30th June and 30th December of every year;
- *set up collection centres either individually or jointly -at various places for collection of used batteries from consumers or dealers;
- ensure that used batteries collected are sent only to the registered recyclers;

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[122] *MoEF&CC notification No. S.O. 432 dated 16.05.2001*
Amendment notification vide no. S.O. 1002 (E) dated 04.05.2010

- ensure that necessary arrangements are made with dealers for safe transportation from collection centres to the premises of registered recyclers;
- create public awareness through advertisements, publications, posters or by other means with regard to the following:
  - ✓ hazards of lead.
  - ✓ responsibility of consumers to return their used batteries only to the dealers or deliver at designated collection centres.
  - ✓ addresses of dealers and designated collection centres.
- *use the international recycling sign on the Batteries;
- buy recycled lead only from registered recyclers; and
- *ensure that the new batteries shall be sold only to the registered dealers.

*Note: - *The assemblers and preconditioners are excluded from the purview of responsibilities.*

14.4 Registration of Importers (Rule-5)

The importers shall get registered as per Form-II **(Annexure-14-B)** with the Central Pollution Control Board for a period of five years and a provision of cancellation for failure, in collection of the required number of used batteries as per the said rules, non-submission of timely half yearly returns to the SPCBs with a copy to the CPCB, renewal of the registration shall be as per the compliance status.

14.4.1 Customs clearance of imports of new lead acid batteries

Customs clearance of imports shall be contingent upon

- valid registration with the Reserve Bank of India (with Importer's Code Number);
- one-time registration with the MoEF&CC or an agency designated by it in Form-II;
- undertaking in Form-III (Annexure-14-C); and
- a copy of the latest half-yearly return in Form-I.

14.5 Responsibilities of dealer (Rule-7)

It shall be the responsibility of a dealer to

- registration with State Pollution Control Board for five years, to submit details as per Form IV annexed with amendment rules, 2010; (Annexure-14-D)
- ensure that the used batteries of similar type and specifications are collected back as per the Schedule against new batteries sold;
- give appropriate discount for every used battery returned by the consumer;
- file half-yearly returns of the sale of new batteries and buy-back of old batteries to the manufacturer in Form V (Annexure-14-E) by 31st May and 30th November of every year;
- ensure safe transportation of collected batteries to the designated collection centres or to the registered recyclers.

14.6 Responsibilities of Recycler (Rule-8)

Each recycler shall:

- apply for registration to the MoEF&CC or an agency designated by it if not applied already, by submitting information in Form VI; (Annexure-14-F)
- ensure strict compliance of the terms and conditions of registration; however, those already registered with the MoEF&CC or an agency designated by it for reprocessing used batteries would be bound by the terms and conditions of such registration;
- submit annual returns as per Form VII (Annexure-14-G) to the State Board;
- make available all records relating to receipt of used batteries, sources, quantities and metal yield to be submitted to the State Pollution Control Board for inspection;
- mark 'Recycled' on lead recovered by reprocessing; and
- create public awareness through advertisements, publications, posters or others with regard to following:
  - ✓ hazards of lead.
  - ✓ obligation of consumers to return used batteries only to the registered dealers or deliver at the designated collection centres.

14.7 Procedure for registration / renewal of registration of recyclers (Rule-9)

Every recycler of used lead acid batteries shall make an application in Form VI along with the following documents to the Joint Secretary, Ministry of Environment and Forests or any officer designated by the Ministry or an agency designated by it for grant of registration or renewal;

- a copy of the valid consents under Water (Prevention and Control of Pollution) Act, 1974, as amended and Air (Prevention and Control of Pollution) Act, 198 1, as amended;
- a copy of the valid authorisation under Hazardous Wastes (Management and Handling Rules, 1989 as amended;
- a copy of valid certificate of registration with District Industries Centre; and
- a copy of proof of installed capacity issued by either SPCB /District Industries Centre.

The Joint Secretary, Ministry of Environment and Forests or any officer designated by the Ministry or an agency designated by it shall ensure that the recyclers possess appropriate facilities, technical capabilities, and equipment to recycle used batteries and dispose of hazardous waste generated.

The registration granted shall be in force for a period of two years from the date of issue or from the date of renewal unless suspended or cancelled earlier.

14.8 Responsibilities of consumers or Bulk Consumers (Rule-10)

- **Consumers:** to ensure that used batteries are not disposed of in any manner other than depositing with the dealer, manufacturer, importer, assembler, registered recycler, re-conditioner or at the designated collection centres.

- Bulk Consumers**:**
  - ✓ to ensure that used batteries are not disposed of in any manner other than by depositing with the dealer/manufacturer/registered recycler/importer/ re-conditioner or at the designated collection centres;
  - ✓ file half-yearly return in Form VIII **(Annexure-14-H)** to the State Board.

14.9 Responsibilities of Auctioneer (Rule-11)

The auctioneer shall:

- ensure that used batteries are auctioned to the registered recyclers only;
- file half-yearly returns of their auctions to the State Boards in Form-IX; (Annexure-14-I)
- maintain a record of such auctions and make these records available to the State Board for inspection.

14.10 Prescribed Authority (Rule-12)

The prescribed authority for ensuring compliance of the provisions of these rules shall be the State Board. And, it shall file an annual compliance status report to the Central Pollution Control Board by 30th April of every year.

14.11 Effluent and Emission standards for Lead Acid Battery Manufacturing Industry

- Emission **Standards**

Source	Pollutant	Concentration based Standards (mg/Nm^3)
Grid casting	Lead Particular matter	10 25
Oxide manufacturing	Lead Particular matter	10 25
Paste mixing	Lead Particular matter	10 25
Assembling	Lead Particular matter	10 25
PVC section	Particulate matter	150

To comply with the respective standards, all the emissions from above mentioned source shall be routed through stack connected with hood and fan in addition to above, installation of control equipment viz. bag filter / ventury scrubber, is also recommended.
The minimum stack height shall be 30 m.

- **Liquid** Effluent **Discharge Standards**

Pollutant	Concentration based standards
pH Suspended solids Lead	6.5-8.5 50 mg/l 0.1 mg/l
(ii) Dry Cell Manufacturing Industry **Emission Standards**	

Pollutant	Concentration based Standards (mg/Nm^3)
Particulate matter	50
Manganese as Mn	5
To comply with the respective standards, all the emissions from above mentioned source shall be routed through stack connected with hood and fan in addition to above, installation of control equipment viz. bag filter / ventury scrubber, is also recommended. The minimum stack height shall be 30 m.	
Effluent Standards	
Pollutant	**Concentration based standards**
pH	6.5-8.5
Total Suspended Solids	100 mg/l
Manganese as Mn	2 mg/l
Mercury as Hg	0.02 mg/l
Zinc as Zn	5 mg/l
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

SCHEDULE

[See rule 4(i) and 7(i)]

S.No.	Year	Number of used batteries to be collected back
(i)	During first year of implementation of rules	50% of new batteries sold
(ii)	During second year of implementation of rules	75% of new batteries sold
(iii)	After second year of implementation of rules	90% of new batteries sold

Annexure-14-A

FORM - I

[See rule 4(iii)]

FORM FOR FILING RETURNS OF SALE OF NEW BATTERIES AND COLLECTION OF USED BATTERIES

[To be submitted by manufacturer/importer/bulk consumer by 30th June (for the period October-March) and 31st December (for the period April-September) every year]

1.	Name and Address of the manufacturer /importer/bulk consumer]		
2.	Name of the authorised person and complete address with telephone and fax numbers		
3.	Total number of new batteries sold [importers or consumers] during the period October-March/April September in respect of the following categories Category (i) Automative (a) Four Wheeler (b) Two Wheeler (ii) Industrial (a) UPS (b) Motive power (c) Stand-by (iii) Others (inverters, etc.) Number of batteries sold to (i) Dealers (ii) bulk consumers (iii) OEM (iv) Any other party for replacement should be indicated separately	(i) No. of Batteries	(ii) Approximate weight (in Metric Tones)
4.	Name and full address of the designated collection centres		
5.	Total number of used batteries of different categories as at Sl. No.3 collected and sent to the registered recyclers*		

*enclose the list of recyclers to who batteries have been sent for recycling.

Place_____

Date_____

Signature of the Authorised Person

Annexure-14-B

FORM II

[See rule 5 & 6(ii)]

FORM FOR

REGISTRATION OF IMPORTER OF NEW LEAD ACID BATTERIES / PRIMARY LEAD

{To be submitted in triplicate to the Ministry of Environment and Forests}

1.	Name and Address of the importer	
2.	Import / Export Licence No.	
3.	Name of person / owner / occupier as the case may be	

Date _____

Place_____ **Signature of the Importer**

(Annexure-14-C)

FORM III

[see rule 6(iii)]

(to be submitted by importer of new lead acid batteries)

UNDERTAKING

To

The Member Secretary
State Pollution Control Board

1. I_____ of M/s _____ hereby submit that I am in the process of importing _____ (MT) of new lead acid batteries.
2. I undertake that I shall collect back the used batteries as per the schedule prescribed by the Government from time to time in lieu of the new batteries imported and sold, and shall send these only to the registered recyclers. I further undertake that I shall submit half-yearly returns as per item (iii) of rule 6 to the State Board and abide by their directions, if any.

Date : _____

Place : _____ **Signature of the Importer**

Copy to : The concerned Customs Authority

Annexure-14-D

FORM - IV

[See rule 4 &7 (vii)]

FORM FOR REGISTRATION OF DEALERS

[To be submitted by dealers to the State Pollution Control Boards/Pollution Control Committees]

1.	Name and address of the dealers with telephone and fax numbers	
2.	TIN/VAT number*	

*If Applicable (As Per Current States Sale Tax Rules, Mandatory Tin/Vat Number Is Required Only If the Annual Turnover Of The Dealer Is More Than The Prescribed Value)

Place_____

Date_____ **Signature of the Authorised Person**

(Annexure-14-E)

FORM V

[See rule 7(iv)]

FORM FOR FILING RETUNS OF SALE OF NEW BATTERIES AND COLLECTION OF OLD BATTERIES

[To be submitted by dealers to the manufacturers by 31st May (for sale during October-March) and 30th November (for sale during April-September) every year]

1.	Name and address of the dealer		
2.	Name of the authorised person and complete address with telephone and fax numbers		
3.	Number of new batteries sold during the period October March/ April-September in respect of the following categories; Category (i) Automative (a) Four Wheeler (b) Two Wheeler (ii) Industrial (a) UPS (b) Motive power (c) Stand-by (iii) Others Number of batteries sold (i) As replacement of used Batteries (ii) to bulk consumers (iii) to OEM (iv) to any other party		
		(i) No. of Batteries	(ii) Approximate weight (in Metric Tones)
4.	Total number of used batteries of different categories as at Sl. No.3 collected and sent to registered recyclers */designated collection centres / manufacturers		

*enclose the list of recyclers to who batteries have been sent for recycling.

Place_____

Date_____ **Signature of the Authorised Person**

(Annexure-14-F)

FORM - VI
(see rule 8 (I), 9(1) & 9(5))

FORM FOR APPLICATION FOR

REGISTRATION OF FACILITIES POSSESSING ENVIRONMENTALLY SOUND MANAGEMENT PRACTICE FOR RECYCLING OF USED LEAD ACID BATTERIES

(To be submitted in triplicate)

1.	Name and Address of the unit			
2.	Contact person with designation, Tel./Fax			
3.	Date of Commissioning			
4.	No. of Workers (including contract labourers)			
5.	Consent Validity	a) Under Air Act, 1981; Valid up to - b) Under Water Act, 1974; Valid up to -		
6.	Validity of Authorisation under rule 5 of the Hazardous Wastes (Management and Handling) Rules, 1989	Valid up to -		
7.	Installed capacity of production in (MTA)			
8.	Products manufactured (Tones/year) during the last three years Name : (a) (b)	Year-1	Year-2	Year-3
9.	Raw material consumed (Tones / year) Name : (a) (b)	Year -1	Year-2	Year-3
10.	Manufacturing Process	Please attach manufacturing process flow diagram for each product(s)		
11.	Water consumption	Industrial - m^3/day Domestic - m^3 / day		
12.	Water Cess paid up to			
14.	Waste water generation a) as per consent m^3/day b) actual m^3 / day (average of last three months)	Industrial- Domestic-		
14.	Waste water treatment (please provide flow diagram of the treatment scheme)	Industrial- Domestic-		
15.	Waste water discharge	Quantity m^3/day Location- Analysis of treated waste water - pH, BOD, COD, SS, O&G, Any other- (indicate the corresponding standards applicable)		
16.	Air Pollution Control Please provide flow diagram for emission control system(s) installed for each process unit, utilities etc. Details for facilities provided for control of fugitive emission due to material handling, process, utilities etc.			

	c) Fuel consumption	S.No.	Name of Fuel		Quantity / day
	d) Stack emission monitoring results vis-à-vis the standards applicable	S.No.	Stack attached to		Emission g/Nm^3
	e) Ambient air quality	S.No.	Location		Results µg/m^3
17.	Hazardous Waste Management a) Waste generation b) Details of collection, treatment c) Disposal (including point of final discharge) i) Provide details of the disposal facility ii) Whether facilities provided are in compliance of the conditions issued by the SPCB in Authorisation iii) Attach analysis report of characterization of hazardous waste generated (including leachate test if applicable)	S.No	Name of the Waste	Process category	Quantity /Year
18.	Details of waste proposed to be taken in auction or import, as the case may be, for use as raw material	1. Name 2. Quantity required /- 3. Position in List A/List B as per Basel Convention (BC) 4. Nature as per Annexure III of BC			
19.	Occupational safety and health aspects	Please provide details of facilities provided.			
20.	Remarks i) Whether industry has provided adequate pollution control system / equipment to meet the standards of emission / effluent. ii) Whether industry is in compliance with conditions laid down in the Hazardous Waste Authorisation iii) Whether Hazardous Waste collection and Treatment, Storage and Disposal Facility (TSDF) are operating satisfactorily. iv) Whether conditions exist or likely to exists of the material being handled / processed of posing immediate or delayed adverse impacts on the environment. v) Whether conditions exist or is likely to exist of the material being handled / processed by any means capable of yielding another material e.g., leachate which may possess eco-toxicity.	Yes/No If Yes, please furnish details Yes / No Yes / No Yes / No Yes / No			
21.	Cost of the unit Cost of pollution control equipment including environmental safeguard measures Capital : Recurring :				
22	Any Other Information :				

I hereby declare that the above statements / information are true and correct to the best of my knowledge & belief.

Date : _____

Place : _____ **Signature Name**

Designation

(Annexure-14-G)

FORM - VII

[see rule 8(iii)]

FORM FOR FILING RETURNS BY RECYCLERS OF USED BATTERIES

[To be submitted by recyclers by 30th June and 31st December of every year]

1.	Name and address of the recycler	
2.	Name of the Authorised person and full address with telephone and fax number	
3.	Installed annual capacity to recycle used battery scrap (in MT)	
4.	Total quantity of used battery scrap purchased from / sent for processing during the period from October-March / April-September	i. Quantity of used batteries sent by / purchased from the manufacturers ii. Quantity of used batteries purchased from the dealers iii. Quantity of used batteries purchased from auctioneers iv. Quantity of used batteries obtained from any other source
5.	Quantity of lead recovered from the used battery scrap (in MTA)	
6.	Quantity of recycled lead sent back to	i. the manufacturer of batteries ii. other agencies * -

*enclose list of other agencies

Place _____

Date _____ **Signature of the Authorised Person**

(Annexure-14-H)

FORM - VIII

[see rule 10 (2)(ii)]

FORM FOR FILING RETURNS BY BULK CONSUMERS OF BATTERIES

[To be submitted by the bulk consumer to the State Board by 30th June (for the period October-March) and 31st December (for the period April-September) every year]

1.	Name and address of the bulk consumer		
2.	Name of the Authorised person and full address with telephone and fax number		
3.	Number of new batteries of different categories purchased from the manufacturer/importer/dealer or any other agency during October-March and April-September Category (i) Automative (a) Four Wheeler (b) Two Wheeler (ii) Industrial (a) UPS (b) Motive power (c) Stand-by (iii) Others	(i) No. of Batteries	(ii) Approximate weight (in Metric Tones)
4.	Number or used batteries of categories mentioned in Sl. No. 3 and Tonnage of scrap sent to manufacturer/ dealer/ importer/ registered recycler/ or any other agency to whom the used batteries scrap was sent*.		

*enclose list of manufacture / dealer / importer / registered recyclers / or any other agency to whom the used batteries scrap was sent.

Place _____

Date _____ **Signature of the Authorised Person**

(Annexure-14-I)

FORM - IX

[see rule 11 (ii)]

FORM FOR FILING RETURNS BY AUCTIONEER OF USED BATTERIES

[To be submitted by the auctioneer to State Board by 30th June and 31st December of every year]

1.	Name and address of the auctioneer	
2.	Name of the Authorised person and full address with telephone and fax number	
3.	Number of used batteries and total Tonnage (of MT) available during the period from October-March and April-September	
4.	Sources of the used battery scrap	
5.	Number of used batteries and total Tonnage (of MT) auctioned during the period from October-March and April-September	
6.	Number of used batteries and total Tonnage of (MT) sent to the registered recyclers *	

*enclose a list.

Place _____

Date _____ **Signature of the Authorised Person**

15. Management of Hazardous Chemicals

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989[123]: Rules framed to manage the Manufacture, Storage and Import of Hazardous Chemicals in safe and environmental friendly manner.

15.1 Important Definitions (Rule-3)

- **Authority:** An authority mentioned in Column 2 of Schedule 5;
- **Hazardous Chemical:**
  - ✓ 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;
  - ✓ any chemical listed in Column 2 of Schedule-2;
  - ✓ any chemical listed in Column 2 of Schedule-3;
- **Industrial Activity:**
  - ✓ an operation or 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
  - ✓ isolated storage; or
  - ✓ pipeline;
- **Isolated Storage:** 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;
- **Major Accident**: An occurrence including any particular major emission, fire or explosion involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of an industrial activity or due to natural events leading to serious effects both immediate or delayed, inside or outside the installation likely to cause substantial loss of life and property including adverse effects on the environments;
- **Pipeline:** A pipe (together with any apparatus and works associated therewith) or system of pipes (together with any apparatus and work associated therewith) for the conveyance of a hazardous chemical other than a flammable gas as set out in Column 2 of Part II of Schedule 3 at a pressure of less than 8 bars absolute: the pipeline also includes inter-state pipe
- **Schedule:** Schedule appended to these rules;
- **Site:** Any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not;
- **Threshold Quantity:**
  - ✓ in the case of a hazardous chemical specified in Column 2 of Schedule 2, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4;
  - ✓ in case of hazardous chemical specified in Column 2 of Part I of Schedule 3, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4 of that part;
  - ✓ in case of substances of a class specified in Column 2 of Part II of Schedule 3, the total quantity of all substances of that class specified in the corresponding entry in Column 3 & 4 of that part

[123] *Govt. of India MoEF&CC notification no. S.O. 966(E) dated 27.11.1989*
As amended vide notification no. SO-2882 dated 03.10.1994 and S.O-57(E) dated 19.01.2000

15.2 General responsibility of the occupier during industrial activity (Rule-4)

- **This rule shall apply to:**
  - ✓ An industrial activity in which a hazardous 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 is, or may be involved; and
  - ✓ Isolated storage of a hazardous chemical listed in Schedule 2 in Column 2 in a quantity or more than the threshold quantity specified in in Column 3, thereof.
- **An occupier shall provide evidence to show that he has:**
  - ✓ Identified the major accident hazards; and
  - ✓ Taken adequate steps to:
    - prevent such major accidents and to limit their consequences to persons and the environment;
    - provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety.

15.2.1 Notification of Major accident (Rule-5)

- **Where a major accident occurs on a site or in a pipe line, the occupier shall forthwith:**
  - ✓ Notify the concerned authority as identified in Schedule 5 of that accident within 48 hours and furnish thereafter to the concerned authority a report relating to the accidents in instalments, if necessary, in Schedule 6.
  - ✓ Notify to the concerned authority, steps taken to avoid any repetition of such occurrence on a site.

15.2.2 Industrial activity to which rules 7 to 15 apply (Rule-6)

- **Rules 7 to 15 shall apply to:**
  - ✓ An industrial activity in which there is involved a quantity of hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the quantity specified in the entry for that chemical in Columns 3 & 4 (Rules 10-12 only for Column 4) and
  - ✓ Isolated storage in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 2 which is equal to or more than the quantity specified in the entry for that chemical in Column 3 & 4 (rule 10-12 only for column 4).

15.2.3 Approval and Notification of sites (Rule-7)

An occupier shall not undertake any industrial activity unless he has been granted an approval for undertaking such an activity and has submitted a written report to the concerned authority containing the particulars specified in Schedule 7 at least 3 months before commencing that activity. For the purpose of this paragraph, an activity in which subsequently there is or is liable to be a threshold quantity or more of an additional hazardous chemical shall be deemed to be a different activity and shall be notified accordingly.

15.2.4 Safety Reports and Safety Audit Reports (Rule-10, 11)

- The Occupier:
  - ✓ shall not undertake any industrial activity to which this rule applies, unless he has prepared a safety report on that industrial activity containing the information specified in Schedule 8 and has sent a copy of that report to the concerned authority at least ninety days before commencing that activity.
  - ✓ shall carry out an independent safety audit of the industrial activities with the help of expert, not associated with such industrial activities and forwarded a copy of the auditor's report along with his comments to the concerned Authority within 30 days after the completion of such Audit.
  - ✓ shall not make any modification to the industrial activity to which that safety report relates which could materially affect the particulars in that report, unless he has made a further report to take account of those modification and has sent a copy of that report to the concerned Authority at least 90 days before making those modifications.
  - ✓ shall forward a copy of the auditor's report along with his comments to the concerned Authority within 30 days after the completion of such Audit.
  - ✓ shall update the safety audit report once a year by conducting a fresh safety audit and forward a copy of it with his comments thereon within 30 days to the concerned authority.
- Concerned Authority may if it deems fit, issue improvement notice under Rule 19 within 45 days of the submission of the said report.

15.2.5 Preparation of on-site emergency plan by the occupier(Rule-13)

- The occupier:
  - ✓ shall prepare and keep up-to-date an on-site emergency plan containing details specified in Schedule II.
  - ✓ shall ensure that the emergency plan takes into account any modification made in the industrial activity and that every person on the site who is affected by the plan-is informed of its relevant provisions.
  - ✓ shall conduct a mock drill of the on-site emergency plan every 6 months and send report of the same to the concerned Authority.

15.2.6 Preparation of off-site emergency plan by the Authority (Rule-14)

The concerned authority as identified in Column 2 of Schedule 5 shall prepare and keep up-to-date an adequate off-site emergency plan containing particulars specified in Schedule 12.

15.2.7 Information to be given to persons liable to be affected by a major accident (Rule-15)

- The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority who are likely to be in an area which may be affected by a major accident about:
  - ✓ Nature of the major accident hazard; and
  - ✓ Safety measures and the "Do's and 'Don'ts" which should be adopted in the event of a major accident

15.2.8 Collection, Development and Dissemination of Information (Rules-17)

- The occupier shall arrange to obtain or develop information in the form of safety data sheet as specified in Schedule 9.
- Every container of a hazardous chemical shall be clearly labelled or marked to identify:
  - ✓ Contents of the container,
  - ✓ Name and address of manufacturer or importer of the hazardous chemical;
  - ✓ Physical, chemical and toxicological data as per the criteria given at Part I of Schedule 1.

15.3 Import of Hazardous Chemicals (Rule 18)

- This rule shall apply to a chemical which satisfies any of the criteria laid down in Part I of Schedule I and is listed in Column 2 of Part II of this Schedule.
- Any person responsible for importing hazardous chemicals in India shall provide before 30 days or as reasonably possible but not later than the date of import to the concerned authorities, the information pertaining to-
  - ✓ Name and address of the person receiving the consignment in India;
  - ✓ Port of entry in India;
  - ✓ Mode of transport from the exporting country to India
  - ✓ Quantity of chemical(s) being imported; and
  - ✓ Complete product safety information.
- Any person importing hazardous chemicals shall maintain records of the hazardous chemicals imported as specified in Schedule 10 and the records so maintained shall be open for inspection by the concerned authority at the State or the Ministry of Environment and Forests or any officer appointed by them in this behalf.
- Importer of the hazardous chemical or a person working on his behalf shall ensure that transport of hazardous chemicals from port of entry to the ultimate destination is in accordance with the Central Motor Vehicles Rules, 1989 framed under the provisions of the Motor Vehicles Act, 1988.

16. Public Liability Insurance Act, 1991

Public Liability Insurance Act, 1991[124] : An Act to provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto.

16.1 Important Definitions (Rule-2)

Accident: An accident involving a fortuitous or sudden or unintended occurrence while handling any hazardous substance resulting in continuous or intermittent or repeated exposure to death of, or injury to, any person or damage to any property but does not include an accident by reason only of war or radio-activity;

Handling: In relation to any hazardous substance, means the manufacture, package, processing, treatment, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance;

Hazardous substance: Any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986 (29 of 1986), and exceeding such quantity as may be specified, by notification, by the Central Government[125];

(Govt. of India vide notification no. S.O. 227(E) dated 24.03.1992 has specified the quantities of hazardous substances for which or exceeding which every owner handling the hazardous substance shall take out insurance policy under the provisions of this Act).

Insurance: Insurance against liability under sub-section (1) of section 3;

Notification: A notification published in the official Gazette;

Owner: A person who owns, or has control over handling, any hazardous substance at the time of accident and includes

- ✓ in the case of firm, any of its partners;
- ✓ in the case of an association, any of its members; and
- ✓ in the case of a company, any of its directors, managers, secretaries or other officers who is directly in charge of, and is responsible to, the company for the conduct of the business of the company;

Relief Fund: Environmental Relief Fund established under section 7A

Liability to give relief in certain cases on principle of no fault (1) Where death or injury to any person (other than a workman) or damage to any property has resulted from an accident, the owner shall be liable to give such relief as is specified in the Schedule for such death, injury or damage.

In any claim for relief under sub-section (I) (hereinafter referred to in this Act as claim for relief), the claimant shall not be required to plead and establish that the death, injury or damage in respect of which the claim has been made was due to any wrongful act, neglect or default of any person.

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[124] *Govt. Of India Ministry of Law and Justice vide notification no. G.S.R 253, dated 27th March, 1991 and amended on 31.01.1992*

[125] *Govt. of India notification no. S.O. 227(E) dated 24.03.1992.*

16.2 Duty of Owner to take out Insurance Policies (Rule-4)

- Every owner shall take out, before he starts handling any hazardous substance, one or more insurance policies providing for contracts of insurance whereby he is insured against liability to give relief under sub-section (1) of section 3:
- Every owner shall get the insurance policy, referred to in sub-section (1), renewed from time to time before the expiry of the period of validity thereof so that the insurance policies may remain in force throughout the period during which such handling is continued.
  - ✓ [126]No insurance policy taken out or renewed by an owner shall be for an amount less than the amount of the paid-up capital of the undertaking handling any hazardous substance and owned or controlled by that owner, and more than the amount, not exceeding fifty crore rupees, as may be prescribed.

    Explanation:- For the purposes of this sub-section, "paid-up capital" means, in the case of an owner not being a company, the market value of all assets and stocks of the undertaking on the date of contract of insurance.
  - ✓ Liability of the insurer under one insurance policy shall not exceed the amount specified in the terms of the contract of insurance in that insurance policy.
  - ✓ Every owner shall also, together with the amount of premium, pay to the insurer, for being credited to the Relief Fund established under section 7A, such further amount, not exceeding the sum equivalent to the amount of premium, as may be prescribed.
  - ✓ Insurer shall remit the further amount received from the owner under sub-section (2C) to the Relief Fund in such manner and within such period as may be prescribed.

16.3 Actions and Penalties for Contravention of Provisions of the Act (Rule-12 & 14)

- Competent authority under the Act may issue following directions:
  - ✓ Prohibition or regulation of the handling of any hazardous substance, or
  - ✓ Stoppage or regulation of the supply of electricity, water or any other service.
- First offence is punishable with imprisonment for a term not less than 1 year and 6 months, but may extend to 6 years or with fine not less than Rs. 1 lakh or with both.
- For second offence or any subsequent offence, punishable with imprisonment for a term not less than 2 years, but may extent to 7 years and with fine not less than Rs. 1 lakh.

[126] *Inserted by PLI (Amendment) Act, 1992 dated 31.01.1992*

17. Miscellaneous Rules, Notifications and Orders

17.1 Regulation of Persistent Organic Pollutants Rules, 2018 (POP rules)[127]

In compliance to the decision taken in the Stockholm Convention, MoEF&CC has notified the Regulation of Persistent Organic Pollutants Rules, 2018 under the Environmental (Protection) Act, 1986. Under these rules, prohibition has been put on the manufacture, trade, use, import and export of the following seven chemicals namely:

i. Chlordecone
ii. Hexabromobiphenyl
iii. Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octa – BDE)
iv. Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial penta-BDE)
v. Pentachlorobenzene
vi. Hexabromocyclododecane and
vii. Hexachlorobutadine

Chemicals mentioned above may be used, sold or imported in quantities as required for research and development activities in Central Universities, Council of Science and Industrial Research Laboratories, Government Institutions or other Research Institutions or accredited laboratories in the Govt. or Private Sector after the approval of the MoEF&CC, Govt. of India.

17.2 Utilization of Fly Ash from Coal and Lignite based Thermal Power Plants[128]

Directions for the 100 per cent utilisation of fly ash generated from coal and lignite based thermal power plants (including captive or co-generating stations or both).

A. Responsibilities of thermal power plants to dispose fly ash and bottom ash

1. Every coal or lignite based thermal power plants (including captive or co-generating stations or both) shall be primarily responsible to ensure 100 per cent utilization of ash (fly ash, bottom ash) generated by it in an eco-friendly manner as given below:
   (i) Fly ash based products viz. bricks, blocks, tiles, fiber cement sheets, pipes, boards, panels;
   (ii) Cement manufacturing, ready mix concrete;
   (iii) Construction of road and fly over embankment, Ash and Geo-polymer based construction material;
   (iv) Construction of dam;
   (v) Filling up of low lying area;
   (vi) Filling o mine voids;
   (vii) Manufacturing of sintered or cold bonded ash aggregate;

[127] *Govt. of India, MoEF&CC notification no. G.S.R. 207(E) dated 05.03.2018*
[128] *Govt. of India MoEF&CC notification no. S.O. 5481 (E) dated 31.12.2021*

(viii) Agriculture in controlled manner based on soil testing;

(ix) Construction of shoreline protection structures in coastal districts;

(x) Export of ash to other countries;

(xi) Any other eco-friendly purpose as notified from time to time.

2. Every coal or lignite based thermal power plant shall be responsible to utilize 100 per cent ash (fly ash and bottom ash) generated during that year, however, in no case shall utilization fall below 80 per cent in any year, and the thermal plant shall achieve average ash utilization of 100 per cent in a three years cycle.

3. The unutilized accumulated ash i.e. legacy ash, which is stored before the publication of this notification, shall be utilized progressively by the thermal power plants in such a manner that the utilization of legacy ash shall be completed fully within ten years from the date of publication of this notification and this will be over and above the utilization targets prescribed for ash generation through current operations of that particular year.

Note: *The obligations under para 2 & 3 above for achieving the ash utilization targets shall be applicable from 1st April, 2022.*

4. Every coal or lignite based thermal power plant shall ensure that loading, unloading, transport, storage and disposal of ash is done in an environmentally sound manner and that all precautions to prevent air and water pollution are taken and status in this regard shall be reported to the concerned SPCB in annexure attached to the notification.

5. Every coal or lignite based thermal power plant shall install dedicated silos for storage of dry fly ash silos for at least sixteen hours of ash based on installed capacity and it shall be reported upon to the concerned SPCB in the annexure and shall be inspected by CPCB or SPCB from time to time.

   Every coal or lignite based thermal power plant shall provide real time data on daily basis of availability of ash with thermal power plant, by providing link to CPCB's web portal or mobile phone App for the benefit of actual user(s).

B. Important directions for the purpose of utilization of ash;

1. All agencies; (Government, Semi-government and Private) engaged in construction activities such as road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams within 300 kms from the lignite or coal based thermal power plants shall mandatorily utilize ash in these activities:

   Provided that it is delivered at the project site free of cost and transportation cost is borne by such coal or lignite based thermal power plants.

   Provided further that thermal power plant may charge for ash cost and transportation as per mutually agreed terms, in case thermal power plant is able to dispose the ash through other means and those agencies makes a request for it and the provisions of ash free of cost and free transportation shall be applicable, if thermal power plant serves a notice on the construction agency for the same.

2. The utilization of ash in the said activities shall be carried out in accordance with specifications and guidelines laid down by the bureau of Indian Standards, Indian road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government Agencies.
3. Filling of low lying areas with ash shall be carried out with prior permission of the SPCB for approved projects and in accordance with guidelines laid down by CPCB and the SPCB shall publish approved sites, location, area and permitted quantity annually on its website.
4. All building construction projects (Central, State and Local authorities, Govt. undertakings, other Govt. agencies and all private agencies) located within a radius of three hundred kilometers from a coal or lignite based thermal power plant shall use ash bricks, tiles, sintered ash aggregate or other ash based products, provided these are made available at prices not higher than the price of alternative products.

C. Environmental Compensation (EC) for non-compliance

1. In the first two years of three years cycle, if the coal or lignite based thermal power plant has not achieved at least 80 per cent ash utilization, then such non-complaint thermal power plant shall be imposed with an environmental compensation of Rs. 1000 per ton on unutilized ash during the end of financial year based on the annual reports submitted and if it is unable to utilize 100 per cent of ash in third year of the three years cycle, it shall be liable to pay an EC of Rs. 1000 per ton on the unutilized quantity on which EC has not been imposed earlier.
2. In case of legacy ash, if the coal or lignite based thermal power plant has not achieved utilization equivalent to at least 20 per cent (for the first year), 35 per cent (for the second year), 50 per cent (for third to tenth year) of ash generated based on installed capacity, an EC of Rs. 1000 per ton of unutilized legacy ash during that financial year shall be imposed and if the utilization of legacy ash is not completed at the end of 10 years, an environmental compensation of Rs. 1000 per ton shall be imposed on the remaining unutilized quantity which has not been imposed earlier.
3. It shall be the responsibility of the transporters or vehicle owner to deliver ash to authorized purchaser or user agency and if it is not complied, then an EC or Rs. 1500 per ton on such quantity as miss-delivered to unauthorized users or non-delivered to authorized users will be imposed besides prosecution of such non-compliant transporters by SPCB.
4. It is the responsibility of the purchasers or user agencies to utilize ash in an eco-friendly manner and if it is not complied, then an EC of Rs. 1500 or per ton shall be imposed by SPCB.
5. If the user agencies don not utilize ash to extent obligated under para B or the extent to which they have been intimated through Notice(s) served under sub-paragraph (1) of para D, whichever is lower, they shall be liable to pay Rs. 1500 or per ton of ash for the quantity they fall short off;

   Provided that the EC on building construction shall be levied at Rs. 75/- per square feet of built up area of construction.

D. Procedure for supply of ash or ash based products.

1. The owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate shall serve written notice to persons or agencies who are liable to utilise ash or ash based products, offering for sale, or transport or both.

2. Persons or user agencies who have been served notices by owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate, if they have already tied up with other agencies for the purpose of utilization of ash or ash products, shall inform the thermal power plant accordingly, if they cannot use any ash or ash products or use reduced quantity.

E. Enforcement, Monitoring, Audit and Reporting

1. CPCB and the concerned SPCB shall be the enforcing and monitoring authority for ensuring compliance of the provisions and shall monitor the utilization of ash on quarterly basis. The concerned District Magistrate shall have concurrent jurisdiction for enforcement and monitoring of the provisions of this notification.

2. (i) Thermal power plants shall upload monthly information regarding ash generation and utilization by 5th of the next month on the web portal.

   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 CPCB, concerned SPCB, Central Electricity Authority (CEA), and concerned Integrated Regional Office of MoEF&CC by the coal or lignite based thermal power plants.

   (ii) All other user agencies shall submit consumption or utilization or disposal of ash and use of ash based products as mandated in this notification in the compliance report of Environmental Clearance (EC) issued by MoEF&CC or SEIAA or Consent to Operate (CTO) issued by SPCB. CPCB or SPCB shall publish annual report of ash utilization of all other agencies except thermal power plants to review the effective implementation of the provisions of the notification.

3. For the purpose of resolving disputes between thermal power plants and users of ash or manufacturer of ash based products, the State Government shall constitute a Committee under the Chairman (SPCB) with representatives from Department of Power, and one representative from the Department which deals with the subject of concerned agency with which dispute is made.

4. The compliance audit for ash disposal by the thermal power plants and the user agency shall be conducted by auditors, authorized by CPCB and audit report shall be submitted to CPCB and concerned SPCB by 30th November every year. CPCB and concerned SPCB shall initiate action against non-compliant thermal power plants within 15 days of receipt of audit report.

   Note: *Proforma for submission Ash Compliance report for the period 1st April – 31st March 2022) as per Annexure-17 (A)*

17.3 Ban on Chinese Thread/ Manja[129]

There shall be a complete ban on the manufacture, sale, storage, purchase, supply, import and use of kite flying thread made out of nylon, plastic or any other synthetic material including the popularly known as "Chinese Dor/ Manjha" and any other synthetic kite-flying thread which is quoted with synthetic substance and is non-biodegradable, in the State of Punjab.

Authorized officers for implementation of these directions:

The following officers are hereby authorized to implement this notification:

1. All Executive Magistrates in the State of Punjab.
2. Officers of rank of Wildlife inspectors & above of the Forest Department, Govt. of Punjab.
3. Officers of the rank of Sub-Inspectors & above of the Punjab Police.
4. Class (c) and above officials of the Municipal Bodies of the state.
5. Officers of the rank of Assistant Environmental Engineers & above of the PPCB.

17.4 Fee for filing appeal before the Appellate Authority[130]

Fee to be paid by the appellant for filing appeals against the orders of the PPCB in respect of the industries as given below:

1.	Red Category industry	Rs. 5000/-
2.	Orange Category industry	Rs. 3000/-
3.	Green Category industry	Rs. 2000/-

17.5 Permission for abstraction of Ground Water from Punjab Water Regulation and Development Authority (PWRDA)[131]

The Punjab Water Regulation and Development Authority (PWRDA) has been constituted under the Punjab Water Resources (Regulation and Management) Act, 2020 and is mandated to regulate the water resources of the State for ensuring their judicious, equitable and sustainable utilization and management. The PWRDA is also providing ad interim permissions for groundwater extraction to industrial and commercial units in the State under the draft guidelines.

Board will not insist upon the entrepreneur to submit the clearance for abstraction of water from PWRDA at the time of CTE/CTO and shall grant consent to establish/consent to operate with the advisory to obtain necessary clearance for abstraction of ground water from authority concerned.

17.6 NOC for providing ground water recharging system by red category industries[132]

No red category 'trade effluent generating' industry will be allowed to provide the rain water harvesting / recharging system.

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[129] *Govt. of Punjab Notification no. 10/133/2016/1173007/1 dated 23.02.2018*
[130] *Govt. of Punjab notification no. 3/49/1996-STE (4)/ dated 06.07.2011 circulated vide no. 3/49/1996-STE (4)/ 1834 dated 25.07.2011*
[131] *PPCB letter no. CEE(HQ)/2018/7956-84 dated 09.03.2018 and 768-97 dated 13.01.2021*
[132] *PPCB vide letter no. PPCB/2018/19049-74 dated 19.06.2018*

17.7 The Ozone Depleting Substances (Regulation and Control) Rules, 2000 (as amended)[133]

Rules framed in compliance with the international obligations for gradual phasing out of various Ozone Depleting Substances (ODS) and to provide the major user of ODS to access non-ODS technologies using international funding.

The Montreal Protocol on Substances that Deplete the Ozone Layer is an international environmental treaty to protect the stratospheric ozone layer by phasing out the production and consumption, including uses of chemicals that deplete it. India, as Party to the Montreal Protocol, is mandated to phase out substances controlled under the Protocol. After having successfully phased out the production and consumption of Chlorofluorocarbons (CFCs), Carbon Tetra Chloride (CTC), Halons, Methyl Bromide and Methyl Chloroform for controlled uses as per the Montreal Protocol phase out schedule, currently the Hydrochlorofluoro carbons (HCFCs) are being phased out as per the accelerated phase out schedule under the Kigali amendment to Montreal Protocol.

The MoEF&CC has initiated the process for project preparation of HCFC Phase out Management Plan(HPMP) State-III, which will address the phase out of remaining HCFCs comprising HCFC-22 used in the refrigeration, firefighting and air-conditioning manufacturing sectors. Inventory of such industries in the country is being prepared by the Ministry for considering the eligibility for inclusion in HCFC phase out management plan.

[133] *MoEF&CC notification no. S.O.670(E) dated 19.07.2000 amended vide notification no. S.O.1283(E) dated 31.12.2001, S.O.996(E) dated 27.8.2003, S.O.929(E) dated 16.8.2004, S.O.1391(E) dated 26.9.2005, S.O.1561(E) dated 18.9.2007, S.O. 1033 (E) dated 13.03.2014, S.O-4724(E) dated 31.12.2019*

Annexure-17(A)

Ash Compliance Report (for the period 1st April-31st March) to be submitted

Sl. No.	Details	
1.	Name of Power Plant	
2.	Name of the company	
3.	District	
4.	State	
5.	Postal address for communication:	
6.	E-mail:	
7.	Power Plant installed capacity (MW):	
8.	Plant Load Factor (PLF):	
9.	No. of units generated (MWh):	
10.	Total area under power plant (ha):(including area under ash ponds)	
11.	Quantity of coal consumption during reporting period (MetricTons per Annum):	
12	Average ash content in percentage (per cent):	
13.	Quantity of current ash generation during reporting period(Metric Tons per Annum Fly ash (Metric Tons per Annum): Bottom ash (Metric Tons per Annum):	
14.	Capacity of dry fly ash storage silo(s) (Metric Tons) :	
15.	Details of utilisation of current ash generated during reporting period (a) Total quantity of current ash utilised (MTPA) duringreporting period: (b) Quantity of fly ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles orfibre cement sheets or pipes or boards or panels) (ii) Cement manufacturing: (iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and fly over embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts; (xiii) Export of ash to other countries: (xiv) Others (please specify):	

	(c) Quantity of bottom ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): (ii) Cement manufacturing: (iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and flyover embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts: (xiii) Export of ash to other countries: (xiv) Others (please specify): Total quantity of current ash unutilised (MTPA) duringreporting period:	
16.	Percentage utilisation of current ash generated during reporting period (per cent):	
17.	Details of disposal of ash in ash ponds (a) Total quantity of ash disposed in ash pond(s) (Metric Tons) as on 31st March (excluding reporting period): (b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons): (c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m3): (d) Total number of ash ponds: (i) Active: (ii) Exhausted (yet to be reclaimed): (iii) Reclaimed: (e) total area under ash ponds (ha):	
18.	Individual ash pond details Ash pond-1,2, etc. (please provide below mentioned details separately, if number of ash ponds is more than one) a) Status: Under construction or Active or Exhausted or Reclaimed b) Date of start of ash disposal in ash pond (DD/MM/YYYY orMMYYYY): c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY): (Not applicable for active ash ponds) d) area (hectares): e) dyke height (m): f) volume (m3): g) quantity of ash disposed as on 31st March (Metric Tons): h) available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons): i) expected life of ash pond (number of years and months):	

	j) co-ordinates (Lat and Long): (please specify minimum 4 co-ordinates) k) type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining l) mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) m) Ratio of ash: water in slurry mix (1:): n) Ash water recycling system (AWRS) installed and functioning: Yes or No o) Quantity of wastewater from ash pond discharged into land or water body (m3): p) Last date when the dyke stability study was conducted and name of the organisation who conducted the study: Last date when the audit was conducted and name of the organisation who conducted the audit:	
19.	Quantity of legacy ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): (ii) Cement manufacturing: (iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and flyover embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts; (xiii) Export of ash to other countries: (xiv) Others (please specify):	
20.	Summary:	

Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)
Current ash during reporting period			
Legacy ash			
Total			

21.	Any other information: Soft copy of the annual compliance report, and shape files of power plant and ash ponds may be e-mailed to:- MoEF&CC- coalash@gov.in	
	Signature of Authorised Signatory	

Abbreviations

APCD	Air Pollution Control Device
BMW	Bio Medical Waste
BOD	Biological Oxygen Demand
CA	Chartered Accountant
CBG	Compressed Bio-gas
CBWTF	Common Bio-Medical Waste Treatment Facility
CEA	Central Electricity Authority
CETP	Common Effluent Treatment Plant
CGWA	Central Ground Water Authority
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COD	Chemical Oxygen Demand
CPCB	Central Pollution Control Board
CT	Cooling Tower
CTE	Consent to Establish
CTO	Consent to Operate
DECC	Directorate of Environment & Climate Change
EC	Environmental Clearance
ELV(s)	End of Life Vehicle(s)
EMP	Environmental Management Plan
ETP	Effluent Treatment Plant
GFA	Gross Fixed Assets
Govt.	Government
HC	Hydro Carbon
HCF	Health Care Facility
HCFC	Hydro chlorofluorocarbon
Hr	Hour
KLD	Kilolitre per Day
Km	Kilometre
LPG	Liquefied Petroleum Gas
m	Meter
m^2 or sq.m	Square Meter
m^3	Cubic Meter
mg/l	Milligram per litter
MoEF&CC	Ministry of Environment, Forest & Climate Change
MSME	Micro, Small and Medium Enterprises
MSW	Municipal Solid Waste
MTA	Metric Tons per Annum
MTD	Metric Tons per Day
NH_3	Ammonia
NGT	National Green Tribunal
mg/m^3	Milligram per meter cube
mg/Nm^3	Milligram per Normal meter cube
NO_2	Nitrogen Dioxide

NOx	Nitrogen Oxides
OCEMS	Online Continuous Effluent /Emission Monitoring System
OCMMS	Online Consent Management & Monitoring System
ODS	Ozone Depleting Substances
OTA	One-time Authorisation
O_2	Oxygen
PCC	Pollution Control Committee
pH	Potential of Hydrogen (measure of acidity or alkalinity of water or any other liquid)
PM	Particulate Matter
PM_{10}	Particulate Matter with diameter less than 10 micro meter
$PM_{2.5}$	Particulate Matter with diameter less than 2.5 micro meter
PPCB	Punjab Pollution Control Board
PWRDA	Punjab Water Regulation and Development Authority
RDF	Refused Derived Fuel
RSPM	Respirable Suspended Particulate Matter
SAC	Site Appraisal Committee
SAR	Sodium Absorption Ratio
SCA	State Competent Authority
SEIAA	State Environment Impact Assessment Authority
SOP	Standard Operating Practice
SO_x	Sulphur Oxide
SO_2	Sulphur Dioxide
SPCB	State Pollution Control Board
STP	Sewage Treatment Plant
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
ULB	Urban Local Body
VOC	Volatile Organic Compound

Acts & Rules

Water Act, 1974	Water (Prevention & Control of Pollution) Act, 1974
Air Act, 1981	Air (Prevention & Control of Pollution) Act, 1981
EIA Notification, 2016	Environmental Impact Assessment notification, 2016
EPA Act, 1986	Environment (Protection) Act, 1986
HoWM Rules, 2016	Hazardous & other Wastes (Management, Handling & Trans-boundary Movement) Rules, 2016
PWM Rules, 2016	Plastic Waste Management Rules, 2016
E-Waste Rules, 2016	E-Waste (Management) Rules 2016
BWM Rules, 2016	Bio-Medical Waste Management Rules, 2016
SWM Rules, 2016	Solid Waste Management Rules, 2016
C&DWM Rules, 2016	Construction & Demolition Waste Management Rules, 2016
Battery Rules, 2001	Batteries (Management & Handling) Rules, 2001
Noise Rules, 2000	Noise (Regulation & Control) Rules, 2000