

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH AT NEW DELHI  
ORIGINAL APPLICATION NO. 141 OF 2026**

**IN THE MATTER OF:**

Veer Singh

.....Applicant

Versus

State of J&K (UT) and Others

.....Respondents

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2.	<b>Annexure-I :-</b> A true copy of the Hon'ble NGT Order dated 23.02.2026.	
3.	<b>Annexure-II :-</b> A copy of CPCB directions dated February 12, 2025, issued to all SPCBs/PCCs under section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, regarding harmonisation of classification of industrial sectors under Red, Orange, Green, White and Blue Categories.	
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*Satif*

**Filed by Advocate Atif Suhrawardy**  
(On behalf of Central Pollution Control Board)

Place: New Delhi

Dated: - 12.05.2026

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**REPLY ON BEHALF OF RESPONDENT No. 3, i.e., THE CENTRAL POLLUTION CONTROL BOARD (CPCB).**

**MOST RESPECTFULLY SHOWETH:**

1. That the Central Pollution Control Board (hereinafter referred to as "CPCB") is constituted under Section 3 of the Water (Prevention and Control of Pollution) Act, 1974. It performs functions under the provisions of the Water (Prevention and Control of Pollution) Act 1974 (hereinafter referred as the Water Act, 1974) the Air (Prevention and Control of Pollution) Act, 1981 (hereinafter referred as the Air Act, 1981) and the Environment (Protection) Act, 1986 (hereinafter referred as the E (P) Act, 1986). In the instant Original Application CPCB has been arrayed as Respondent No.3.
2. That the State Pollution Control Boards (hereinafter referred to as "SPCBs") and Pollution Control Committees (hereinafter referred to as "PCCs") have been constituted in States/Union Territories under the Water

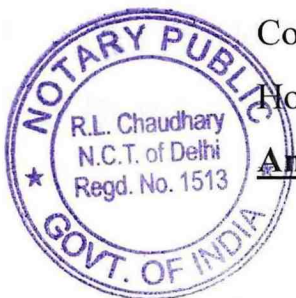


Act, 1974 and the Air Act, 1981 and are empowered to implement the provisions of these Acts in respect of territories falling in their respective Territorial Jurisdictions.

**PRELIMINARY SUBMISSIONS:**

3. That the present Original Application has been filed by the Applicant alleging continuous illegal operation of a Stone Crusher and Hot Mix Plant being run by M/s SGIH Pvt. Ltd, located at Khasra No. 45, Village Sungri Chana, Tehsil Chasana, District Reasi (J&K) and large-scale illegal and unscientific mining in Ans River, allegedly without any valid Environmental Clearance, Consent to Establish (CTE), Consent to Operate (CTO) or allocation of a legal Mining block.
  
4. That the Hon'ble National Green Tribunal (PB) vide order dated 23.02.2026 constituted a Joint Committee comprising of the Representative of the CPCB, Jammu & Kashmir Pollution Control Committee and the Deputy Commissioner, Reasi, and directed the Joint Committee to visit the site, ascertain the status of the Environmental Clearances (EC, CTE, CTO) if any, obtained by the Respondent No. 7 and compliance of their conditions and has also been directed to ascertain the allegation of the illegal mining by the Respondent No. 7 and find out the extent of illegal mining by the Respondent No. 7 and ascertain the consequential environmental damage which has been caused and submit the report before the Tribunal within eight weeks. The Deputy Commissioner, Reasi will act as a coordinating agency in the Joint Committee. A true copy of the order dated 23.02.2026 passed by this Hon'ble National Green Tribunal is marked and annexed hereto as

**Annexure-I.**



5. That it is humbly submitted that as per the CPCB direction dated February 12, 2025 issued to all SPCBs/PCCs under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981, regrading harmonization of classification of industrial sectors under Red, Orange, Green, White and Blue Categories, "Stone Crushers" and "Hot Mix Plants" are categorized under 'Orange' category and are required to obtain Consent to Establish (hereinafter referred to as 'CTE') and Consent to Operate (hereinafter referred to as 'CTO') from the concerned SPCB/PCC. The Stone crushing units and Hot Mix plants should operate only after obtaining CTE and CTO from the concerned SPCB/PCC and shall comply with the conditions laid down in CTE and CTO. The copy of said directions is enclosed as **Annexure- II.**

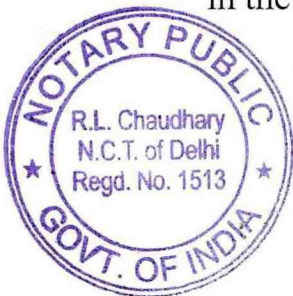
6. That the Emission Standards for stone crushing units were notified vide Notifications no. (i) S.O. 443(E) dated 18.04.1987 and (ii) G.S.R. 742(E) dated 30.08.1990, and for Hot Mix Plants notified vide notification no. G.S.R. 376(E) dated 18<sup>th</sup> May, 2023 under the E (P) Act, 1986 by the Ministry of Environment, Forest and Climate Change (hereinafter referred to as "MoEF&CC") and all the stone crushing units and Hot Mix plants are required to comply with the emission norms prescribed thereunder. A copy of aforesaid notifications in respect of Stone crushing units and Hot Mix Plants is enclosed as **Annexure -III.**

7. That CPCB formulated comprehensive Environmental Guidelines for Stone Crushing Units in July, 2023, which were duly circulated to all SPCBs/PCCs for implementation within their respective jurisdictions. The said Guidelines stipulate both general and source-specific measures required to be adopted by stone crushing units for the prevention and



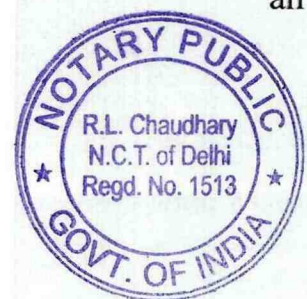
suppression of fugitive dust emissions. A copy of the said Environmental Guidelines for Stone Crushing Units is enclosed as Annexure-IV.

8. That minor minerals are defined under Section 3(e) of the Mines and Minerals (Development & Regulation) Act, 1957 (MMDR Act). Section 15 of the MMDR Act empowers the State Governments to make Rules for regulating the grant of quarry leases, mining leases or other mineral concessions in respect of minor minerals and for purposes connected therewith.
9. That Section 23C of the MMDR Act empowers the State Governments to make Rules for preventing illegal mining, transportation and storage of minerals and for the purposes connected therewith.
10. That Central Government has made it mandatory to obtain Environmental Clearance for mining of minerals. The MoEF&CC published EIA Notification 2006 and its amendments regarding Environmental Clearance to be obtained by the mine owner for mining activities, which includes Environmental Impact Assessment/Environment Management Plan Reports and necessary conditions for safeguarding the environment are stipulated while granting necessary Environmental Clearances.
11. That the State Level Environment Impact Assessment Authority (hereinafter referred to as "SEIAA") is constituted in States/UTs and are empowered to grant Environmental Clearance as per procedures specified in the EIA Notification for the respective States/UTs.



12. That MoEF&CC has issued "Sustainable Sand Mining Management Guidelines-2016" to promote scientific mining of sand and encourage environmentally friendly management practices, and to ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system. For the enforcement of the regulatory provisions related to river sand mining for effective monitoring and ensuring sustainable sand mining, MoEF&CC has released "Enforcement and Monitoring Guidelines for Sand Mining" in January 2020.

13. That the mining operations are regulated through the grant of CTE and/or CTO under the Water, 1974 and the Air Act, 1981 by the concerned SPCBs/PCCs. The Water Act and the Air Act also includes provisions for monitoring compliance with environmental standards and provisions of a show-cause notice/closure for non-compliance of environmental standards. In the matter of illegal sand mining, Hon'ble National Green Tribunal vide order dated 26.02.2021 in OA No. 360/2015 directed for the scale of compensation to be adopted by all the States/UTs for imposing Environmental Compensation to deal with cases of illegal sand mining in violation of Environmental Clearance conditions. In compliance to above order, CPCB vide letter dated 11.06.2021 issued directions to Environment Secretaries of States/UTs to evolve an appropriate mechanism for assessment of compensation in all Districts of the State and for utilisation of recovered compensation for restoration of the environment by preparing an appropriate action plan.

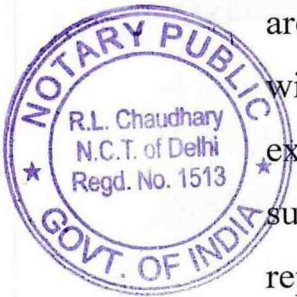


PARAWISE REPLY ON MERITS:

14. That the averment made in Paragraph No.1 of the Original Application is about the introduction of the Applicant who is a resident of Village Sungri Chana, Tehsil-Chasana, District-Reasi (J&K) where alleged illegal activity of Stone Crusher/Hot Mix Plant and Mining is going on and also brings out the adverse impact of illegal activities of Respondent No.7. In reply, it is humbly submitted that the Joint Committee constituted by the Hon'ble NGT vide Order dated 28.02.2026, carried out site visit on 23.04.2026. The Deputy Commissioner, Reasi is coordinating agency in the Joint Committee.

15. That the averment made in Paragraph No.2 of the Original Application is about the statutory duties of the Respondent No. 2 to 6 regarding protection of environment, regulating mining activities and ensure compliance with environmental norms. In this regard, the submissions made in para 5 to 13 of this reply are re-iterated and are not repeated herein for the sake of brevity.

16. That the averments made in Paragraph No. 3 of the Original Application are about the illegal operation of the Stone Crusher and Hot Mix Plant without obtaining CTE/CTO, and also illegal mining in River Ans for extracting raw material by M/s SGIH Pvt. Ltd. In this regard, the submissions made in para 5 to 13 of this reply are re-iterated and are not repeated herein for the sake of brevity.



17. That the averment made in Paragraph No. 4 of the Original Application is about filing of the present Original Application under Section 14, 15 and

18 of the NGT Act, 2010, invoking the Jurisdiction of the Hon'ble Tribunal for protection of environment, ecology, natural resources and public health, which calls for no reply from Answering Respondent No. 3.

18. That the averment made in Paragraph No. 5 of the Original Application is about the issues raised in the present Original Application which constitutes substantial questions relating to environment within the meaning of Section 14 the NGT Act, 2010 and also about carrying on alleged illegal mining activities and operation of stone crusher and hot mix plant by Respondent No.1 without mandatory statutory clearance and thereby causing environmental degradation. In this regard, the submissions made in para 5 to 14 of this reply are re-iterated and are not repeated herein for the sake of brevity.

19. That the averments made in Paragraph No.6 of the Original Application are about the alleged establishment of a Stone Crusher, 100-200 meters away from Residential area adjoining to the agriculture land and submission that no stone crusher should be established without CTE and CTO from PCB/PCC and also should be located up to 500 meters from any residential area. Jammu & Kashmir Pollution Control Committee (hereinafter referred to as "J&KPCC") is empowered to grant CTE and CTO and enforce conditions of CTE and CTO within the UT of Jammu & Kashmir. Thereby, the reply of concerned respondent may kindly be considered in this regard.

20. That the averment made in Paragraph No.7 of the Original Application is about reasons of approaching this Hon'ble Tribunal. The contention made

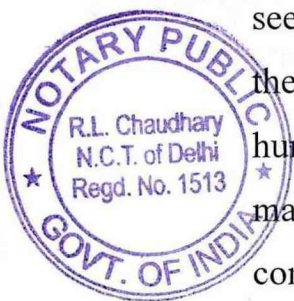


in this Paragraph does not refer to this Answering Respondent. Hence, no reply is required from this Answering Respondent No.3.

21. That the averment made in Paragraph No. 8 of the Original Application is about the written communication issued by the Deputy Commissioner, Reasi regarding the operation of illegal stone crusher. However, it is alleged that in pursuance of same no action had been taken thereto neither by the Deputy Commissioner himself nor by the Sub-Divisional Magistrate to whom the said communication was addressed. In reply it is humbly submitted that matter pertains to Respondent No. 6 and hence may be appropriately addressed by the concerned respondent and need no comments from Answering Respondent No. 3.

22. That the averment made in Paragraph No. 9 of the Original Application is about the failure of Respondent No.7 in obtaining CTE or CTO. In this regard, the reply made in para 5 of this reply is re-iterated and is not repeated herein for the sake of brevity.

23. That the averments made in Paragraph No. 10 of the Original Application are about the application filed under the Right to Information Act, 2010, seeking detailed information regarding the permission/license granted to the stone crusher unit and the reply submitted by JKPCC. In reply, it is humbly submitted that the matter pertains to Respondent No. 5 and hence, may be appropriately addressed by concerned respondent and needs no comments from Answering Respondent No. 3.

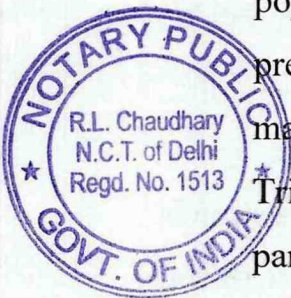


24. That the averment made in Paragraph No.11 of the Original Application are allegation about the illegal operations which are being carried out round

the clock, including night hours, which aggravate pollution levels and cause immense hardship to the local population. In this regard, the submissions made in para 4 to 7 of this reply are re-iterated and are not repeated herein for the sake of brevity.

25. That the averment made in Paragraph No. 12 of the Original Application is about the guidelines/notifications issued by JKPCC regarding establishment and operation of the Stone Crusher Unit, which provides for obtaining the mandatory 'CTE' and 'CTO'. It is further alleged that Respondent No.7 has established and operating the said unit in violation of the aforesaid guidelines, without adhering to the mandatory consent conditions. In this regard, the reply made in para 5 of this reply is re-iterated and is not repeated herein for the sake of brevity.

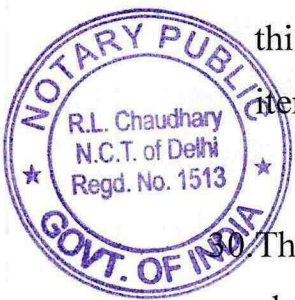
26. That the averment made in Paragraph No.13 of the Original Application is about the location of the Stone Crusher. The Applicant has alleged that the said Stone Crusher is situated in close and impermissible proximity to sensitive and inhabited areas, which are approximately 115 meters from a temple, 231 meters from the cremation ground, 74 meters from the Ans River, and about 100 meters from the residential habitation, which poses serious environmental, health and public nuisance concerns to the local population. In this regard, it is humbly submitted that compliance with the prescribed siting criteria falls within the jurisdiction of the J&KPCC and may be appropriately addressed by them. Further, the Hon'ble Tribunal has constituted the Joint Committee in this regard as submitted at para 4 above.



27. That the averment made in Paragraph No. 14 of the Original Application alleges about the continuous emission of dust particles that adversely affect the health and living conditions of the residents of the nearby localities due to the accumulation and stacking of crushed stone material. In this regard, it is pertinent to mention that to mitigate environmental issues associated with Stone Crushers, the CPCB has formulated "Environmental Guidelines for Stone Crusher Units" in July, 2023 and circulated to all the SPCBs/PCCs for its implementation.

28. That the averment made in Paragraph No.15 of the Original Application is about the engagement of Respondent No.7 in the activity of large-scale illegal extraction of minor minerals directly from the river bed/nallah by using heavy machinery such as JCBs, excavators, dumpers and tippers. The allegations relates to Respondent No 4 to 7 hence call for no reply from this answering respondent.

29. That the averment made in Paragraph No.16 of the Original Application is about the result of the illegal riverbed mining. The Applicant had submitted that such illegal riverbed mining has resulted in deepening of the riverbed, destabilization of riverbanks, alteration of natural water flow, destruction of aquatic life and also increases the risk of floods during the monsoon. In this regard, the submissions made in para 4 and 8 to 13 of this reply are reiterated and are not repeated herein for the sake of brevity.



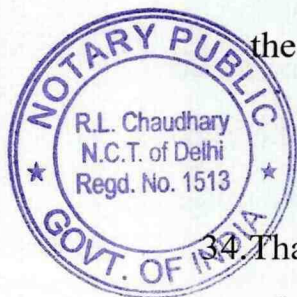
30. That the averment made in Paragraph No.17 of the Original Application is about effect of illegal mining. The Applicant has submitted that illegal mining severely affected groundwater recharge, leading to depletion of drinking water sources and also irrigation facility for farmers. In this

regard, the submissions made in para 4 and 8 to 13 of this reply are re-iterated and are not repeated herein for the sake of brevity.

31. That the averment made in Paragraph No.18 of the Original Application is about the generation of dust, and particulate matter emissions due to continuous crushing of stones, operation of the hot mix plant and movement of heavy vehicles. In this regard, the submissions made in para 4 to 7 of this reply are re-iterated and are not repeated herein for the sake of brevity.

32. That the averment made in Paragraph No. 19 of the Original Application is about deterioration of the ambient air quality in the surrounding area, In reply it is humbly submitted that unit is required to comply with the prescribed environmental norms and guidelines for prevention and control of pollution as stipulated under the applicable environmental laws and the conditions prescribed under the CTE and CTO so as to maintain the ambient air quality. The respondent no. 5 i.e. J&KPCC, shall ensure compliance with the prescribed standards and the conditions stipulated under the CTE and CTO.

33. That the averment made in Paragraph No. 20 of the Original Application is about the alleged effect of these illegal activities of the Respondent No. 7 on the residents of the area. The Hon'ble Tribunal has constituted the Joint Committee in this regard as submitted at para 4 above.



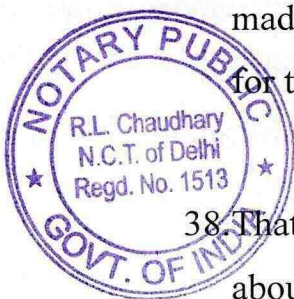
34. That the averment made in Paragraph No.21 of the Original Application relates to the Fundamental Right of breathing in clean air guaranteed under

Article 21 of the Constitution of India. The Applicant had submitted that the right to breathe clean air, which is an integral part of Article 21 of the Constitution of India, being grossly violated in the present situation. The contention made in this paragraph is for the consideration of the Hon'ble Tribunal. Hence, need no reply from Answering Respondent No.3.

35. That the averments made in Paragraph No.22 of the Original Application is about the effect of illegal mining and dumping of debris, which pollutes surface water bodies and also renders water unfit for drinking and domestic use. In this regard, the submissions made in para 4 and 8 to 13 of this reply are re-iterated and are not repeated herein for the sake of brevity.

36. That the averments made in Paragraph No. 23 are about the adverse impact of depletion of groundwater on agriculture, livestock and overall rural economy. The averments do not refer to this Answering Respondent. Hence, need no reply from Answering Respondent No.3.

37. That the averments made in Paragraph No. 24 are about the failure on the part of Respondent No.7 regarding installation of any scientific mechanism for water conservation or pollution control. In this regard, the submissions made in para 4 to 8 of this reply are re-iterated and are not repeated herein for the sake of brevity.



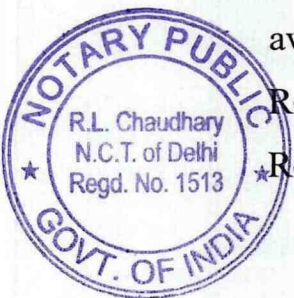
38. That the averment made in Paragraph No.25 of the Original Application is about the Noise Pollution caused by the operation of the stone crusher, hot mix plant and heavy vehicles, which allegedly generates excessive noise far beyond the permissible limits prescribed under the Noise Pollution (Regulation and Control) Rules, 2000. In reply, it is submitted that these

industrial units are required to comply with the prescribed noise standards stipulated under the Noise Pollution (Regulation and Control) Rules, 2000.

39. That the averment made in Paragraph No.26 of the Original Application is about the alleged Continuous night time operations of Stone crusher and hot mix plant which causes sleep disturbance, mental stress and adverse psychological impact on residents of the area. In reply it is humbly submitted that as per CPCB guidelines, stone crushers are allowed to operate only during day time (i.e. from 6.00 AM to 10.00 PM) to avoid inconvenience to the nearby residents due to ambient noise.

40. That the averment made in Paragraph No.27 & 28 of the Original Application is about the alleged adverse effect of illegal mining regarding the destruction of natural habitats of birds, fish and other wildlife and the alleged adverse effect of illegal operation of stone crusher and illegal mining on vegetation, soil fertility and ecological balance, which results in damage of vegetation, reduction in soil fertility and disturbance in ecological balance also. In this regard, the submissions made in para 4 to 13 of this reply are re-iterated and are not repeated herein for the sake of brevity.

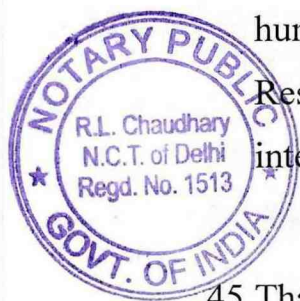
41. That the averment made in Paragraph No.29 of the Original Application is about the alleged submission of multiple complaints by the Applicant. The averment made in this Paragraph does not refer to this Answering Respondent No.3. Hence, no reply is required from this Answering Respondent No.3.



42. That the averment made in Paragraph No.30 of the Original Application is about the alleged inaction and failure on the part of Authorities in taking effective action despite having full knowledge, thereby facilitating continued illegality. The averment made in this Paragraph does not refer to this Answering Respondent No.3. Hence, no reply is required from this Answering Respondent No.3.

43. That the averment made under the heading Grounds of the Original Application related to the Grounds, on the basis of which the Applicant have approached this Hon'ble Tribunal. In this regard, it is humbly submitted that submissions made in the above paragraphs may please be considered and are not repeated herein for the sake of brevity.

44. That the averment made under the heading "Interim Relief" is about the Interim Relief sought by the Applicant. The Applicant has prayed for issuance of appropriate direction to Respondent No.7 for restraining him from operating the said stone crusher unit during the pendency of present case and also for direction to Pollution Control Board to forthwith take necessary action to stop the operation of the illegal stone crusher. It is humbly submitted that the same needs no reply from this Answering Respondent No. 3 and may be adjudicated by the Hon'ble Tribunal in the interest of justice.



45. That the averment made under the heading "Limitation" and under the heading "Prayer" are about the limitation to file the present Original Application and prayer sought by the applicant from the Hon'ble Tribunal. It is humbly submitted that the no reply is offered in this regard and the

same may be suitably addressed by the Hon'ble Tribunal in the interest of justice.

46. That it is most respectfully submitted that the Answering Respondent seeks liberty to file an additional reply if the same is required to be filed at a later stage.

47. In light of the above submissions, it is most respectfully submitted that this Answering Respondent i.e. CPCB, shall abide by all the orders or directions passed by the Hon'ble National Green Tribunal in the instant Original Application.

A handwritten signature in blue ink, appearing to read "Anamika Sagar".

(Anamika Sagar)

Scientist-E

Central Pollution Control Board

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH AT NEW DELHI  
ORIGINAL APPLICATION NO. 141 OF 2026**

**IN THE MATTER OF:**

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....Applicant

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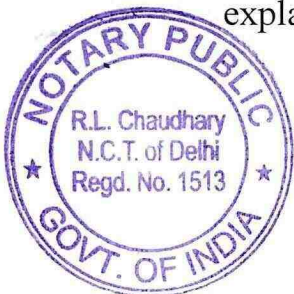
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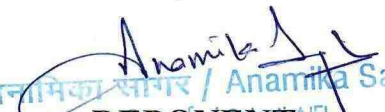
....Respondents

**AFFIDAVIT**

I, Anamika Sagar, working as Scientist 'E', having office at the Delhi, Central Pollution Control Board, Respondent No. 03, Parivesh Bhawan, East Arjun Nagar, Delhi, do hereby solemnly affirm and sincerely state on oath as follows:-

1. That I, the deponent herein, is well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records, and hence, I am competent to verify, sign and swear this affidavit on behalf of the Respondent CPCB.
2. That the accompanying reply may be read part and parcel of the present affidavit.
3. That the accompanying reply has been drafted and filed under my instructions, the contents thereof are true and correct based on the record maintained during the ordinary course of business of CPCB and available records and documents and the contents of the same are read over and explained to me and are not repeated herein for the sake of brevity.



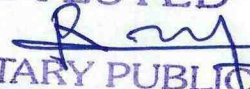
  
 अनमिका सागर / Anamika Sagar  
**DEPONENT**  
 केंद्रीय प्रदूषण नियंत्रण बोर्ड  
 Central Pollution Control Board  
 (पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)  
 (M/o Environment, Forest & Climate Change, Govt. of India)  
 परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032  
 Parivesh Bhawan, East Arjun Nagar, Delhi-110032

## VERIFICATION

Verified at New Delhi on this day of **12 MAY 2026** MAY 2026, that the contents above are correct and true based on the records of the case as mentioned in the day-to-day affairs of the CPCB. Nothing has been concealed therefrom or misstated.

  
**DEPONENT**



**ATTESTED**  
  
**NOTARY PUBLIC**  
**GOVT. OF INDIA**

**12 MAY 2026**

**अनामिका सागर / Anamika Sagar**  
वैज्ञानिक 'ई' / Scientist 'E'  
**केंद्रीय प्रदूषण नियंत्रण बोर्ड**  
**Central Pollution Control Board**  
(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)  
(M/o Environment, Forest & Climate Change, Govt. of India)  
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032  
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

Item No. 05

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 141/2026

Veer Singh

Applicant

Versus

State of J&amp;K (UT) &amp; Ors.

Respondent(s)

Date of hearing: 23.02.2026

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON  
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER**

Applicant: Mr. Prakash Pandey, Advocate (Through VC)

**ORDER**

1. In this Original Application, the residents of Village Sungri Chana, Tehsil Chasana, District Reasi, J&K have raised a complaint against illegal operation of the Stone Crusher and Hot Mix Plant being run by the Respondent No. 7 – M/s SGIH Pvt. Ltd. The applicant has alleged that this Stone Crusher and Hot Mix Plant is being operated by the Respondent No. 7 without obtaining CTE and CTO in khasra no. 45 of Village Sungri Chana. The further allegation of the applicant is that the Respondent No. 7 has indulged in large scale illegal and unscientific mining in the Ans River, Sungri without valid Environmental Clearances and has dug up the pits upto the depth of 30 feet causing serious damage to the river. In support of such a plea, counsel for the applicant has referred to the photographs (Page 19 onwards).

2. The counsel for the applicant has also submitted that though the complaints were made to different authorities but no action has been taken till now.

3. The OA raises substantial issue relating to compliance of environmental norms.

4. Issue notice to the respondents. Applicant is directed to serve the respondents and file affidavit of service at least one week before the next date of hearing.

5. Having regard to the nature of allegation made in the OA we also deem it proper to appoint a Joint Committee comprising of the Representative of the Central Pollution Control Board, Jammu & Kashmir Pollution Control Committee and the Deputy Commissioner, Reasi. The Deputy Commissioner, Reasi will act as a coordinating agency in the Joint Committee.

6. The Joint Committee will visit the site, ascertain the status of the Environmental Clearances (EC, CTE, CTO) if any obtained by the Respondent No. 7 and compliance of their conditions and will also ascertain the allegation of the illegal mining by the Respondent No. 7 and find out the extent of illegal mining by the Respondent No. 7 and ascertain the consequential environmental damage which has been caused and submit the report before the Tribunal within eight weeks.

7. List on 14.05.2026.

Prakash Shrivastava, CP

Dr. Afroz Ahmad, EM

February 23, 2026  
Original Application No. 141/2026  
AS



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

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

Date: 12.02.2025

To

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

**Sub: Directions under section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 regarding harmonization of classification of industrial sectors under Red, Orange, Green, White and Blue categories.**

WHEREAS, under section 16 (2)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(c) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the Central Pollution Control Board (CPCB), constituted under the Water (Prevention and Control of Pollution) Act, 1974, is to coordinate activities of the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs); and

WHEREAS, under section 16 (2)(c) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(d) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the CPCB is to provide technical assistance and guidance to SPCBs and PCCs; and

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

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

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(K)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**NOW, THEREFORE**, in the exercise of the powers delegated under Section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and Section 18(1)(b) of the Air (Prevention & Control of Pollution), Act, 1981 the earlier directions dated 07.03.2016 and subsequent directions/letter in the context of categorization of industries are withdrawn with immediate effect and following '**Directions**' are hereby issued for compliance by all SPCBs and PCCs:

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

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

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

**Encl.** As above.



**(Bharat Kumar Sharma)**

Member Secretary



Copy to:

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(As per the list)
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4. The Secretary,  
Ministry of New and Renewable Energy  
Block-14, CGO Complex,  
Lodhi Road, New Delhi-110 003
5. The Joint Secretary (CP Division)  
Ministry of Environment, Forests and Climate Change  
Indira Paryavaran Bhawan  
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6. All Regional Directorates, CPCB  
(As per the list)



**(Bharat Kumar Sharma)**

Member Secretary



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

(A tool for progressive environmental management)



**Central Pollution Control Board**

**“Parivesh Bhawan”, East Arjun Nagar**

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**(January 2025)**

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सत्यमेव जयते

FOREWORD

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

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

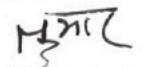
The 2025 classification methodology bifurcates sub-sectors based on pollution load, scale of operation, production technology, and type of fuel used into Red, Orange, Green, White and Blue categories. Red indicates the highest pollution potential, requiring stringent regulatory oversight, while White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

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

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

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

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

  
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## EXECUTIVE SUMMARY

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

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

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

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

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

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

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

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

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

Following are the salient features of the revised classification methodology:

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

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

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

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

\*\*\*\*\*

**LIST OF ABBREVIATION**

CBG: Compressed Biogas

CNG: Compressed Natural Gas

CPI: Cumulative Pollution Index

CPCB: Central Pollution Control Board

CTE: Consent to Establishment

CTO: Consent to Operate

EC: Environment Compensation

ETP: Effluent Treatment Plant

EES: Essential Environmental Services

Gen-Set: Generator Set

HAPs: Hazardous Air Pollutants

HCFs: Health Care Facilities

HW: Hazardous Waste

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

LNG: Liquefied Natural Gas

LPG: Liquefied Petroleum Gas

NGT: National Green Tribunal

NOC: No Objection Certificate

OCEMS: Online Continuous Effluent/Emission Monitoring System

PCC: Pollution Control Committee

PM: Particulate Matter

PI: Pollution Index

PI<sub>A</sub>: Air pollutant score

PI<sub>H</sub>: Waste pollutant score

PI<sub>w</sub>: Water pollutant score

PNG: Piped Natural Gas

SPCB: State Pollution Control Board

TTZ: Taz Trapezium Zone

VOCs: Volatile Organic Compounds

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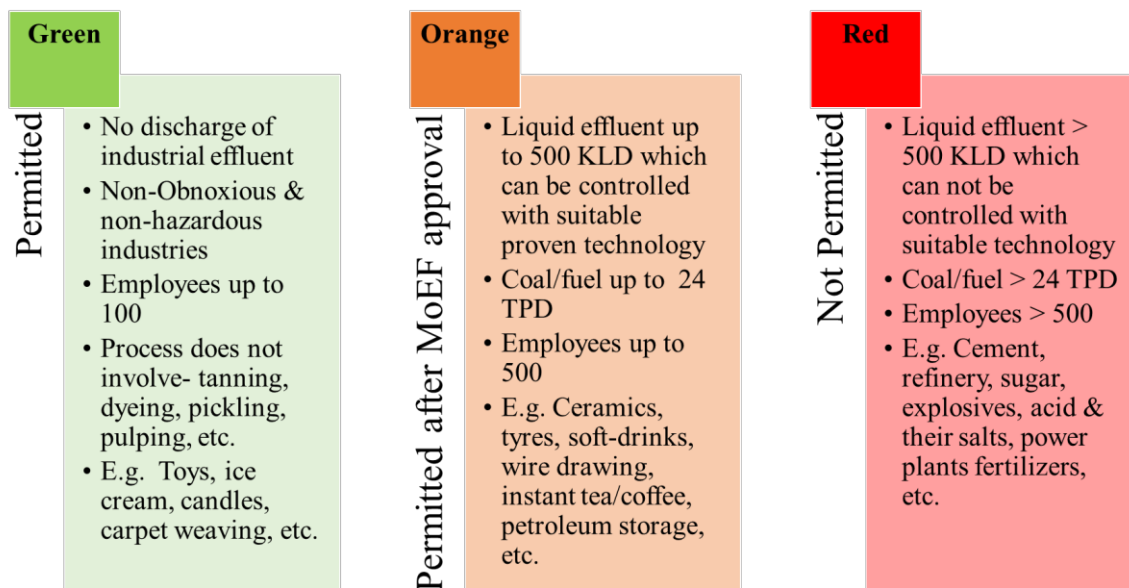
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## Genesis and Journey of Classification

### 1.1 Introduction

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

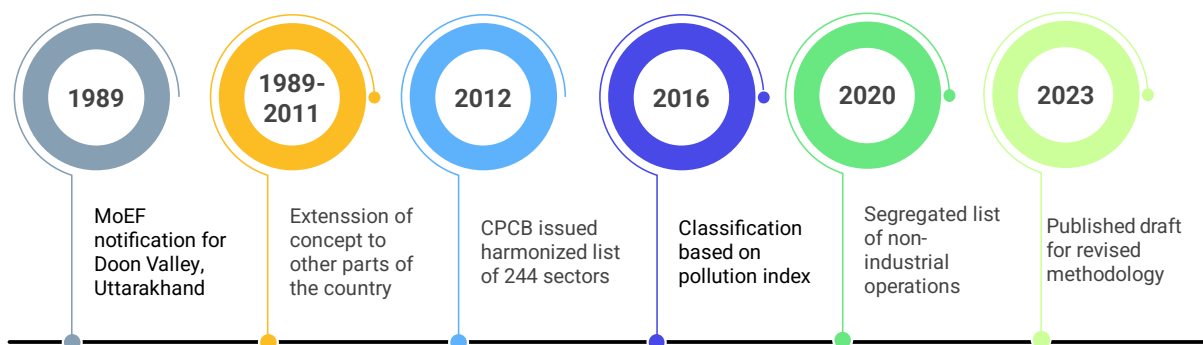


**Figure I: Criteria for classification of industries in Doon Valley Notification, 1989**

Subsequently, the application of this concept was extended to other parts of the country not only for the purpose of location of industries, but also for the purpose of consent management and formulation of norms related to surveillance/inspection of industries. As the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) were following different

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

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



**Figure II: Genesis and journey of classification of sectors**

The concept of categorization is based on the “Precautionary Principle”, which focuses on potential of industries to pollute the environment. The purpose of categorization is to ensure that the industry is established in a manner consistent with the environmental objectives and to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in generation of minimum pollutants.

\*\*\*\*\*

# 2

## Modified Methodology for Classification

### 2.1 Need and scope for revision of methodology

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

#### i. Assessment of Pollution Index:

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

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

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

#### ii. Size of operations of industrial activities:

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



### **iii. Consideration to segregated industrial activities:**

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

### **iv. Consideration of type of fuel used:**

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

### **v. Separate scoring for sewage and trade effluent:**

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

### **vi. Motivation to industries for progressive environmental management:**

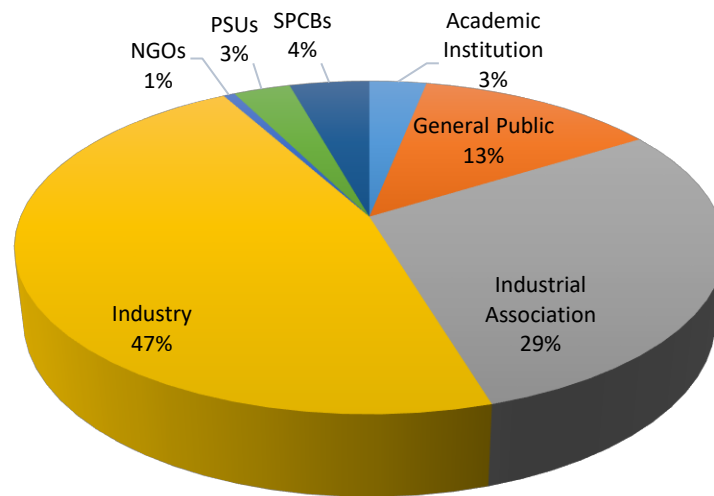
In the previous classification regime, there was no effective provision for change in category of industries based on the variation in pollution potential of a sector, even if the industries adopt cleaner technologies or switch over to cleaner raw material/cleaner fuel etc., resulting into reduction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

## **2.2 Modified methodology for classification of sectors**

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

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

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



**Figure III: Stakeholder-wise representations received**

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

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



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

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

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

### **2.2.1 Scoring criteria for Water Pollutant “ $PI_W$ ”**

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

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



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

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

**Table I: Scoring Criteria for Water Polluting Sector**

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



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

### 2.2.2 Scoring criteria for Air Pollutant “PI<sub>A</sub>”:

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

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

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

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



Table II : Scoring criteria for air polluting sectors

Air Pollutant Group	Description	Score
<b>Score A1: Score based on Process emissions (point source)</b> (Maximum of the following scores to be considered)		
A1-1	Hazardous Air Pollutants (HAPs) and heavy metals: <i>HAPs (Phosgene, Benzene, Benzo(α)pyrene, Butadiene, Toluene Di-isocyanate, Methylene-di-phenyl Di-isocyanate, Ethylene Oxide, Ethylene Di Chloride, Acrylonitrile, Propylene Oxide), Dioxins &amp; Furans, Asbestos, Polycyclic Aromatic Hydrocarbons (PAHs), HCN, Cd, Th, Hg, Sb, As, Pb, Co, Cr, Cu, Mn, Ni, V, etc.</i>	35
A1-2	Halogens, acids, and pesticides-based pollutants: <i>H<sub>2</sub>S, HF, HBr, P<sub>2</sub>O<sub>5</sub> as H<sub>3</sub>PO<sub>4</sub>, NH<sub>3</sub>, TOC, Cl, HCl, SO<sub>3</sub>, CH<sub>3</sub>Cl, Total Fluoride, PM having pesticide compounds/other organic compounds, Acid mist, etc.</i>	30
A1-3	Pollutants due to combustion of fuel or due to process: <i>PM, CO<sub>2</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, etc.</i>	25
A1-4	Volatile Organic Compounds (VOCs): <i>Ethyl benzene, Styrene, Toluene, Xylene, Aromatics, Propylene Glycol, Ethylene Glycol, etc.</i>	20
<b>Score A2: Score based on fugitive emissions and odour nuisance</b> (Maximum of the following scores to be considered)		
A2-1	Fugitive emissions of Particulate Matter (PM), acid mist, VOCs, etc. from process	30
A2-2	Fugitive emissions of Particulate Matter (PM), acid mist, VOCs, etc. due to storage and handling, etc.	25
A2-3	Odour nuisance, including odour due to the use of binding gums, cements, adhesives, enamels etc.	20
<b>Score A3: Score based on quantity of fuel</b> (Maximum of the following scores to be considered)		
<b>Coal or liquid fuels</b>		
A3-1	Fuel consumption $\geq$ 24 TPD	35
A3-2	12 TPD $\leq$ Fuel consumption < 24 TPD	30
A3-3	Fuel consumption < 12 TPD	25
<b>Biomass-based fuels</b>		
A3-4	Fuel consumption $\geq$ 48 TPD	25
A3-5	24 TPD $\leq$ Fuel consumption < 48 TPD	20
A3-6	Fuel consumption < 24 TPD	15
<b>Cleaner/gaseous fuels, such as, PNG, CNG, LPG, Compressed Biogas (CBG), propane, butane etc.</b>		
A3-7	Fuel consumption $\geq$ 120 TPD	20
A3-8	60 TPD $\leq$ Fuel consumption < 120 TPD	15
A3-9	Fuel consumption < 60 TPD	10
A3-10	Electricity	0
<b>Air Pollutant Score (PI<sub>A</sub>) = A1+A2+A3</b>		
<b>Note:</b> In case, any sector/unit is using more than one type of fuel, the most polluting fuel category, will be considered.		



### 2.2.3 Scoring criteria for Industrial Waste Generating Sector “PI<sub>H</sub>”

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

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

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

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

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

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

**Table III: Scoring criteria for waste generating Sectors**

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



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

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

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

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

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

**Table IV: Ranges of Cumulative Pollution Index for different categories**

Cumulative Pollution Index (PI)	Category of industrial sector
$PI \geq 80$	Red
$55 \leq PI < 80$	Orange
$25 \leq PI < 55$	Green
$PI < 25$	White

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

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



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

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

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

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

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



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

The list of EES facilities is given at [Annexure-II](#).

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## **Classification of Sectors as per Revised Methodology**

### **3.1 Types of sectors based on their activities**

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

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

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



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

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

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

**Table V: Number of sectors classified under different categories**

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



### 3.2. Usage of classification of sectors

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

- i. **Consent management:** SPCBs/PCCs may grant Consent to Operate (CTO) to red, orange, and green categories of industries for validity up to 5 years, 10 years, and 15 years, respectively as per existing provisions which would be later governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023/Water Act, as amended. The validity of blue category sectors will be 2 years more than the category based on PI.
- ii. **Inspection frequency:** SPCBs/PCCs may prioritize their environmental surveillance programs based on the categories of sectors. SPCBs/PCCs are required to ensure inspection of red, orange, and green category of industries at least once in six-months, one-year, and two-years, respectively. Common facilities and 17 categories of industries are to be inspected at least once in every three-months.
- iii. **Siting criteria:** The categorization may be used as a tool for deciding the location/siting of an industry in a particular location.
- iv. **Development of cluster:** The classification will help in planning of sector specific cluster, based on scoring of various pollutants and development of adequate environment management infrastructure facility, accordingly.
- v. **Sector specific plans for pollution control:** The plans for control of pollution may be prepared and implemented on priority for the sectors having higher pollution index and overall higher pollution load.
- vi. **Levying environmental compensation:** Pollution index may be used for determining and levying environmental compensation on industries violating the environmental norms.
- vii. **A tool for progressive environmental management:** Industrial units may adopt cleaner technologies, cleaner fuels, etc. which may result in reduction of pollution index, thus, moving to lower pollution potential category. It will provide incentives to industries in terms of less consent renewal fees, less environmental surveillance/compliance burden, more validity period for consents/authorizations, etc.

### 3.3 Classification of left-out/new sectors

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



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

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

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## 4

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

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

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

### **4.1 Eligibility Criteria**

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



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

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

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

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

#### 4.2. Evaluation Criteria

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



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

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

Criteria	Checks and balances
<b>I. Wastewater Management</b>	
Installation of wastewater recovery system resulting into treatment and 100% reuse of treated wastewater in industrial process.	<ul style="list-style-type: none"> <li>• Unit must have adequate operational Effluent Treatment Plant (ETP). The freshwater requirement of the unit has shown proportionate reduction.</li> <li>• There should not be any flow/ponding of wastewater inside the premises or discharge outside from the premises. Further, there should not be any by-pass.</li> <li>• Electronic flowmeters and Pan-tilt-zoom (PTZ) camera should have been installed with connectivity for continuous transmission of data to SPCB/PCC and CPCB servers (as applicable).</li> <li>• Recirculation system should be clearly mapped and visible for inspection and flow meter should be installed at required locations with records.</li> <li>• Mass/water balance based on actual production need to be checked. The claim regarding reduction in freshwater consumption should have concurrency with the readings of flow meters, water bill, log-books, etc.</li> <li>• Treated wastewater should not be used for horticulture or agriculture purposes.</li> <li>• Sludge generated from treatment of wastewater should be managed properly as per the authorization issued by the concerned SPCB/PCC and timely submission of Form-IV as per the requirement of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.</li> </ul>
<b>II. Air Pollution Management</b>	
100% fuel dependency on cleaner fuels, such as- Piped Natural Gas (PNG), Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG) Liquefied Petroleum Gas (LPG), Compressed	<ul style="list-style-type: none"> <li>• No other fuel (coal, pet-coke, furnace oil, etc.) should be stored/used in the unit premises. Diesel for Gensets (as an auxiliary power source) may be allowed. Preference may be given to the units using gas based Gensets.</li> <li>• Adequate facility for stack monitoring (port holes, zig-zag ladder etc.) should be available with provision of OCEMS (as applicable).</li> </ul>



Biogas (CBG), propane, butane, etc.	<ul style="list-style-type: none"> <li>• Use of upgraded air pollution control devices with higher efficiency for the reduction of emissions.</li> <li>• Adoption of cleaner technology, advanced pollution control systems etc. to control fugitive/emissions</li> <li>• Use of alternate cleaner raw material for generation of less pollution.</li> <li>• Use of renewable energy as an alternate to conventional fuel/power should be considered.</li> </ul>
<b>III. Waste Management</b>	
The unit has adopted cleaner technology/ cleaner production which results in reduction in pollution/hazardous waste generation	<ul style="list-style-type: none"> <li>• Reduction in generation of pollution/waste due to adoption of cleaner technology/change in raw material etc.</li> <li>• Mass balance based on actual production need to be checked. There should be concurrency in generation of hazardous waste, utilization, disposal, etc. with respect to net reduction in generation.</li> </ul>
<b>IV. EPR Targets (for recycling facilities)</b>	
Recycling units identified for EPR obligations and has fulfilled all requirement including Environmentally Sound Management Facility for recycling.	<ul style="list-style-type: none"> <li>• Complying with the requirement of EPR obligation identified by CPCB from time to time.</li> </ul>

### 4.3. Re-assessment of Pollution Index (PI)

The purpose of giving star category is to classify the unit in the sector as star performing units.

The category of the unit may be re-assessed as detailed below:

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

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

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

**Table VIII: Nomenclature for revised category**

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

### **B. Essential Environmental Service Sectors for Domestic/Household Waste- “Blue Category Sectors”:**

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

#### **4.4 Incentives to the units for better environmental management**

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

**Table IX: Incentives to units for better environmental performance**

Category	Incentives
Red*	<ul style="list-style-type: none"> <li>• CTO may be granted for the validity of max. 10 years.</li> <li>• Prescribed random environmental surveillance inspection frequency may be once a year, considering the change in category.</li> </ul>
Orange*	<ul style="list-style-type: none"> <li>• CTO may be granted for the validity of max. 15 years.</li> <li>• Prescribed random environmental surveillance inspection frequency may be once in two years, considering the change in category.</li> </ul>
Green*	<ul style="list-style-type: none"> <li>• CTO may be granted for the validity of max. 20 years.</li> <li>• Prescribed random environmental surveillance inspection frequency may be once in four years, considering the change in category and given incentives twice the original category.</li> </ul>
Blue*	<ul style="list-style-type: none"> <li>• CTO may be granted with additional 3 years validity period.</li> <li>• Prescribed random environmental surveillance inspection frequency may be once in 3 months.</li> </ul>



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

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# 5

## Implementation pathway/guidelines

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

- i. All pending application for consideration of CTE/CTO and future such application shall be processed as per the revised methodology of classification. In case CTE granted before the revised classification, applicability of CTO will be as per new classification.
- ii. New classification will be applicable to existing units at the time of renewal of CTO or within one year from the date of directions issued by CPCB regarding implementation of revised classification, whichever is earlier. The annual fees or cumulative fees for the remaining period shall be as per the revised category.
- iii. SPCBs/PCCs may grant Consent to Operate (CTO) to units under red, orange, and green categories for maximum validity up to 5 years, 10 years, and 15 years, respectively as per existing provisions which would be later governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023/Water Act, as amended. SPCBs/PCCs may grant Consent to Operate (CTO) to units under Blue Category sectors with additional 2 years validity, considering their role as Essential Environmental Services for management of waste generated from domestic/household activities.
- iv. Requirement of intimation/consent for white category of industries, shall be governed as per the provisions/guidelines under Jan Vishwas (Amendment of Provisions) Act, 2023//Water Act, as amended.
- v. All sectors irrespective of category shall follow guidelines for pollution control, if any, issued by SPCB/PCC/CPCB time to time.



- vi. Siting of units shall be only in the conforming area as per the guidelines of CPCB/SPCB/PCC. Further, as per the Section 17(1)(n) of the Water Act, 1974 and the Section 17(1)(h) of the Air Act, 1981, SPCB/PCC may also frame policies/advisory with respect to the location of any industry/operations, the carrying on of which is likely to cause air/water pollution, considering the scale/type of industries and sensitivity of area. Siting of units in eco-sensitive area will be governed by their respective notifications.
- vii. The classification of sectors shall not be linked to sanction of loans/finance of bank proceedings.
- viii. In the matter of Taz Trapezium Zone (TTZ), for air pollution scores of 10 and 20 (as per 2016 methodology), equivalent scores of 30 and 60 (as per 2025 methodology), respectively, may be considered for sectoral guidelines/opinion from NEERI (Ref: Order dated 08.12.2021, in the matter of M.C. Mehta v/s Union of India, Writ Petition (Civil) No.13381/1984, before Hon'ble Supreme Court).
- ix. As per CPCB directions dated 12.12.2019, issued under Section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981, SPCBs/PCCs are required to ensure inspection of red, orange, and green category of industries at least once in six-months, one-year, and two-years, respectively. Common waste treatment facilities and 17 categories of industries are to be inspected at least once in every three-months. (Ref: Order dated 05.11.2019, in the matter of Shailesh Singh v/s State of Haryana & Ors., OA No.639/2018, before Hon'ble National Green Tribunal, Principal Bench).
- x. The sectors which are classified under white or green category and if such sectors have installed Genset(s) of higher capacity which are classified under orange/green category, then such sector will be considered under higher category.
- xi. All Industrial units are encouraged to adopt measures such as cleaner technology/cleaner production, cleaner raw material, cleaner fuel etc., for better environmental management. If such measures result into overall reduction of pollution



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

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**ANNEXURE-I**  
**(LIST OF INDUSTRIAL SECTORS CLASSIFIED UNDER RED, ORANGE, GREEN, AND WHITE CATEGORIES)**



**LIST OF INDUSTRIAL SECTORS**

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division	
~A~																	
1	Manufacturing of <b>Automobiles</b> (integrated facilities)	20	30	25	75	0	25	0	25	25	20	45	83.8	Red	i. Such types of plants are having either one or combinations of polluting activities viz. washing, metal surface finishing operations, pickling, plating, electro-plating, phosphating, painting, heat treatment etc.  ii. Some of such plants may outsource some /all of the polluting activities or may have stand-alone units. In such cases, after thorough inspection of such units by concerned SPCB, re-categorization of the industry shall be made accordingly.	IPC-V	
2	<b>Asbestos</b> and asbestos based industries	10	30	25	65	35	30	30	95	25	30	55	98	Red	Asbestos is carcinogenic and banned in many countries.	IPC-II	
3	<b>Almirah</b> , Grill Manufacturing (Dry Mechanical Process)	0	0	0	0	0	30	0	30	0	0	0	30	Green		IPC-V	
~B~																	
<b>4.0</b>	<b>BAKERY, CONFECTIONERY AND SWEETS PRODUCTS</b>																
4.1	Bakery, confectionery, sweets with production capacity $\geq 1$ TPD	25	0	20	45	25	0	25	50	0	0	0	61.3	Orange		IPC-III	

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

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

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

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

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

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
28	Cashew nut processing	20	0	15	35	25	20	15	60	0	0	0	67	Orange		IPC-III
<b>29.0</b>	<b>COFFEE SEEDS PROCESSING INDUSTRY</b>															
29.1	Coffee seeds processing (wet process)	35	0	20	55	25	0	15	40	0	0	0	64	Orange		IPC-III
29.2	Coffee seeds processing with eco-pulper	20	0	15	35	25	0	15	40	0	0	0	50.5	Green		IPC-III
<b>30</b>	<b>Manufacturing of Candy</b>															
30	Manufacturing of Candy	10	0	15	25	0	0	0	0	0	0	0	25	Green		IPC-V
<b>31</b>	<b>Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)</b>															
31	Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)	0	0	0	0	0	20	0	20	0	0	0	20	White		IPC-V
<b>32</b>	<b>Manufacturing of precast Cement products (without using asbestos/ boiler / steam curing) like pipe, pillar, jafri, well ring, block/tiles etc.(should be done in closed covered shed to control fugitive emissions)</b>															
32	Manufacturing of precast Cement products (without using asbestos/ boiler / steam curing) like pipe, pillar, jafri, well ring, block/tiles etc.(should be done in closed covered shed to control fugitive emissions)	0	0	15	15	0	25	0	25	0	0	0	30.6	Green		IPC-V
<b>33</b>	<b>Manufacturing of Ceramic Colour by mixing &amp; blending only (not using boiler and wastewater recycling process)</b>															
33	Manufacturing of Ceramic Colour by mixing & blending only (not using boiler and wastewater recycling process)	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-V
<b>34.0</b>	<b>CHILLING PLANT, COLD STORAGE AND ICE-MAKING</b>															
34.1	Chilling plant	20	15	15	50	0	0	0	0	0	0	0	50	Green		IPC-IV
34.2	Cold storage	0	15	15	30	0	0	0	0	0	0	0	30	Green		IPC-V
34.3	Ice Making	0	20	15	35	0	0	0	0	0	0	0	35	Green		IPC-V

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
35	Decoration of <b>Ceramic Cups</b> and plates by electric furnace	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-V
36	Ready mix <b>Cement Concrete</b>	0	0	0	0	0	30	0	30	0	0	0	30	Green		IPC-V
37	<b>CO<sub>2</sub></b> recovery plant	0	0	0	0	0	0	0	0	20	10	30	30	Green	Exhausted molecular sieves are generated as hazardous waste.	IPC-V
38	Assembly of air <b>Coolers/Conditioners</b> , repairing and servicing	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V
39	<b>Chalk</b> making from plaster of Paris (only casting without boilers etc. - sun drying / electrical oven)	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V
40	Standalone manufacturing of <b>Concrete</b> admixtures up to 1000 MT per Month capacity by physical mixing (without boiler and reactor and no generation of wastewater)	0	0	0	0	0	0	0	0	10	10	20	20	White	The sector may become green category if it generates wastewater. The unit needs to be re-classified as per the methodology in case the capacity exceeds 1000 MT per Month.	IPC-V
41	Used <b>Cooking</b> oil (UCO) collection centers	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V
~D~																
<b>42.0</b>	<b>DYES, DYE INTERMEDIATES AND PIGMENT PRODUCTIONS</b>															
42.1	Dyes, Dye Intermediates and Pigments produced by chemical synthesis	35	30	25	90	30	20	25	75	30	20	50	96.3	Red		IPC-I

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

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

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

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

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
59.1	Modular wooden furniture from particle board, MDF, swan timber etc, Ceiling tiles/ partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (With boiler)	0	0	0	0	25	25	10	60	0	0	0	60	Orange		IPC-V
59.2	Modular wooden furniture from particle board, MDF, swan timber etc, Ceiling tiles/ partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (Without boiler)	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-V
<b>60.0</b>	<b>CARPENTRY &amp; WOODEN FURNITURE MANUFACTURING</b>															
60.1	Carpentry & wooden furniture manufacturing with spray painting (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-V
60.2	Carpentry & wooden furniture manufacturing without spray painting (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V

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

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

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

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

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

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
	renewable energy) on BOO/BOOT/BOT, mode etc., located in the premises of end user industry and directly using de-mineralized water & other utilities (cooling tower, ETP, etc.) sourced from end user industry														water requirement to be met by the end user industry.  ii. Wastewater and other waste generated during O&M shall also be managed by the end user industry.	
69	<b>Glue</b> from starch (physical mixing) with Gas/ electrically operated oven /boiler.	0	0	0	0	25	0	10	35	0	0	0	35	Green		IPC-V
70	<b>Gold</b> and silver smithy (purification with acid smelting operation and sulphuric acid polishing operation) (using less or equal to 1 litre of sulphuric acid/ nitric acid per month)	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-V
71	Compressed oxygen <b>Gas</b> from crude liquid oxygen (without use of any solvents and by maintaining pressure & temperature only for separation of other <b>Gases</b> )	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V
72	<b>Glass</b> and ampules and vials making from <b>Glass</b> tubes	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V
73	<b>Ground</b> nut decorticating	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V

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

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

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

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

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

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
101.1	Industry or process involving metal surface treatment or process such as pickling/ electroplating/paint stripping/ heat treatment using cyanide bath/ phosphating or finishing and anodizing / enamellings/ galvanizing	25	30	20	75	30	25	0	55	25	30	55	88.8	Red		IPC-V
101.2	Plasma electrolytic polishing (electroplating)	25	30	15	70	30	25	0	55	0	0	0	78.3	Orange		IPC-V
101.3	Heat treatment using furnace ( without cyaniding)	0	0	0	0	25	0	25	50	0	0	0	50	Green		IPC-V
101.4	Heat treatment with any of the new technology like ultrasound probe, induction hardening, ionization beam, gas carburizing etc.	0	15	15	30	0	25	0	25	0	0	0	38.8	Green		IPC-V
<b>102.0</b>	<b>FORGING OF FERROUS AND NON- FERROUS METALS</b>															
102.1	Forging of ferrous and non-ferrous metals using liquid fuel	0	0	0	0	25	25	20	70	30	10	40	76	Orange		IPC-V
102.2	Forging of ferrous and non-ferrous metals using gaseous fuel	0	0	0	0	25	25	10	60	30	10	40	68	Orange		IPC-V
102.3	Forging of ferrous and non-ferrous metals using electricity	0	0	0	0	25	25	0	50	30	10	40	60	Orange		IPC-V
102.4	Forging of ferrous and non-ferrous metals (cold forging, without any heat treatment)	0	0	0	0	0	0	0	0	30	10	40	40	Green		IPC-V
<b>103.0</b>	<b>ROLLING MILLS</b>															
103.1	Rolling and pickling	25	30	15	70	25	30	25	80	25	10	35	90.5	Red		IPC-V
103.2	Rolling mills (oil and coal fired)	0	15	15	30	25	0	25	50	0	0	0	57.5	Orange		IPC-V
103.3	Rolling mills (gas fired)	0	15	15	30	25	0	10	35	0	0	0	44.8	Green		IPC-V

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

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

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

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

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

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

## 151

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

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

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

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

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
150.2	Industry engaged in recycling of e-waste generated from the electrical and electronic equipment (EEE) listed in the E-Waste (Management) Rules 2022 (PCB processing limited to only mechanical processing and separation without pyro/hydro/ electro-metallurgical processing), production of Al, Cu, and other metals from non-PCB sources and/or recycling of plastic separated from Waste EEE.	0	15	15	30	20	25	15	60	25	10	35	73	Orange		WM-III
150.3	Industry engaged in dismantling (only) of e-waste, generated from the electrical and electronic equipment (EEE) listed in the E-Waste (Management) Rules 2022	0	0	0	0	0	25	0	25	25	10	35	43.1	Green		WM-III
150.4	E-waste refurbishing centres	0	0	0	0	0	25	0	25	25	10	35	43.1	Green		WM-III
<b>151.0</b>	<b>INDUSTRIES ENGAGED IN RECYCLING/REPROCESSING/ RECOVERY/REUSE OF HAZARDOUS WASTE (Items as per Schedule IV of H&amp;OW( M &amp; TBM) Rules, 2016.)</b>															
151.1	Lead Recycling ( Lead Acid Batteries with Acids; Lead Scrap Recycling) Rotary Furnace/ Pit Furnace (Mandir/Canopy Bhatti)	0	30	20	50	35	30	25	90	20	20	40	94.5	Red	This also includes battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs covered by ISRI, Code word "Rakes." Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "rains."	WM-II

# 156

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
151.2	Lead Recycling ( Drained Lead Acid Batteries; Lead Scrap Recycling) Rotary Furnace/Mandir Bhatti on Cleaner Fuel	0	30	15	45	35	30	10	75	20	10	30	84.4	Red	This also includes, battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs covered by ISRI, Code word "Rakes." Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "rains."	WM-II
151.3	Isolated storages (as defined under Manufacture, Storage, and Import of Hazardous Chemicals Rules, 1989 as amended)	10	25	15	50	20	25	0	45	30	10	40	71.3	Orange		IPC-I
151.4	Paint and ink sludge / residues recycling	20	25	15	60	0	20	0	20	30	10	40	72	Orange		WM-II
151.5	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste, excluding lead, paint, and ink sludge	0	30	15	45	35	0	25	60	20	10	30	75	Orange	This includes items namely - Brass Dross, Copper Dross, Copper Oxide Mill Scale, Copper everts, Cake & Residues, Waste Copper and copper alloys in dispersible form, Slags from copper processing for further processing or refining, Insulated Copper Wire, Scrap/copper with PVC sheathing including ISRI-code material namely "Druid" Jelly filled Copper cables, Zinc Dross-Hot dip Galvanizers SLAB,, Zinc Dross-Bottom Dross, Zinc ash/Skimming arising from galvanizing and die casting operations, Zinc ash/Skimming/other zinc bearing wastes arising from smelting and refining,, Zinc ash and residues including zinc alloy residues in dispersible form.	WM-II

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

# 158

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

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division	
<b>162.0</b>	<b>MANUFACTURING OF SURGICAL AND MEDICAL PRODUCTS</b>																
162.1	Manufacturing of <b>Surgical</b> and medical products	10	25	15	<b>50</b>	25	0	10	<b>35</b>	0	0	<b>0</b>	58.8	Orange		IPC-V	
162.2	Surgical and medical products assembled only (with effluent-generating processes)	10	25	15	<b>50</b>	0	0	0	<b>0</b>	0	0	<b>0</b>	50	Green		IPC-V	
162.3	Surgical and medical products assembled only (without effluent-generating processes)	0	0	0	<b>0</b>	0	0	0	<b>0</b>	0	0	<b>0</b>	0	White		IPC-V	
<b>163.0</b>	<b>SEMICONDUCTOR MANUFACTURING INDUSTRIES</b>																
163.1	Semiconductor fabs manufacturing	25	30	35	<b>90</b>	35	30	0	<b>65</b>	25	10	<b>35</b>	95	Red	i. Toxic wastewater is generated due to presence of Hydrofluoric acid (HF), Mixed Nitric HF (HF+HNO <sub>3</sub> ), Phosphoric acid, Sulphuric acid (H <sub>2</sub> SO <sub>4</sub> ), Hydrogen Peroxide, Isopropyl alcohol (IPA) / Methanol (Methanol Only), Stripper EKC-265 /ACT N396 (ACT N396 Only), BHF – 63 U, Choline etchant, etc.  ii. The air pollutants which are being emitted during the manufacturing process are SiH <sub>4</sub> , PH <sub>3</sub> , B <sub>2</sub> H <sub>6</sub> , HF, HBr, DCS, NF <sub>3</sub> , SF <sub>6</sub> , BCl <sub>3</sub> , Cl <sub>2</sub> , HCL, NH <sub>3</sub> , C2F <sub>6</sub> , CHF <sub>3</sub> , CF <sub>4</sub> , C <sub>4</sub> F <sub>8</sub> , C <sub>2</sub> F <sub>6</sub> etc.  iii. Process waste, used oil etc. are generated as hazardous waste.	WM-III	
163.2	Display fabs manufacturing	25	30	35	<b>90</b>	25	30	0	<b>55</b>	25	10	<b>35</b>	94.5	Red		WM-III	
163.3	Sensor fabs manufacturing/ Compound semiconductors/ silicon photonics	25	30	35	<b>90</b>	25	30	0	<b>55</b>	25	10	<b>35</b>	94.5	Red		WM-III	
163.4	Semiconductor Assembly, Testing, Marking and Packaging Facility (ATMP)	0	0	0	<b>0</b>	0	25	0	<b>25</b>	25	10	<b>35</b>	43.1	Green		WM-III	
<b>164</b>	<b>Saw mills</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>Green</b>		<b>IPC-V</b>	

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
165	Spice grinding	0	0	0	0	0	30	0	30	0	0	0	30	Green		IPC-V
166	Cutting, Sizing and polishing of marble, granite and other stones	10	0	20	30	0	30	0	30	0	0	0	40.5	Green		IPC-V
167	Manufacturing of Solar module/ non-conventional energy apparatus	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V
~T~																
<b>168.0</b>	<b>TANNERIES</b>															
168.1	Tanneries (Raw to finish)	35	30	25	90	0	20	0	20	25	30	55	93.8	Red		IPC-IV
168.2	Tanneries (Raw to wet blue)	35	30	25	90	0	20	0	20	25	30	55	93.8	Red		IPC-IV
168.3	Tanneries (Wet blue to finish)	35	30	20	85	0	20	0	20	25	30	55	90.6	Red		IPC-IV
168.4	Vegetable tanning	20	25	25	70	0	20	0	20	20	10	30	77.5	Orange		IPC-IV
<b>169.0</b>	<b>MANUFACTURING OF TOOTH POWDER, TOOTHPASTE, TALCUM POWDER AND OTHER COSMETIC ITEMS</b>															
169.1	Manufacturing of toothpaste and other cosmetic items	20	25	20	65	25	0	25	50	0	0	0	73.8	Orange		IPC-V
169.2	Manufacturing of tooth powder, talcum powder	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-V
<b>170.0</b>	<b>THERMOMETER MANUFACTURING</b>															
170.1	Glass (mercury based) thermometer manufacturing	10	30	15	55	25	0	10	35	25	10	35	70.8	Orange	Process involves making of glass bulb, forming reservoir in the glass tube for fluid, inserting fluid, scale marking. Use of fuel to heat the glass tubes and hydrofluoric acid to seal the scaling. Small quantities of spent acids are generated.	IPC-V
170.2	Digital thermometer manufacturing	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
171	Manufacturing of <b>Teflon</b> -based products	10	0	15	25	25	25	25	75	0	0	0	78.1	Orange	Due to spraying applications, emissions (HC) are generated	IPC-V
172	<b>Thermocol</b> manufacturing (with boiler)	0	20	15	35	25	0	25	50	0	0	0	58.8	Orange		IPC-V
<b>173.0</b>	<b>MANUFACTURING OF TOBACCO PRODUCTS INCLUDING CIGARETTES AND TOBACCO PROCESSES</b>															
173.1	Manufacturing of tobacco products including cigarettes and tobacco processes (with boiler)	20	0	15	35	25	20	25	70	0	0	0	75.3	Orange		IPC-III
173.2	Manufacturing of tobacco products including cigarettes and tobacco processes (without boiler)	20	0	15	35	0	20	0	20	0	0	0	41.5	Green		IPC-III
174	<b>Transformer</b> repairing/ manufacturing (dry process only)	0	0	0	0	0	25	0	25	30	10	40	47.5	Green		IPC-V
175	<b>Tyre</b> Pyrolysis Oil Industries-Applicable for advanced batch automated process / continuous TPO units	10	0	15	25	25	25	25	75	0	0	0	78.1	Orange		WM-III
176	<b>Tamarind</b> powder manufacturing	10	15	15	40	25	0	10	35	0	0	0	50.5	Green	Dried tamarind fruits are cleaned, soaked, and boiled in steam jacketed kettle. Then pulp is extracted in pulper and dried in drum type drier.	IPC-V

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division	
<b>177.0</b>	<b>TEA PROCESSING AND BLENDING</b>																
177.1	Tea processing (with boiler)	10	0	15	25	25	0	25	50	0	0	0	56.3	Orange		IPC-III	
177.2	Tea processing (without boiler)	10	0	15	25	0	0	0	0	0	0	0	25	Green		IPC-III	
177.3	Blending and packing of tea	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V	
<b>TEXTILE SECTOR</b>																	
<b>178.0</b>	<b>TEXTILE INDUSTRY</b>																
178.1	Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing, and colouring, including the garment and apparel manufacturing industry	30	30	30	90	25	0	35	60	30	20	50	95.5	Red		IPC-III	
178.2	Yarn to grey fabric manufacturing with water jet machines	20	25	25	70	0	0	0	0	0	0	0	70	Orange		IPC-III	
178.3	Garment and apparel manufacturing industry including Doubling / Reeling / TFO-Two for one unit (dry process)-with boiler	0	0	0	0	25	0	25	50	0	0	0	50	Green		IPC-III	
178.4	Garment and apparel manufacturing industry including Doubling / Reeling / TFO-Two for one unit (dry process)-without boiler	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-III	
<b>179.0</b>	<b>SAREE/FABRIC PRINTING BY SCREEN / WOODEN BLOCK /HAND BLOCK</b>																
179.1	Saree/fabric printing by screen / wooden block/hand block	25	0	25	50	25	0	20	45	30	10	40	71.3	Orange		IPC-III	
179.2	Hand block printing without effluent generation	0	0	0	0	25	0	20	45	0	0	0	45	Green		IPC-III	

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division	
<b>180.0</b>	<b>TEXTILE SPINNING, SIZING AND WEAVING MILLS</b>																
180.1	Textile spinning, sizing and weaving mills (wastewater generation $\geq$ 10 KLD)	10	20	20	50	25	0	15	40	0	0	0	60	Orange		IPC-III	
180.2	Textile spinning, sizing and weaving mills (wastewater generation <10 KLD)	10	20	15	45	25	0	10	35	0	0	0	54.6	Green		IPC-III	
181	<b>Power looms</b> (without dye and bleaching)	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-III	
<b>182.0</b>	<b>REPROCESSING OF WASTE TEXTILE FABRIC</b>																
182.1	Integrated facility for reprocessing of waste textile fabric (including washing, bleaching, dyeing etc.)	30	30	20	80	25	25	15	65	0	0	0	86.5	Red		IPC-III	
182.2	Reprocessing of waste textile fabric (dry process)	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-III	
183	<b>Cotton and woollen Hosiers</b> making (Dry process only without any dyeing / washing operation)	0	0	0	0	0	0	0	0	0	0	0	0	White		IPC-V	
~W~																	
184	Seasoning of <b>Wood</b> in steam heated chamber	0	0	0	0	25	0	25	50	0	0	0	50	Green		IPC-V	
185	Pulverization of bamboo and scrap <b>Wood</b>	0	0	0	0	0	25	0	25	0	0	0	25	Green		IPC-V	
186	Distilled <b>Water</b> (without boiler) with electricity as source of heat	0	20	20	40	0	0	0	0	0	0	0	40	Green		IPC-V	

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S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
187	Purification of <b>Water</b> and packaging (mineralized/non-mineralized water)	0	20	25	45	0	0	0	0	0	0	0	45	Green	RO Rejects.	IPC-V



**ANNEXURE-II**

**(LIST OF ESSENTIAL ENVIRONMENTAL SERVICES)**

**LIST OF ESSENTIAL ENVIRONMENTAL SERVICES****i. Essential Environmental Services for Industrial Waste Management**

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

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

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



**ANNEXURE-III**

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

**SERVICE/INFRASTRUCTURE DEVELOPMENT SECTORS**

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

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division	
4.0	<b>HOTELS/BANQUET HALLS HAVING ROOM FACILITY</b>																
4.1	Hotels (above 3 star) or having 100 & above rooms	20	25	30	75	25	0	25	50	0	0	0	81.3	Red		UPC-I	
4.2	Hotels (above 3 star) or having 100 & above rooms (based on cleaner /gaseous fuel)	20	25	30	75	25	0	10	35	0	0	0	79.4	Orange		UPC-I	
4.3	Hotels (up to 3 star) or having more than 20 rooms but less than 100 rooms.	20	25	20	65	25	0	25	50	0	0	0	73.8	Orange		UPC-I	
4.4	Up to 20 rooms	10	25	15	50	0	0	10	10	0	0	0	52.5	Green		UPC-I	
5.0	<b>RAILWAY LOCOMOTIVE WORK SHOP/ INTEGRATED ROAD TRANSPORT WORKSHOP/ AUTHORIZED SERVICE CENTERS</b>																
5.1	Railway locomotive work shop/ Integrated road transport workshop/ Authorized service centers (wastewater generation $\geq 10$ KLD)	20	25	25	70	30	25	0	55	30	10	40	84.3	Red		IPC-V	
5.2	Railway locomotive work shop/ Integrated road transport workshop/ Authorized service centers (wastewater generation $<10$ KLD)	20	25	15	60	30	25	0	55	30	10	40	79.0	Orange		IPC-V	
6.0	<b>RAILWAY STATIONS</b>																
6.1	Railway Stations (Wastewater Generation $\geq 5$ MLD)	20	0	35	55	25	0	25	50	30	10	40	75.3	Orange	Wastewater generating from public toilets, public taps, platform, and apron washing, coach cleaning, laundry, restaurants etc.  Emissions and generation of hazardous waste due to overall operations are considered.	UPC-I	
6.2	Railway Stations (Wastewater Generation $\geq 100$ KLD, but $< 5$ MLD)	20	0	15	35	0	0	0	0	0	0	0	35.0	Green	Wastewater generating from various domestic uses as public toilets, public taps, platforms, and apron washing, restaurants etc.	UPC-I	

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division	
7.0	<b>RAILWAY SIDINGS</b>																
7.1	Railway sidings / Mineral stock yard	0	0	0	0	0	25	0	25	0	0	0	25.0	Green	Fugitive emissions due to loading, unloading, storage and transportation of the minerals.	UPC-I	
7.2	Railway sidings only for defence purpose	0	0	0	0	0	0	0	0	0	0	0	0.0	White		UPC-I	
8.0	<b>PORTS AND HARBOURS</b>																
8.1	Ports and harbours, jetties and dredging operations	20	30	25	75	0	25	0	25	30	20	50	84.4	Red		WM-I	
8.2	Ports and harbours (only containers handling)/ Captive jetties	20	25	20	65	0	25	0	25	30	10	40	76.4	Orange		WM-I	
9.0	Automobile service stations/ workshops	20	25	20	65	20	0	0	20	30	10	40	75.5	Orange		IPC-V	
10.0	<b>BUILDING CONSTRUCTION PROJECTS</b>																
10.1	Building construction project ≥ 20,000 sq. m. built-up area	20	0	25	45	25	0	25	50	0	0	0	61.3	Orange	i. During the construction phase, the sector is mainly air polluting. However, in post construction phase it is mainly water polluting due to generation of sewage. Consent to Establish/Operate to be taken as per EC conditions, as applicable.  ii. Building construction project ≥ 5,000 sq. m., but < 20,000 sq. m. built-up area (with connectivity to terminal STP) may not require separate classification.  iii. For projects < 5000 the wastewater shall be managed according to on-site sanitation methods as mentioned in the Manual on Sewerage and Sewage Treatment System (2013), published by the	UPC-I	
10.2	Building construction project ≥ 5,000 sq. m., but < 20,000 sq. m. built-up area (without connectivity to terminal STP)	20	0	20	40	0	0	0	0	0	0	0	40.0	Green		UPC-I	

S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
															Central Public Health and Environmental Engineering Organisation (CPHEEO), and as amended from time to time.	
11.0	Standalone mechanized laundry (using boiler)	20	0	20	40	25	0	25	50	0	0	0	60.0	Orange		IPC-V
12.0	New highway construction project	0	0	0	0	25	25	25	75	0	0	0	75.0	Orange	Such projects involve use of hot mix plants, ready-mix concrete plants, construction activities generating fugitive emissions, etc.	UPC-I
13.0	<b>DAIRY FARM</b>															
13.1	Dairy Farm (having more than 500 animals)	30	25	25	80	0	20	0	20	0	0	0	82.0	Red	Dairy farms having less than 15 animals do not require separate classification.	IPC-IV
13.2	Dairy Farm (having 101 to 500 animals)	30	25	20	75	0	20	0	20	0	0	0	77.5	Orange		IPC-IV
13.3	Dairy Farm (having 15 to 100 animals)	30	25	15	70	0	20	0	20	0	0	0	73.0	Orange		IPC-IV
14.0	Gold Assaying & Hallmarking Centres	0	0	0	0	35	0	0	35	25	10	35	46.4	Green	Lead oxide, nitrous fumes are generated during cupellation and parting acid treatment, respectively contributing to the air emissions. The hazardous waste is generated during fire assay in the form of spent cupels bearing lead, spent acid, scrubbed water etc.	IPC-V
15.0	Facility of handling, storage, and transportation of food grains in bulk	0	0	0	0	0	25	0	25	0	0	0	25.0	Green		IPC-V
16.0	Flyash export or disposal operations	0	0	0	0	0	25	0	25	0	0	0	25.0	Green		IPC-V

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S. No.	Sector	W1	W2	W3	PI <sub>w</sub>	A1	A2	A3	PI <sub>A</sub>	H1	H2	PI <sub>H</sub>	Pollution Index (PI)	Category	Remarks	Concerned Division
17.0	Oil and gas transportation pipeline (excluding pipeline covered under definition of isolated storage of hazardous chemicals, as per Manufacture, Storage, and Import of Hazardous Chemicals Rules, 1989)	0	0	0	0	25	0	10	35	0	0	0	35.0	Green		IPC-I
18.0	Gaushalas	20	0	15	35	0	20	0	20	0	0	0	41.5	Green		IPC-IV
19.0	Household bio-digesters/gobar-gas (cow-dung) plants based on biodegradable wastes, etc.	0	0	0	0	0	20	0	20	0	0	0	20.0	White		IPC-V



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



**OTHERS/SPECIAL CATEGORY SECTORS**

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

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

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



**A tool for progressive environmental Management**



**Central Pollution Control Board**

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

Sr. No.	Industry	Parameter	Standards
1	2	3	4

\* Separate standards for VSS, HSS, PBSW & PBCW as given in column 4 stands abolished

<sup>1</sup>[(c) Standards for forage fluoride

- Twelve consecutive months average - 40 ppm
- Two consecutive months average - 60 ppm
- One month average - 80 ppm]

*37.	<b>STONE CRUSHING UNIT</b>	Suspended Particulate Matter (SPM)	<p>The Standards consist of two paras :</p> <p><b>(i) Implementation of the following Pollution Control measures:</b></p> <p>(a) Dust containment cum suppression system for the equipment.</p> <p>(b) Construction of wind breaking walls.</p> <p>(c) Construction of the metalled roads within the premises.</p> <p>(d) Regular cleaning and wetting of the ground within the premises.</p> <p>(e) Growing of a green belt along the periphery.</p>
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<sup>1</sup> Inserted by Rule 2(IV)(b) of the Environment (Protection) First Amendment Rules, 2006 notified by G.S.R.46(E), dated 3.2.2006.

\* Standards notified at Sl. No. 11 may also be referred.

Sr. No.	Industry	Parameter	Standards
1	2	3	4
			<b>(ii) Quantitative standard for SPM :</b>  **[measured between three meters and ten metres from any processes equipment of a stone crushing unit shall not exceed 600 microgrammes per cubic metre] from a controlled isolated as well as from a unit located in a cluster should be less than 600 mg/Nm <sup>3</sup> [xxx....]
38.	<b>PETROCHEMICALS (BASIC &amp; INTERMEDIATES)</b>	<b>EFFLUENTS</b>	
		Ph	6.5 – 8.5
		*BOD <sup>2</sup> [(3days at 27°C)]	50
		**Phenol	5
		Sulphide (as S)	2
		COD	
		Cynide (as CN)	250
		*** Fluoride (as F)	
		Total suspended Solids	<sup>3</sup> [100]
		Hexavalent Chromium <sup>3</sup> [(as Cr)]	0.1
		**** Total Chromium <sup>3</sup> [(as Cr)]	2.0

\*\* Corrections have been made as per CORRIGENDUM Notification No. S.O. 8(E) dated 31.12.1990.

<sup>1</sup> The sentence 'The measurements are to be conducted at least twice a month for all the 12 month in a year' deleted as per CORRIGENDUM Notification S.O 8(E) dated 31.12.90.

<sup>2</sup> Substituted by Rule 2 of the Environment (Protection) Amendment Rules, 1996 notified by G.S.R.176(E), dated 2.4.1996 may be read as BOD (3 days at 27°C) wherever BOD 5 days 20°C occurred.

<sup>3</sup> Corrected as per CORRIGENDUM Notification S.O. 8(E) dated 31.12.1990.



# भारत का राजपत्र The Gazette of India

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असाधारण  
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)  
PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित  
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NEW DELHI, FRIDAY, MAY 19, 2023/VAISAKHA 29, 1945

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 18 मई, 2023

सा.का.नि. 376(अ).—कतिपय प्रारूप नियम अर्थात् पर्यावरण (संरक्षण) संशोधन नियम, 2022, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उपनियम (3) के अधीन यथापेक्षित, भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय की अधिसूचना संख्या सा.का.नि. 805 (अ), तारीख 4 नवंबर, 2022 द्वारा भारत के राजपत्र, असाधारण, भाग II, खंड 3, उपखंड (i) में प्रकाशित किए गए थे जिसमें उन सभी व्यक्तियों से, जिनका इससे प्रभावित होना संभाव्य है, उस तारीख से, जिसको उक्त अधिसूचना में अंतर्विष्ट राजपत्र की प्रतियां जनता को उपलब्ध करा दी गई थी, साठ दिनों के अवसान से पूर्व, आक्षेप और सुझाव आमंत्रित किए गए थे ;

और, पूर्वोक्त अधिसूचना अंतर्विष्ट करने वाली राजपत्र की प्रतियां 7 नवंबर, 2022 को जनता को उपलब्ध करा दी गई थी ;

अतः, अब, केन्द्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29), की धारा 6 और धारा 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, पर्यावरण (संरक्षण) नियम, 1986 का और संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात् :-

1. संक्षिप्त नाम और प्रारंभ.—(1) इन नियमों का संक्षिप्त नाम पर्यावरण (संरक्षण) दूसरा संशोधन नियम, 2023 है।

(2) ये राजपत्र में इस अधिसूचना के प्रकाशन की तारीख से छह माह के अवसान पर प्रवृत्त होंगे।

2. पर्यावरण (संरक्षण) नियम, 1986 की अनुसूची-1 में, क्र.सं. 115 और उससे संबंधित प्रविष्टियों के पश्चात् निम्नलिखित क्र.सं. और प्रविष्टियां अंतस्थापित की जाएंगी, अर्थात्:-

क्रम सं.	उद्योग	मानदंड	मानक
(1)	(2)	(3)	(4)
“116	हॉट मिक्स संयंत्र	स्टैक उत्सर्जन में विविक्त कण सांद्रता (mg/Nm <sup>3</sup> )	
		बैच टाइप हॉट मिक्स संयंत्र	150
		ड्रम टाइप हॉट मिक्स संयंत्र	300

टिप्पणियां :-

- (i) हॉट मिक्स संयंत्र के लिए न्यूनतम स्टेक ऊंचाई की गणना इस प्रकार की जाएगी: स्टेक ऊंचाई (एच<sub>स</sub>)=14 (क्यू)<sup>0.3</sup>, जहां क्यू किलोग्राम/घंटे में एसओ<sub>2</sub> उत्सर्जन दर है।
- (ii) केवल राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समितियों द्वारा विनिर्दिष्ट स्वीकृत ईंधन का ही प्रयोग किया जाएगा।
- (iii) माल की संभलाई से होने वाले उत्सर्जन को पानी के छिड़काव अथवा धूल उत्सर्जन के स्थलों को ढककर नियंत्रित किया जाएगा।
- (iv) परिसर के अंदर की सड़कों, कार्य किए जाने वाले प्लेटफार्म, लोडिंग तथा अनलोडिंग क्षेत्रों को पक्का किया जाएगा तथा हमेशा स्वच्छ रखा जाएगा।
- (v) पर्यावरण (संरक्षण) अधिनियम, 1986 के अधीन ध्वनि प्रदूषण (विनियमन तथा नियंत्रण) नियम, 2000 का अनुपालन किया जाएगा और श्रमिकों को व्यक्तिगत सुरक्षा उपकरण प्रदान किए जाएंगे।
- (vi) परिधि के किनारे हरित पट्टी विकसित की जाएगी।
- (vii) रेडियो में पुनर्चक्रित आसफाल्ट पेवमेंट (आरएसपी)के उपयोग की अनुमति दी जाएगी।
- (viii) किसी भी निरस्त प्रक्रिया की या हॉट मिक्स की बची सामग्री प्रक्रिया में पुनर्चक्रित की जाएगी।
- (ix) प्रचालन चरण के अंत में अर्थात् संयंत्र को हटाने के बाद, कार्य-स्थल को पुनः बहाल किया जाए।
- (x) राज्य प्रदूषण नियंत्रण बोर्ड या प्रदूषण नियंत्रण समितियां, उपलब्ध प्रौद्योगिकी और विद्यमान पर्यावरणीय स्थितियों के आधार पर हॉट मिक्स संयंत्रों को अनुमति देने हेतु उनके आकार और क्षमता का विनिश्चय कर सकेंगी।
- (xi) हॉट मिक्स संयंत्र को निम्नलिखित स्थान निर्धारण संबंधी मापदंडों से स्थापित किया जाएगा।
  - (क) शहरों और कस्बों की सीमा से 1 कि.मी. दूर,
  - (ख) आवासों से 0.5 कि.मी. दूर,
  - (ग) राष्ट्रीय या राज्य राजमार्गों (मध्य रेखा से) 0.2 कि.मी. दूर,
  - (घ) विद्यालयों/कालेजों तथा मंदिरों से 0.5 कि.मी. दूर,
  - (ङ) अस्पताल, न्यायालय तथा पर्यटन स्थल से 1 कि.मी. दूर,
- (xii) उपर्युक्त पैरा (xi) स्थल निर्धारण मापदंडों को पूरा न करने वाले विद्यमान हॉट मिक्स संयंत्रों के मामले में, इकाई को प्लाट परिधि पर जीआई शीटों की न्यूनतम 6 मीटर ऊंची दीवार बननी चाहिए।

(xiii) हॉट मिक्स संयंत्र नीचे उल्लिखित उपयुक्त वायु प्रदूषण नियंत्रण उपकरणों से युक्त होने चाहिए ताकि मानकों को प्राप्त करने के लिए इष्टतम दक्षता सुनिश्चित की जा सके :

- क. ड्रम के प्रकार: वेट स्क्रबर सहित साइक्लोन/मल्टी-क्लोन  
ख. बैच के प्रकार: बैग फिल्टर्स सहित मल्टी-क्लोन

[फा. सं. क्यू-15017/14/2018-सीपीडब्ल्यू]

नरेश पाल गंगवार, अपर सचिव

टिप्पणी : मूल नियम, भारत के राजपत्र, असाधारण, भाग II, खंड 3, उपखंड (i) में तारीख 19 नवंबर, 1986 द्वारा प्रकाशित किए गए थे और अधिसूचना संख्या सा.का.नि. 373(अ), 16 मई, 2023 द्वारा अंतिम बार संशोधित किए गए।

## MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

### NOTIFICATION

New Delhi, the 18th May, 2023

**G.S.R. 376(E).**—Whereas, certain draft rules, namely the Environment (Protection) Amendment Rules, 2022 were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i) as required under sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, *vide* notification of the Government of India, Ministry of Environment, Forest and Climate Change, number G.S.R. 805 (E), dated the 04<sup>th</sup> November, 2022, inviting objections or suggestions from any person likely to be affected thereby within a period of sixty days from the date on which copies of the Gazette containing the said notification were made available to the public;

And whereas, copies of the Gazette containing the aforesaid notification were made available to the public on the 07<sup>th</sup> November, 2022;

Now, therefore, in exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely: -

1. **Short title and commencement.**—(1) These rules may be called the Environment (Protection) Second Amendment Rules, 2023.

(2) They shall come into force on expiry of period of six months from the date of publication of this notification in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, in Schedule-I, after serial number 115 and the entries relating thereto, the following serial number and entries shall be inserted, namely: -

Sl. No.	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
“116	<b>Hot Mix Plant</b>	Particulate Matter Concentration (mg/Nm <sup>3</sup> ) in stack emission	
		Batch type Hot Mix Plant	150
		Drum type Hot Mix Plant	300

#### Notes:

- (i) The minimum stack height for Hot Mix Plant shall be calculated as: Stack height (H<sub>s</sub>) = 14(Q)<sup>0.3</sup>, where, Q is the SO<sub>2</sub> emission rate in kg/hr.
- (ii) Only approved fuel as specified by State Pollution Control Boards or Pollution Control Committees shall be used.

- (iii) Dust emission from material handling shall be contained with water sprinkling or by covering the points of dust emission.
- (iv) The internal roads, working platform, loading and unloading areas in premises should be paved and kept clean all times.
- (v) Provisions of the Noise Pollution (Regulation and Control) Rules, 2000 shall be followed and workers shall be provided with personal protective equipments.
- (vi) The green belt shall be developed along the periphery.
- (vii) Use of Recycled Asphalt Pavement (RSP) shall be allowed in the aggregates.
- (viii) Any process rejects or left over of the hot mix shall be recycled in the process.
- (ix) The site shall be reinstated at the end of operation phase i.e. after dismantling the plant.
- (x) State Pollution Control Boards or Pollution Control Committees may decide the size and capacity to permit hot mix plants based on available technology and prevailing environmental conditions.
- (xi) The Hot Mix Plant shall be installed from the following siting criteria, namely:-
  - (a) 1 km from boundary of cities and towns;
  - (b) 0.5 km from habitation;
  - (c) 0.2 km from National or State Highways ( from Centre Line);
  - (d) 0.5 km from Schools or Colleges and temples;
  - (e) 1 km from Hospital, court and tourist spot.
- (xii) In case existing hot mix plants are not able to meet above siting criteria at para (xi) above, the unit may be allowed with the condition that minimum 6 metre high compound wall of GI sheets along plot periphery shall be installed.
- (xiii) The hot mix plant shall be equipped with appropriate air pollution control devices as mentioned below so as to ensure optimum efficiency to achieve the standards, namely:-
  - (a) Drum Type: Cyclone or multi-clones with wet scrubber;
  - (b) Batch Type: Multi-clones with bag filters.

[F. No. Q-15017/14/2018–CPW]

NARESH PAL GANGWAR, Addl. Secy.

**Note :** The principle rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), *vide* number S.O. 844 (E) dated the 19<sup>th</sup> November 1986 and last amended, *vide* notification number G.S.R. 373(E) dated the 16<sup>th</sup> May 2023.

**Environmental Guidelines  
for  
Stone Crushing Units**



**Central Pollution Control Board**

**Ministry of Environment, Forest and Climate Change**

**Parivesh Bhawan, East Arjun Nagar**

**Delhi-110032**

**(July, 2023)**

## 1.0 Introduction

Stone crushing sector is an important industrial sector engaged in producing crushed stone of various sizes (40 mm.20 mm.10 mm. crushed sand, stone dust etc) depending upon the requirement which acts as raw material for various construction activities.

Stone crushing operation releases a substantial amount of fugitive dust, which not only pollute the environment, but also pose a health hazards to the workers and the surrounding population. The growth in infrastructure is leading to increase in demand of raw materials, thereby resulting in the need to set up new stone crushing units or increase production from existing units. This poses a challenge to maintain the ambient air quality, which is possible if environmental guidelines predetermined by the industry concerned are followed.

Inventory and information about stone crushing units gathered from 27 SPCBs/PCCs (Arunachal Pradesh, Andaman & Nicobar island, Assam, Bihar, Chandigarh, Chhattisgarh, Daman, Dadra & Nagar Haveli, Goa, Gujarat, Haryana, Himanchal Pradesh, Jharkhand, J&K, Karnataka, Kerala, Madhya Pradesh Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Sikkim, Tripura, Uttarakhand), and the data received indicates that there are about 16,931 stone crushing units with capacity ranges between 0.1 TPH to 1,400 TPH.

## 2.0 Classification of Stone Crushing Units

Based on the information received from SPCBs/PCCs, stone crushers may be classified into small, medium and large-scale in terms of production capacity.

S.No.	Category	Production capacity (TPH)
1.	Small Scale	Up to 25
2.	Medium Scale	26 to 100
3.	Large Scale	100 above

### 3.0 Stone Crushing Process

The stone crushing process can be broadly divided in following stages:

**3.1 Transportation of raw material:** Stones extracted from various sources are transported to stone-crushing units by means of trucks, trailers or automatic dumpers.

**3.2 Primary crushing:** Mined stones are fed directly into the primary crusher through stone feeders. The primary crusher breaks large stones and boulders into 100-140 mm size stones. Crushed stones are sent to secondary crusher for further reduction into smaller sizes. Various types of crushers are used in stone crushing industry. Jaw crushers are widely used as primary crushers.

**3.3 Secondary crushing:** After primary crushing, crushed stones are fed to secondary crushers through conveyor belts. In this stage, stones are further crushed to a size of 40-60 mm to 10 mm or even smaller. Stone crushing units use different types of crushers for secondary crushing. Granulator or cone crusher is usually used for secondary crushing.

**3.4 Screening:** From secondary crusher, crushed stones are transferred for screening through a conveyor belt. Screening is the process for segregating products of various sizes. Different mesh size screens are aligned one below the other and each screen is connected to a separate conveyor belt for discharging different size products. Mass that remains on the screen is called 'oversize' and material that passes through screen is called 'under size'. Oversize is returned to secondary crushers for further crushing and then again to screen. Under size is discharged through a 'telescopic chute' and screened products of various sizes are conveyed to stockpiles by belt conveyors. Different types of screens are used such as; grizzly-type screen, vibrating screen and rotary screen. Vibrating screens are most commonly used.

**3.5 Tertiary crushing:** Tertiary crushing is carried out in units that produce stone dust as their primary product. Dust is usually a by-product of stone crushing process. Units that produce dust, install a separate machine, usually roller crushers. Stones of size 10-20 mm are sent to roller crushers for grinding into fine dust.

**3.6 Product storage and loading:** After crushing and screening, final product is transferred to a conveyor belt which distributes the product into different stockpiles, depending on size of the product. The product/fines are either stored as stockpiles or directly loaded into trucks & dumpers and transported.

#### **4.0 Environmental issues associated with Stone Crushing Units**

The major environmental issue due to operation of a stone crushing unit is fugitive dust emissions which is contributed by the following processes:

- **Primary crushing:** Primary crushers breaks large boulders into smaller sizes. Crushing process as well as unloading of stones generate a substantial amount of fugitive dust. Mechanism for water sprinkling is provided to reduce fugitive dust. Some primary crushing areas are partially or completely covered with a shed as a measure to further prevent the fugitive dust emissions to surroundings, however at some places partial coverings provided which do not appear to be sufficient to such emissions.
- **Secondary crushing:** Compared to primary crushing, fugitive dust emitted at secondary crushing is relatively higher. Generally, insufficient covered shed provided in the process results in fugitive emissions.
- **Screening:** Screening process is also a source of fugitive dust emissions. As the material is conveyed to screen from secondary crusher, screen vibrates and thus, separates the material of different sizes resulting into huge amount of fugitive dust emissions. Generally, units provide covered shed and water sprinklers to combat

dust emissions however, improper design and operation of sprinklers and improper covering is an issue.

- **Tertiary crushing:** Fugitive emissions are generated during grinding of stones into fine dust.
  
- **Conveyor Belt:** Conveyor belts are primary means of transferring raw materials and products from one end to the other. Movement of products on the conveyor belts is a potential source of fugitive dust emissions. To reduce dust emissions, water sprinkling arrangement is provided on each belt. Some units cover conveyor belts either with sheets or thick cloth to reduce dust emissions.
  
- **Product release and storage:** Fugitive emissions generated during transfer of material through telescopic chutes is lower than that generating during direct disposal of product on stockpile. Material, such as stone dust, stored in open areas is are also a potential source of fugitive dust emissions.
  
- Although no process waste water is generated from stone crushing units, however, water is used for sprinkling, conveyed to settling tanks of appropriate size which is recycled and reused in process.

## 5.0 Environmental Guidelines for Stone Crushing Units

The stone crushing units should adopt following environmental guidelines to prevent/suppress fugitive dust emissions from their operation:

Source of emission	Measures to be Taken
Unloading of raw material for storage	Water sprinkling with adequately designed nozzle which produce tiny droplets of water should be provided during raw materials unloading .
Unloading of raw material into hopper	<ul style="list-style-type: none"> <li>• Three sides and top should be covered and one side may be kept open for vehicular movement.</li> <li>• Water sprinklers should be provided on approach roads.</li> </ul>

Primary Crushing/ Jaw Crusher	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance.</li> <li>• Primary crushers/jaw crushers should be covered with tarpaulin/cotton cloth/suitable materials to contain fugitive dust emissions (<b>Figure-1</b>)</li> <li>• Water sprinkler system with adequately designed nozzle which produce tiny droplets of water should be provided at primary crusher/jaw crusher so that fugitive emissions are contained and amount of water sprayed should be optimized.</li> </ul>
Secondary Crushing	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance.</li> <li>• Dry extraction cum bag filter followed by cyclone to be provided for control of emissions.</li> </ul>
Screening	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance. Door to be kept closed during operation.</li> <li>• Flexible covers where conveyors pass through the screen house should be installed at entries and exits of conveyors to screen house.</li> <li>• Dust extraction system connected with bag filter to be provided.</li> <li>• Provision of water mist sprinkling systems with adequately designed nozzle which produce tiny droplets of water should be made at inlet/outlet of screens.</li> </ul>
Tertiary Crushing	<ul style="list-style-type: none"> <li>• Crusher should be completely enclosed by G/MS sheets on top and at least three sides completely from the ground level. One side should have provision of movable sheet/door for movement/maintenance. Dust extraction system connected with bag filter to be provided.</li> <li>• Provision of water mist sprinkling system should be made with adequately designed nozzle which produce tiny droplets of water.</li> </ul>

Conveyor Belts	Conveyor belts should be properly covered from node to node with a thick sheet of suitable material along with water sprinkling system with adequately designed nozzle which produce tiny droplets of water.
Discharge points	Flexible Telescopic chute from top of discharge point to the ground level should be provided ( <b>Figure-2 &amp; Figure-2(a)</b> ).
Product storage	<ul style="list-style-type: none"> <li>• Properly designed telescopic chute of adequate length of suitable material should be provided at ends of conveyor so that dust generated from this section is contained at source.</li> <li>• All open stockpiles for aggregates of size above 5 mm should be kept sufficiently wet by water spraying.</li> <li>• Stockpiles of aggregates of 5 mm size or less should be covered to ensure that same is not carried away (or whipped out) by wind.</li> </ul>

### 5.1 General Measures

- i. Wind breaking wall: GI/MS/brick wall should be provided along the periphery of crusher. Height of the wall should be 3-ft more than the highest node of the crusher.
- ii. Roads: Metaled/concrete roads should be provided within the premises. Ramps and the entire ground area inside the premises should also be metaled.
- iii. Housekeeping: To curb the air pollution in the crusher premises, arrangement of rotating water sprinkling system/fogger/Anti-smog gun should be provided. Water sprinklers should have adequately designed nozzle which produce tiny droplets of water, as such system is more effective in dust control with significant reduction in consumption of water. Fine dust accumulated and bag filters in the crushing area should be cleaned at regular intervals and the collected dust should be stored in sacks for further sale or disposal.
- iv. Plantation: 2-3 rows of tall trees should be planted around the periphery of crusher.
- v. Housing should be open for movement of mechanical drivers, conveyor belts, etc. should be sealed properly with flexible rubber flaps.

- vi. Name of the unit, contact details of the owner and address of the unit, plant capacity and date of issue of CTE/CTO from SPCBs/PCCs should be displayed on the display board at the entrance.
- vii. Transportation: Vehicles carrying any kind of material should be completely covered.
- viii. Regular wetting of roads should be done to suppress dust within the premises to control dust emission re-suspension.
- ix. Water consumption and handling: Unit should provide settling tanks of appropriate size and recycle & reuse of the water in process. Crusher should provide a water storage tank with adequate capacity. In case of use of groundwater, stone crushing unit should obtain permission to extract groundwater from the Central Ground Water Authority (CGWA)/Ground Water Department (GWD) of the State/UT. Unit should maintain proper log book of consumption of fresh water. Depending on availability, efforts may be made to use STP treated water instead groundwater to control emissions from process activities.

## **6.0 Regulatory/Monitoring Mechanism for Stone Crushing Unit**

- i. Stone crushing unit should obtain Consent to Establish (CTE) and Consent to Operate (CTO) from the concerned SPCBs/PCCs.
- ii. Unit while applying for CTO/renewal of consent, should upload the duly filled checklist attached at **Annexure-1** along with digitally tagged photographs and videos of the crushing unit to ensure compliance of the conditions mentioned in the guidelines. SPCBs/PCCs should digitally verify the said conditions before issuance of CTE/CTO/renewal of consent.
- iii. CCTV/PTZ cameras should be installed at the entrance and all corners of the premises of the unit covering entire area with minimum of 30 days data storage.
- iii. Stone crushing unit shall comply with emission norms prescribed under the Environment (Protection) Rules, 1986 and conditions laid down in CTO by concerned SPCB/PCC.

- v. Online/manual ambient air monitoring systems to be installed in crusher zone as per CPCB/SPCB guidelines – in upwind and downwind directions.
- vi. Stone crushing unit should develop green belt as per the plan approved by concerned Department of the State/UT.
- vii. Local authorities should associate with stone crusher associations for the construction of metalled road in the entire crusher zone.
- viii. A District Level Committee should be constituted under chairmanship of District Magistrate/Deputy Commissioner so that surprise inspections for surveillance of stone crushing units located under their jurisdiction can be carried out on regular basis.
- ix. Health survey of workers should be carried out by the stone crusher on half-yearly basis.
- x. New Crushers should be allowed to operate only in dedicated crusher zones as per the siting policies of SPCBs/PCCs.
- xi. Stone crusher unit should be operated only during day time (i.e. 6.00 AM to 10.00 PM) to avoid inconvenience to the nearby residents due to ambient noise.



**Figure-1:** Covering of Primary/Jaw crusher



**Figure-2:** Chute from top of discharge point



**Figure-2(a):** Chute from top of discharge point

## Format/Checklist for SPCBs/PCCs before issuance of CTE &amp; CTO

S. No.	Fugitive Emission Source Locations	Checklist for compliance of conditions of Environmental guidelines	Yes/No
1.	Unloading area of raw material, primary crusher, Screener, conveyors belts and transfer points	Water sprinklers installed with adequate designed nozzles (Upload photo/videos).	
2.	Primary crushers, Secondary crushers, Screeners and tertiary crushers	Enclosures by GI/MS sheets on top and at least three sides completely from the ground level (Upload photo/videos).	
3.	Secondary, Tertiary crushers and Screener	Dry extraction cum bag filter followed by cyclone. (Upload photo).	
4.	Covering of Conveyor belts from node to node with a thick sheet of suitable material	Covering of Conveyor belts (Upload photo).	
4	At discharge points	Flexible Telescopic chute from top of discharge point to the ground level (Upload photo).	
5	GI/MS/brick wind breaking wall of 3-ft more than the highest node of the crusher along the periphery of crusher	Wind breaking wall (Upload photo)	
<b>General</b>			
6.	Wind breaking wall	GI/MS/brick wind breaking wall of 3-ft more than the highest node of the crusher along the periphery of crusher (Upload photo)	
7.	Roads	Metalled/concrete roads within the premises. Ramps and the entire ground area inside the premises should also be metalled	

8.	Suppression of dust within the premises	Arrangement of rotating water sprinkling system/fogger/Anti-smog gun in the premises to suppress dust within the premises to control dust emission re suspension	
9.	Green belt	Plantation of 2-3 rows of tall trees around the periphery of crusher	
9.	Display board	Display board at the entrance, having name of unit, contact details of owner and address of unit, plant capacity and date of issue of CTE/CTO from SPCB/PCC	
10	Covering of vehicles	Covering of vehicles carrying any kind of material .	
11	CCTV/PTZ camera	CCTV/PTZ cameras installed at the entrance and all corners of the premises of the unit covering entire area with minimum of 30 days data storage	
12	Photos/videos	Upload photographs/videos ensuring compliance of all conditions as mentioned in the guidelines while applying CTE/CTO/ Renewal	

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