NAGALAND POLLUTION CONTROL BOARD

Signal Point, Dimapur – 797112, Nagaland
Tel.: 03862-245727, TeleFax; 03862-245726
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ANNEXURE I

Brief write up on issuance of CTE/CTO by the NPCB

1. Documents required for obtaining CTE and CTO:

The mandatory documents to be enclosed for grant of CTE/CTO are:

I. Licenses/ Certificates:

a. **Legal Status of Company**:

i. Partnership/ Proprietary/Company etc.; (or)

ii. SSI/MSME Certificate (Udyog Aadhar)/Memorandum of Entrepreneurship, if applicable;

b. **Location of the Project**:

i. Industrial Area: Allotment letter from the respective Industrial Area Development Board/Corporation/Land Possession Certificate; or

ii. Other than Industrial Area: Registered Land Deed/ Land Conversion Certificate from concerned Authority/ Rent (or) Lease Agreement in case of the property is on rent/ lease;

c. **Mining Project**: Mineral Mining Lease permission granted by the Department of Mines & Geology, if applicable;

d. **Environmental Clearance** granted by Central Government or State Environment Impact Assessment Authority, if applicable, under the notification of the Government of India number S.O. 1533 (E), dated the 14th September, 2006 issued under the Environment (P) Act, 1986 (29 of 1986);

e. **Investment**: Charted Accountant Certificate about proposed Capital Investment.

II. Technical Details:

i. Environmental Impact Assessment Report, submitted to the Central Government or State Environment Impact Assessment Authority under the notification of the Government of India number S.O. 1533 (E), dated the 14th September, 2006 issued under the Environment (Protection) Act, 1986 (29 of 1986); or

ii. Project report comprising manufacturing process (write up with flow chart), raw materials, products, by-products, extent of land, water source and consumption for various purpose, wastewater generation from various activity, Effluent Treatment Plant (write up with flow diagram), Water Balance, Fuel used, Sources of emission and Air Pollution Control Devices proposed, D.G. sets and Hazardous and Other Waste Generation along with Plant layout plan.

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2. The procedural steps and prescribed time-limit mechanism:

The steps followed in issuing CTE/CTO are:

- Verification of documents
- If found lacking, remedial measures from the applicant.
- If the industry requires physical verification, it is duly complied by the NPCB.
- All the process is completed within 10 days (average) and accordingly CTE/CTO issued.

Accordingly, the data of consent issued past 1 (one) year and also sample copies of application forms along with documents received from industries are enclosed herewith as Annexure IV.

3. The existing grievance redressal mechanism for applicants

Grievance redressal mechanism for applicants is not available.

4. The average time taken to issue consent to establish/ consent to operate

Average time taken is 10 days

Member Secretary

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NPCB/IND-EODB/326 Dated 23/10/2017

Annexure III

INSPECTION MECHANISM

I. **Scheduled Inspections**:

Industries are usually informed in advanced about the inspection schedule, and the inspection team assesses their compliance with norms.

II. **Surprise Inspections**:

Unannounced visits to check for adherence to pollution control measures.

III. **Monitoring Parameters**:

The NPCB officials check parameters like air and water pollution levels, waste management practices, and safety measures.

IV. **Sampling and Testing**:

Samples of air and water are collected for lab analysis.

V. **Compliance Checks**:

Verification of documents, records, and implementation of pollution control measures.

Sd/-
Member Secretary

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Dated 23/10/2017

Checklist for Inspection of Industries

i) Environmental compliance with respect to Air, Water and Noise

ii) Compliance with safety regulations; availability of On-site and Off-site Emergency Response Plan

iii) Equipment maintenance and condition

iv) Hygiene standards, food safety certifications & storage and handling practices, in case of food processing industries

v) Worker safety and training

vi) PPE usage by workers

vii) Display board of consent issued by the board near the factory gate

viii) Waste management practices

Sd/-
Member Secretary

Classification

Of

Industrial Sectors

Under

Red, Orange, Green and White Categories

Nagaland Pollution Control Board
Signal point: Dimapur Nagaland

EXECUTIVE SUMMARY

Categorization of Industrial Sectors under Red, Orange, Green and White Category

The Ministry of Environment, Forest and Climate Change (MoEFCC) had brought out notifications in 1989, with the purpose of prohibition/ restriction of operations of certain industries to protect ecologically sensitive Doon Valley. The notification introduced the concept of categorization of industries as " Red", "Orange "and "Green" with the purpose of facilitating decisions related to location of these industries. Subsequently, the application of this concept was extended in 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.

The purpose of categorization is to ensure that the industry is established in a manner which is consistent with the environmental objectives. The new criteria will prompt industrial sectors willing to adopt cleaner technologies, ultimately resulting in generation of fewer pollutants. Another feature of the new categorization system lies in facilitating self-assessment by industries as the subjectivity of earlier assessment has been eliminated. This 'Re-categorization' is a part of the efforts, policies and objective of present government to create a clean & transparent working environment in the country and promote the Ease of Doing Business.

The salient features of the 'Re-categorization' Exercise are as follows :

- Due importance has been given to relative pollution potential of the industrial sectors based on scientific criteria. Further, wherever possible, splitting of the industrial sectors is also considered based on the use of raw materials, manufacturing process adopted and in turn pollutants expected to be generated.
- Newly introduced White category industrial sectors are practically non-polluting.
- There shall be no necessity of obtaining the Consent to Operate'' for White category of industries.
- No Red category of industries shall normally be permitted in the ecologically fragile area/ protected area.

SPCBs/PCCs may issue consent to the industries as follows:

Green	maximum 15 years
Orange	maximum 10 years
Special & Ordinary Red	maximum 5 years

RED CATEGORY OF INDUSTRIAL SECTORS

Sl. No.	Industry sector	Remarks
1	Airports and Commercial Air Strips	i. The Airports are generating mainly the waste - waters. ii. This is the water pollution normalized score for airports having discharge more than 100 KLD. iii. The airports / s trips having discharge less than 100 KLD will have s core of 50 and hence orange category. iv. If the s core is normalized wrt water + HW both, then all the airports will come under Orange category (score - 58.33).
2	Aluminium Smelter	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. This sector is generating all sorts of pollution i .e. air, water and HW.
3	Asbestos and asbestos based industries	i. This is mainly air polluting industry. ii. Final s core is based on air pollution s core only. iii. Asbestos is carcinogenic and banned in many countries.
4	Automobile Manufacturing (integrated facilities)	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. In such cases, after thorough inspection of such units by concerned SPCB, re-categorization of the industry shall be made accordingly.
5	Basic chemicals and electro chemicals and its derivatives including manufacturing of acid	i. Standards prescribed for Inorganic Chemicals are adopted. ii. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.
6	Cement	This is mainly air polluting industry & hence normalized air pollution s core.
7	Chlorates, per-chlorates & peroxides	i. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable. ii. Water pollution score normalized to 100 is undertaken.
8	Chlorine, fluorine, bromine, iodine and their compounds	i. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable. ii. Water pollution score normalized to 100 is undertaken.
9	Chlor Alkali	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Chlor-alkali units are having different section like NaOH, Cl_2, SBP etc which are having toxic effluents. Additionally, fuel consumption is also on higher-side.

10	Coke making , liquefaction, coal tar distillation or fuel gas making	It is a kind of petrochemical industry.
11	Copper Smelter	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Integrated Copper Smelters contain all sorts of pollution.
12	DG Set of capacity > 5 MVA	i. Mainly air polluting. ii. DG sets consume the diesel @ 0.21 litres/hr/KVA at full load. iii. Average running is taken @ 12 hrs / day although many of the DG sets run for more than this period.
13	Distillery (molasses / grain / yeast based)	Mainly water polluting industry. Final score is the normalized water pollution s core.
14	Dyes and Dye- Intermediates	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Such types of industrial sectors generate all sorts of pollution
15	Fertilizer (basic) (excluding formulation)	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Generates all sorts of pollution.
16	Fibre glass production and processing (excluding moulding)	i. The use of styrene in most methods of fibreglass production causes hazardous air pollution that is harmful to breathe at excessive levels. ii. It is mainly air polluting & HW generating industry. The air pollution & HW s cores are normalized to 100. iii. In case of lead containing glass, the s core of A1 will be 25 and final normalized s core will be 75 and shall be categorized as Red.
17	Fire crackers manufacturing and bulk storage facilities	i. This is the normalized s core based on air pollution & HW generation. ii. Various hazardous chemicals are used in the manufacturing process. iii. These chemicals are namely Potassium Nitrate, Potassium per-chlorate, Barium Nitrate, Aluminium compounds, Copper, Chloride etc. iv. These chemicals are highly hazardous and cause serious diseases among the workers. especially ability of blood to carry oxygen leading to headaches, methemoglobinemia and kidney problems , skin problems, thyroid metal fume etc.
18	Health-care Establishment (as defined in BMW Rules)	i. Mainly water polluting. ii. The water pollution s core is normalized to 100 & valid for Hospitals having total waste-water generation > 100 KLD. iii. The hospitals with incinerator will be categorized as Red irrespective of the quantity of the waste - water generation. iv. The hospitals having total waste-water generation less than 100 KLD and without incinerator, the normalized water pollution score will be 50 and will be categorized as Orange category.

19	Hotels having overall wastewater generation @ 100 KLD and more.	i. Mainly water polluting. Small boiler may be installed. ii. The water pollution s core is normalized to 100 & valid for Hotels having waste-water generation > 100 KLD. iii. The hotels having more than 20 rooms and waste-water generation less than 100 KLD and having a coal / oil fired boiler, the pollution score will be 35/40 & are categorized as Orange. iv. The hotels having more than 20 rooms and waste-water generation less than 10 KLD and having no-boiler & no hazardous waste generation, the pollution score will be 20 & are categorized as Green.
20	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Lead acid battery plates and other lead scrap/ashes/residues not covered under Batteries (Management and Handling) Rules, 2001. [* Battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs cove red by ISRI, Code word "Rakes ". Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "rains".	All the three types of pollutants are generated.
21	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Integrated Recycling Plants -- Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.	All the three types of pollutants are generated.

22	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Dismantlers Recycling Plants -- Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.	Mainly air polluting and hazardous waste generating. Air & HW pollution scores are jointly normalized to 100.
23	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Spent cleared metal catalyst containing copper,, Spent cleared metal catalyst containing zinc.	All the three types of pollutants are expected.
24	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt	All the three types of pollutants are expected.
25	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	Mainly water polluting & toxic hazardous waste generating Industry. Scores are normalized to 100.
26	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black	Mainly air polluting. Ai r pollution s core is normalized to 100.
27	Iron & Steel (involving processing from ore/ integrated steel plants) and or Sponge Iron units	i. This industrial sector is the one among the ’17 categories of Highly Polluting Industries ’. ii. Such types of industrial sectors generate all sorts of pollution.
28	Isolated storage of hazardous chemicals (as per schedule of manufacturing, storage of hazardous chemicals rules ,1989 as amended)	As per provisions of Rules, to be kept under Red category especially for safety purposes.

29	Lead acid battery manufacturing (excluding assembling and charging of lead acid battery in micro scale)	i. Mainly air polluting. Air pollution scores are normalized to 100. ii. Lead Acid Battery manufacturing consists of various stages which broadly involve (after producing or receiving lead oxide): Paste Mixing , Grid Casting , Grid Pasting & Curing , Hydro-setting, parting & enveloping , Stacking, grouping & inter-cell welding , Formation. iii. Exposure of workmen to lead during all or any of the processes outlined above exceeds the prescribed standards if appropriate equipment in this respect is not installed at any Battery Manufacturing Unit. iv. All of the above processes, some more than others, involve release of lead particles or fumes into the environment. Pollution from the above processes can be grouped into two possible types, viz: (a) Lead Oxide becomes airborne and there is Particulate Pollution (b) Fumes are generated and there is Gaseous Pollution
30	Manufacturing of explosives, detonators, fuses including management and handling activities	i. Explosives manufacture and use contribute some measure of hazardous waste to the environment. ii. Nitroglycerin produces several toxic byproducts such as acids, caustics, and oils contaminated with heavy metals. These must be disposed of properly by neutralization or stabilization and transported to a hazardous waste landfill. iii. The use of explosives creates large amounts of dust and particulate from the explosion, and, in some cases, releases asbestos, lead, and other hazardous materials into the atmosphere.
31	Manufacturing of paints varnishes, pigments and intermediate (excluding blending/mixing)	i. The process may cause considerable emissions of volatile organic compounds (VOC). VOC contribute to the creation of ozone in the lower layers of the atmosphere (photochemical air pollution) and can present danger to health. ii. Dust and odour may also be a problem. iii. Washing of vessels will contribute waste - waters. iv. Large quantities of HWs are also produced.
32	Manufacturing of lubricating oils, grease and petroleum based products	Generates all sorts of pollution.
33	Manufacturing of glue and gelatin	Highly water polluting & obnoxious air polluting.
34	Milk processes and dairy products(integrated project)	i. Water as well as air polluting due to use of boilers. ii. Water & air pollution scores are normalized to 100.
35	Mining and ore beneficiation	Both air and water polluting. Score is normalized with air & water pollution.
36	Nuclear power plant	i. Mainly air polluting due to incinerator. Others - cooling water. ii. Air pollution s core is normalized to 100.

37	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)	i. Mainly water polluting & hazardous waste generating. ii. The water pollution & HW generation scores are normalized to 100.
38	Oil Refinery (mineral Oil or Petro Refineries)	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Such types of industrial sectors generate all sorts of pollution.
39	Organic Chemicals manufacturing	Such types of industrial sectors generate all sorts of pollution.
40	Pesticides (technical) (excluding formulation)	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries. ii. Such types of industrial sectors generate all sorts of pollution.
41	Petrochemicals Manufacturing (including processing of Emulsions of oil and water)	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Such types of industrial sectors generate all sorts of pollution. iii. The earlier red category industrial sector namely "Processing of Emulsions of Oil & Water " is merged with this industrial sector.
42	Pharmaceuticals	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Such types of industrial sectors generate all sorts of pollution.
43	Photographic film and its chemicals	i. Silver salts and other chemicals are used in preparation. Slight quantity of effluents is generated. ii. Water pollution s cores are normalized to 100.
44	Phosphate rock processing plant	i. The separation of phosphate rock from impurities and non-phosphate materials for use in fertilizer manufacture consists of beneficiation, drying or calcining at some operations, and grinding. Phosphate rock from the mines is first sent to beneficiation units to separate sand and clay and to remove impurities. Steps used in beneficiation depend on the type of rock. ii. The water & air pollution scores are normalized to 100.
45	Phosphorous and its compounds	Water pollution & air pollution containing compounds of phosphorous are expected
46	Power generation plant [except Wind and Solar renewable power plants of all capacities and Mini Hydel power plant of capacity <25MW]	i. Mainly air polluting. It uses a mixture of biomass (agro based) and coal (< 10 %) as a fuel. Almost, round the year operation. ii. In case of DG sets of 5 MVA & more and emissions of SO2 will take place due to use of liquid fuel. Ai r pollution score will be =20 + 10 = 30, Normalized s core will be 75. iii. In case of 'Waste to Energy Plants', water will be used for cooling and air score will be - 30+10 =40.

47	Processes involving chlorinated hydrocarbons	Chlorinated hydrocarbons are used in the manufacture of insecticides, pesticides and organo chloro pesticides. Effluents & emissions are toxic in nature.
48	Ports and harbour, jetties and dredging operations	This category contains all sorts of pollution.
49	Pulp & Paper (waste paper based without bleaching process to manufacture Kraft paper)	Mainly water & air polluting. Water & air pollution scores are normalized to 100.
50	Pulp & Paper (waste paper based units with bleaching process to manufacture writing & printing paper)	Waste paper based Pulp & Paper mills with bleaching process generate all sorts of pollution.
51	Pulp & Paper (Large-Agro + wood) , Small Pulp & Paper (agro based-wheat straw/rice husk)	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Large /Small Agro based Pulp & Paper mills contribute all sorts of pollution problems
52	Railway locomotive workshop /Integrated road transport workshop/Authorized service centers	i. Mainly water polluting industry. Water is used in the washing of locomotives, road transport vehicles during servicing. ii. This score is valid for those Centers having discharge more than 100 KLD. iii. Service Centers having waste-water generation < 100 KLD, the normalized score will be = (100*20)/40= 50.
53	Sugar (excluding Khandsari)	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Sugar mills generate all sorts of pollution problems.
54	Ship Breaking Industries	i. The ship-breaking industry creates numerous hazards for the coastal and marine environment. ii. Ship-breaking releases a large number of dangerous pollutants, including toxic waste, oil, poly-chlorinated biphenyls, and heavy metals, into the waters and sea bed. iii. While most of the oil is removed before a ship is scrapped, sand used to mop up the remaining oil is thrown into the sea. High concentrations of oil and grease are then found in the coastal waters, choking marine life. iv. Solid waste strewn on the shore, 45 tonnes on any given day according to a study by the Central Pollution Control Board, also finds its way into the sea. v. Adding to the stress on coastal waters, the organic load from the thousands of workers living in cramped conditions with little or no sanitary facilities results in unacceptably high levels of BOD.

55	Slaughter house (as per notification S.O.270(E)dated 26.03.2001)and meat processing industries, bone mill, processing of animal horn, hoofs and other body parts	Mainly water polluting and obnoxious odour generating industry. The water pollution s core is normalized to 100
56	Synthetic fibres including rayon, tyre cord, polyester filament yarn	This sector generates all sorts of pollution problems.
57	Tanneries	Mainly water polluting & hazardous waste generating industry. Scores are normalized to 100.
58	Thermal Power Plants	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. TPP generate all sorts of pollution problems.
59	Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing and colouring	In this sector all sorts of pollution are generated.
60	Zinc Smelter	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries '. ii. Integrated Zinc smelter generates all sorts of pollution problems.

Note

Sl. No.	Industry sector	Remarks
1	Incineration plant, CETP, TSDF, E-Waste recycling, CBMWTF, Effluent Conveyance Project, Solvent/acid recovery plant, MSW sanitary landfill site	All such facilities are classified as Red but special category projects as these are parts of pollution control facilities. (These units may be duplicated in other categories however for clarity, they are included here)

ORANGE CATEGORY OF INDUSTRIAL SECTORS

Sl. No.	Industry sector	Remarks
1	Almirah, Grill Manufacturing (Dry Mechanical Process)	Air pollution due to spray painting (emissions of VOCs). Units without painting operations shall be categorized as White.
2	Aluminium & copper extraction from scrap using oil fired furnace (dry process only)	i. Normalized Air pollution score. ii. Significant air pollution due to melting (emissions of SO_2, PM).
3	Automobile servicing, repairing and painting (excluding only fuel dispensing)	Normal water & air polluting and recyclable waste oil generating. If the waste water generation is more than 100 KLD, it will become mainly water polluting and Red Category unit.
4	Ayurvedic and homeopathic medicine	
5	Bakery and confectionery units with production capacity > 1 TPD. (With ovens / furnaces)	
6	Brickfields (excluding fly ash brick manufacturing using lime process)	Significantly air polluting.
7	Building and construction project more than 20,000 sq. m built up area	i. In the pre-construction stage, it is mainly air polluting due to generation of dust (PM) emissions. ii. After construction, it is mainly water polluting. If the discharge is more than 100 KLD, it will be having the normalized score of 75 and be categorized as Red.
8	Cashew nut processing	Normal water and air polluting.
9	Ceramics and Refractories	i. Mainly air polluting industry. ii. This score is for the units having coal consumption < than 12 MT/day. iii. For the units having coal consumption > 12 MT /day, the normalized air pollution score will be 62.5 and shall be categorized as Red.
10	Coal washeries	i. Wet washeries are mainly water polluting industry generating effluents which are having inorganic SS & TDS. Additionally, air pollution due to PM emissions is also generated. ii. Water & air pollution scores are jointly normalized to 100.
11	Coffee seed processing	Normal water & air polluting industry.
12	Chanachur and ladoo from puffed and beaten rice(muri and shira) using husk fired oven	Normal water and air polluting.
13	Coated electrode manufacturing	Preparation of core wire / rod, preparation of dry mix, preparation of wet mix, application of coating by extrusion, baking of coated electrodes
14	Compact disc computer floppy and cassette manufacturing / Reel manufacturing	Generates waste-water and process emissions.
15	Cotton spinning and weaving (medium and large scale)	Mainly air polluting industry. Sources of air pollution (PM) are the fine particles of cotton from spinning process. Air pollution score is normalized to 100.

16	Dairy and dairy products (small scale)	Water and air polluting both.
17	DG set of capacity >1MVA but < 5MVA	Mainly air polluting. Air pollution score is normalized to 100
18	Dismantling of rolling stocks (wagons/coaches)	Emissions of dust and generation of waste oils take place during dismantling. Air pollution & HW generation scores (15+10=25) are normalized to 100
19	Dry coal processing, mineral processing, industries involving ore sintering, pelletisating, grinding & pulverization	Mainly air polluting industry. Final score is the normalized air pollution score.
20	Dry cell battery (excluding manufacturing of electrodes) and assembling & charging of acid lead battery on micro scale	Water and air polluting both.
21	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol)	i. Mainly water polluting industry. This is the normalized water pollution score for units having discharge < 100 KLD. ii. For the units having discharge > 100 KLD, the normalized water pollution score will be 75 and shall be accordingly categorized as Red.
22	Ferrous and Non- ferrous metal extraction involving different furnaces through melting, refining, re-processing, casting and alloy making	i. Mainly air polluting. ii. This score is applicable to secondary production of ferrous & nonferrous metals (excluding lead) up-to 1 MT/hour production. iii. For lead, the normalized air pollution score will be = (100*25)/40= 62.5 and is categorized as Red. iv. For Induction Furnace clubbed with AOD furnace – separate calculation shall be made based on the capacity of the furnaces. In such industries, the molten metal from induction furnace is transferred to AOD furnace where other metals like manganese and nickel are added to get the metal of desired constituents. The lime and silicon are also added for reduction of the metal oxides to the base metal. the normalized air pollution score will be = (100*25)/40= 62.5 and is categorized as Red.
23	Fertilizer (granulation / formulation / blending only)	Air polluting.
24	Fish feed, poultry feed and cattle feed	Obnoxious odour , H2S etc. AP score is normalized to 100
25	Fish processing and packing (excluding chilling of fishes)	Mainly water polluting.
26	Flakes from rejected PET bottle	Normal water & air pollutions are generated.
27	Foam manufacturing	i. Raw material is polyurethane, latex etc. ii. Emissions of VOCs and HAPs. CH3Cl2 and similar compounds as blowing agents. iii. Outdated raw materials and spoiled slots are discarded as HW.
28	Forging of ferrous and non- ferrous metals (using oil and gas fired furnaces)	Heating furnace. Mainly air polluting.

29	Formulation/ pelletization of camphor tablets, naphthalene balls from camphor/ naphthalene powders.	Mainly air polluting. Emissions of Benzene, HC are expected.
30	Food and food processing including fruits and vegetable processing	Normal water and air polluting.
31	Glass ceramics, earthen potteries and tile manufacturing using oil and gas fired kilns, coating on glasses using cerium fluorides and magnesium fluoride etc.	Mainly air polluting. Emissions of SO2 are expected.
32	Gravure printing, digital printing on flex, vinyl	Waste waters , emissions of VOCs
33	Heat treatment using oil fired furnace (without cyaniding)	Mainly air polluting and noise generating. AP Score is normalized to 100.
34	Hot mix plants	Mainly air polluting. Air pollution scores are normalized to 100.
35	Hotels (< 3 star) or hotels having > 20 rooms and less than 100 rooms.	Mainly water polluting. WP score is normalized to 100.
36	Ice cream	Wash-water and boilers / oven for pasteurization.
37	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 – Items namely - Paint and ink Sludge/residues	Mainly air polluting. Air pollution score is normalized to 100
38	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Brass Dross Copper Dross,, Copper Oxide Mill Scale,, Copper Reverts, Cake & Residues, Waste Copper and copper alloys in dispersible form, Slags from copper processing for further processing or refining , Insulated Copper Wire, Scrap/copper with PVC sheathing including ISRI-code material namely “Druid” ,, Jelly filled Copper cables ,, Zinc Dross-Hot dip Galvanizers SLAB,, Zinc Dross-Bottom Dross,, Zinc ash/Skimming arising from galvanizing and die casting operations,, Zinc ash/ Skimming/other zinc bearing wastes arising from smelting and refining,, Zinc ash and residues including zinc alloy residues in dispersible from .	Mainly air polluting.

39	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 – Items namely - Used Oil – As per specifications prescribed from time to time.	Mainly air polluting and hazardous waste generating industry. Air pollution & HW scores are normalized to 100
40	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 – Items namely - Waste Oil ---As per specifications prescribed from time to time.	Mainly air polluting and hazardous waste generating industry. Air pollution & HW scores are normalized to 100.
41	Industry or processes involving foundry operations	i. This score is valid for the foundries having capacity < 5 MT/hr as such units require the coal/coke @ < 500 kg/hr. ii. The units having capacity of 5 MT/hr and more, the coal/coke consumption will be more than 500 kg/hr and the normalized score will be 62.5 and classified accordingly as Red.
42	Jute processing without dyeing	CPCB has notified standards for this category. Both air and water pollutions are generated.
43	Lime manufacturing (using lime kiln)	Mainly air polluting
44	Liquid floor cleaner, black phenyl, liquid soap, glycerol mono-stearate manufacturing	Both air and water pollution are generated.
45	Manufacturing of silica gel	Waste-waters containing TDS and emissions of H2SO4 are generated.
46	Manufacturing of tooth powder, toothpaste, talcum powder and other cosmetic items	Both air and water pollution are generated.
47	Manufacturing of glass	i. Mainly air polluting (melting at 1500ºC and refining. ii. In case of lead glass , the score of A1 will be 25 and accordingly the normalized scores will be 62.5 i.e. Red
48	Manufacturing of iodized salt from crude/ raw salt	Boiling in Evaporators (multiple effect evaporators), centrifuging, iodization with KIO3 mixing. Mainly air polluting. Air pollution score is normalized to 100.
49	Manufacturing of mirror from sheet glass	Evaporator & furnace for heating the metal to be applied as reflector on mirror. Mainly air polluting
50	Manufacturing of mosquito repellent coil	Mainly air polluting. Toxic fumes are expected.
51	Manufacturing of Starch/Sago	i. Water and air polluting industry. Boiler is used for steam generation. ii. Water & air pollution scores are normalized to 100
52	Mechanized laundry using oil fired boiler	Both air and water pollution are generated.

53	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)	i. Mainly air polluting. Boiler as well as VOCs from use of adhesives. ii. Without boiler, it will be a Green category industry.
54	New highway construction project	Mainly air polluting project.
55	Non-alcoholic beverages(soft drink) & bottling of alcohol/non alcoholic products	i. Both air and water polluting. Score is normalized with air & water pollution. This score is valid for industries having waste-water generation < 100 KLD. ii. For the units having waste-water generation > 100 KLD the, normalized score would be 62.5 and categorized as Red.
56	Parboiled Rice Mills	i. Rice Mills are generating both air and water pollution. Wastewaters are having high strength in respect of BOD. ii. This is the normalized air & water pollution score for units having waste-water generation < 100 KLD and fuel consumption less than 12 MTD. iii. For units having wastewater generation > 100 KLD or fuel consumption > 12 MTD or both , the unit shall be classified as Red.
57	Paint blending and mixing (Ball mill)	Both air and water pollution are generated.
58	Paints and varnishes (mixing and blending)	Waste-waters as well as fumes of VOCs due to solvents, pigments, varnishes.
59	Pharmaceutical formulation and for R & D purpose (For sustained release/ extended release of drugs only and not for commercial purpose)	i. All sorts of pollution are generated. ii. R&D activities are to be shifted to Red category.
60	Ply-board manufacturing (including Veneer and laminate) with oil fired boiler/ thermic fluid heater (without resin plant)	Mainly air polluting because of use of boiler. AP score is normalized to 100
61	Potable alcohol (IMFL) by blending, bottling of alcohol products	Mainly water polluting. WP score is normalized to 100.
62	Printing or etching of glass sheet using hydrofluoric acid	Both air and water pollution are generated.
63	Printing ink manufacturing	1. Pigments, binders and solvents are used. 2. Boiler is also used. 3. Emissions of VOCs take place.
64	Printing press	Colored waste-waters containing dyes and VOC emissions are generated.
65	Producer gas plant using conventional up drift coal gasification (linked to rolling mills glass and ceramic industry refectories for dedicated fuel supply)	Mainly air polluting & tar (HW) generating. SO2, CO, NOx are generated. Tar is the byproduct and utilized by other industries in co-processing.

66	Reprocessing of waste plastic including PVC	Large quantities of wash-water and fugitive emissions are generated.
67	Rolling mill (oil or coal fired) and cold rolling mill	Mainly air polluting. Air pollution score is normalized to 100. Others - cooling water and recyclable waste oils etc. are generated.
68	Spray painting, paint baking, paint shipping	Mainly air polluting. Emissions of VOCs and HC are generated.
69	Steel and steel products using various furnaces like blast furnace /open hearth furnace/induction furnace/arc furnace/submerged arc furnace /basic oxygen furnace /hot rolling reheated furnace	i. Mainly air polluting. In the emissions, oxides of manganese, nickel etc. Are also present. ii. Air pollution score is normalized to 100.
70	Silk screen printing, sari printing by wooden blocks	Wash-water and PM emissions from boilers.
71	Stone crushers	Mainly air polluting. Air pollution score is normalized to 100.
72	Surgical and medical products including prophylactics and latex	Both air as well as water polluting. Air and water pollution scores are normalized to 100.
73	Synthetic detergents and soaps(excluding formulation)	i. This is the score for units having generation of wastewaters less than 100 KLD. ii. The units having wastewater generation more than 100 KLD will become mainly water polluting and accordingly normalized water pollution score will be 75 and be categorized as Red.
74	Synthetic resins	All sorts of pollution are generated.
75	Synthetic rubber excluding molding	i. Most synthetic rubber is created from two materials, styrene and butadiene. Both are currently obtained from petroleum. ii. Process is similar to a part of Petrochemical plants.
76	Tea processing (with boiler)	Air polluting
77	Tephlon based products	Due to spraying applications, emissions (HC) are generated
78	Thermocol manufacturing (with boiler)	Polystyrene is heated. Mainly air polluting with boiler.
79	Thermometer manufacturing	Process - making 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.
80	Tobacco products including cigarettes and tobacco/opium processes	Such industries generate both air as well as water pollution. These scores are normalized to 100.
81	Transformer repairing/ manufacturing (dry process only)	Mainly air polluting because of ovens, shot-blasting etc.
82	Tyres and tubes vulcanization/ hot retreating	Mainly air polluting. Emissions of PM, VOCs and obnoxious odour are generated.
83	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils	i. All sorts of pollution are generated. ii. This score is valid for plants having wastewater generation < 100 KLD. iii. If the waste-water generation is more than 100 KLD, the unit shall be classified as Red.
84	Wire drawing and wire netting	Mainly water polluting. WP score is normalized to 100.

List of Green Category of Industries

1	Aluminium utensils from aluminium circles by pressing only (dry mechanical operation)	Minor air pollution due to some fugitive PM emissions from buffing operations.
2	Ayurvedic and homeopathic medicines (without boiler)	Small quantities of waste-waters are generated from washing operations.
3	Bakery /confectionery /sweets products (with production capacity <1tpd (with gas or electrical oven)	Small quantities of waste-waters are generated from washing operations.
4	Bi-axially oriented PP film along with metalizing operations	Mainly extrusion process involving Cooling water recirculation
5	Biomass briquettes (sun drying) without using toxic hazardous wastes	Minor air pollution due to some fugitive PM emissions from pulverization / mixing operations.
6	Blending of melamine resins & different powder, additives by physical mixing	Minor air pollution due to some fugitive PM emissions from pulverization / mixing operations.
7	Brass and bell metal utensils manufacturing from circles(dry mechanical operation without re-rolling facility)	Minor air pollution due to some fugitive PM emissions from buffing operations.
8	Candy	Small quantities of waste-water and minor PM emissions are generated.
9	Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)	This score is valid with Small gas / electricity operated oven / furnace for making glue.
10	Carpentry & wooden furniture manufacturing (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	Minor air pollution due to some fugitive PM emissions from cutting operations.
11	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)	Minor air pollution due to some fugitive PM emissions from mixing operations.
12	Ceramic colour manufacturing by mixing & blending only (not using boiler and wastewater recycling process)	Minor air pollution due to some fugitive PM emissions.
13	Chilling plant, cold storage and ice making	Cooling water recirculation only.
14	Chilling plant and ice making without using ammonia	Cooling water and brine water circuits. Spillages / blow down may take place
15	CO2 recovery	Normal water pollution from scrubbing action
16	Coke briquetting (sun drying)	Mainly air polluting industry. Sources of air pollution (PM) are pulverizes and mixers. Air pollution score is normalized to 100.
17	Cotton spinning and weaving (small scale)	Minor PM emissions from spinning process.

18	Cutting, sizing and polishing of marble stone	Mainly water polluting. Water pollution score is normalized to 100.
19	Dal Mills	Some fugitive emissions of PM.
20	Decoration of ceramic cups and plates by electric furnace	Fumes of enamels. Minor air pollution.
21	DG sets of capacity 1 MVA or less (For commercial & industrial)	Mainly air polluting
22	Digital printing on PVC clothes	Minor emissions / odour generations are expected.
23	Distilled water (without boiler) with electricity as source of heat	TDS as distillation residues
24	Emery powder (fine dust of sand) manufacturing	Air polluting. PM emissions take place during various stages of grindings of naturally occurring minerals.
25	Facility of handling, storage and transportation of food grains in bulk	Some fugitive emissions of PM during handling of grains.
26	Flour mills (dry process)	Fugitive dust emissions.
27	Fly ash export, transport & disposal facilities	• This is mainly air polluting activity. • This is the normalized score based on air pollution.
28	Glass , ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln	Minor fugitive emissions only.
29	Glue from starch (physical mixing) with gas /electrically operated oven /boiler.	Some fugitive emissions of PM during mixing of raw materials.
30	Gold and silver smithy (purification with acid smelting operation and sulphuric acid polishing operation) (using less or equal to 1 litre of sulphuric acid/ nitric acid per month)	Minor fumes from cleaning process.
31	Heat treatment with any of the new technology like ultrasound probe , induction hardening , ionization beam, gas carburizing etc.	• Cooling waters and minor heat fumes. • Finalization of categorization subject to field verification.
32	Hotels & Restaurants (upto 20 rooms & without boilers)	This score is valid for hotels having overall waste – water generation less than 10 KLD
33	Insulation and other coated papers (excluding paper or pipe manufacturing)	Minor fumes due to application of polyurethane
34	Leather foot wear and leather products (excluding tanning and hide processing except cottage scale)	Minor fumes due to use of adhesives / gums
35	Lubricating oil, greases or petroleum based products (only blending at normal temperature)	Minor fumes at the time of transfers from one container to other.
36	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying	1. Minor fumes due to application of gums / adhesives / pastes etc. 2. This score is valid only for gas fired boiler. 3. The units having coal fired boilers shall be categorized as Orange.

37	Manufacturing of optical lenses (using electrical furnace)	Small quantities of waste-waters containing TDS, SS are generated.
38	Mineralized water.	RO Rejects
39	Mineral stack yard / Railway sidings	• Mainly air pollution due to loading, unloading, storage and transportation of the minerals • Waste-water generation mainly during rains only.
40	Oil mill Ghani and extraction (no hydrogenation / refining)	Small quantities of floor washings & equipments washings are generated
41	Oil and gas transportation pipeline	• Contains small gas based power plants up-to 5 MWs. • Air pollution score is normalized to 100. • In case, if these power plants are bigger / liquid fuel / oil based, scores will be calculated accordingly.
42	Packing materials manufacturing from non asbestos fibre, vegetable fibre yarn	Some fugitive emissions of PM are expected.
43	Phenyl/toilet cleaner formulation and bottling	Minor fumes of VOCs in the work zone
44	Polythene and plastic processed products manufacturing (virgin plastic)	Cooling water & emissions due to mixing of raw materials.
45	Poultry, Hatchery and Piggery	Obnoxious odour containing H2S, CH4 etc. and fugitive PM emissions
46	Power looms (without dye and bleaching)	Minor emissions of PM.
47	Puffed rice (muri) (using gas or electrical heating system)	Minor emissions of PM.
48	Pulverization of bamboo and scrap wood	Some fugitive emissions of PM are expected
49	Ready mix cement concrete	PM emissions.
50	Reprocessing of waste cotton	PM emissions.
51	Rice mill (Rice hullers only)	PM emissions are generated. Mainly air polluting. AP score is normalized to 100
52	Rolling mill (gas fired) and cold rolling mill	Mainly air polluting. AP score is normalized to 100
53	Rubber goods industry (with gas operated baby boiler)	Some PM emissions and obnoxious odour.
54	Saw & veneer mills	Mainly air polluting. PM and noise are generated.
55	Seasoning of wood in steam heated chamber	Air pollution due to use boiler for supply of steam. Air pollution score is normalized to 100.
57	Soap manufacturing (handmade without steam boiling / boiler)	Small quantities of waste-water are generated.
56	Spice grinding (upto-20 HP motor)	Small quantities of fugitive emissions of raw materials.
58	Spice grinding (>20 hp motor)	Mainly air polluting. Fugitive emissions of PM.

59	Steel furniture/ fabrication without spray painting	Obnoxious gases from welding as well as noise pollution.
60	Steeping and processing of grains	Washing waters are generated
61	Synthetic detergent formulation	• This score is valid for the industries which are not manufacturing LABSA. It is procured from outside. • Small quantities of emissions are generated from mini boiler. • Air pollution score is normalized to 100.
62	Tamarind powder manufacturing	• Dried tamarind fruits - cleaned and after soaking them in water they are boiled in steam jacketed kettle for about 40-45 minutes. Then pulp is extracted in pulper and dried in drum type drier and on cooling, the final product is packed. • Generates small quantities of waste waters and air emissions. Joint s core is normalized to 100.
63	Tea processing (without boiler)	With boiler, it is an orange category industry. Without boiler, it will be green category industry.
64	Tyres and tube retreating (without boilers)	Due to applications of binding gum / adhesives / cement, some obnoxious fumes may generate.

List of White Category of Industries

Sl. No	Industry Sector
1	Agar bati
2	Assembly of air coolers /conditioners, repairing and servicing
3	Assembly of bicycles ,baby carriages and other small non motorizing vehicles
4	Bailing (hydraulic press)of waste papers
5	Bio fertilizer and bio-pesticides without using inorganic chemicals
6	Biscuits trays etc from rolled PVC sheet (using automatic vacuum forming machines)
7	Blending and packing of tea
8	Block making of printing without foundry (excluding wooden block making)
9	Candle manufacturing
10	Chalk making from plaster of Paris (only casting without boilers etc. (sun drying electrical oven)
11	Compressed oxygen gas from crude liquid oxygen (without use of any solvents and by maintaining pressure & temperature only for separation of other gases)
12	Cotton and woollen hosiers making (Dry process only without any dying / washing operation)
13	Diesel pump repairing and servicing (complete mechanical dry process)
14	Electric lamp (bulb) and CFL manufacturing by assembling only
15	Electrical and electronic item assembling (completely dry process)
16	Engineering and fabrication units (dry process without any heat treatment / metal surface finishing operations / painting)
17	Flavoured betel nuts production/ grinding (completely dry mechanical operations)
18	Fly ash bricks/ block manufacturing
19	Fountain pen manufacturing by assembling only
20	Glass ampules and vials making from glass tubes
21	Glass putty and sealant (by mixing with machine only)
22	Ground nut decorticating
23	Handloom/ carpet weaving (without dying and bleaching operation)
24	Leather cutting and stitching (more than 10 machine and using motor)
25	Manufacturing of coir items from coconut husks
26	Manufacturing of metal caps containers etc
27	Manufacturing of shoe brush and wire brush
28	Medical oxygen
29	Organic and inorganic nutrients (by physical mixing)
30	Organic manure (manual mixing)
31	Packing of powdered milk
32	Paper pins and u clips
33	Repairing of electric motors and generators (dry mechanical process)
34	Rope (plastic and cotton)
35	Scientific and mathematical instrument manufacturing
36	Solar module non conventional energy apparatus manufacturing unit
37	**Solar Power generation through solar photovoltaic cell plants of all capacities, Wind Power Plants of all capacities and Hydel Power Plants upto and including capacity of 25 MW**
38	Surgical and medical products assembling only (not involving effluent / emission generating processes)