



MANIPUR POLLUTION CONTROL BOARD

IMPHAL WEST DC OFFICE COMPLEX

LAMPHELPAT-795004

LIST OF RED CATEGORY OF INDUSTRIES

Sl. No.	Industry Sector	Remarks
1	Isolated storage of hazardous chemicals (as per schedule of Manufacture, Storage and Import of Hazardous Chemicals Rules ,1989 as amended)	Kept under Red category especially for safety purposes.
2	Automobile manufacturing (integrated facilities)	<ol style="list-style-type: none">i. Such types of plants are having either one or combinations of polluting activities viz. washing, metal surface finishing operations, pickling, plating, electroplating, 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 MPCB, re-categorization of the industry shall be made accordingly.
3	Industries engaged in recycling/reprocessing/ recovery/reuse under Schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, items namely “spent cleared metal catalyst containing copper and spent cleared metal catalyst containing zinc”.	
4	Manufacturing of lubricating oils, grease and petroleum based products	
5	DG Set of capacity > 5 MVA	
6	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black	
7	Lead acid battery manufacturing(excluding assembling and charging of lead acid battery in micro scale)	<ol style="list-style-type: none">i. 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.ii. 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.iii. 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

8	Phosphate rock processing plant	
9	Power generation plant [except Wind and Solar renewable power plants of all capacities and Mini Hydel power plant of capacity <25MW]	
10	Industries engaged in recycling/reprocessing/recovery/reuse under Schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, items namely “spent catalyst containing nickel, cadmium, zinc, copper, arsenic, vanadium and cobalt”.	
11	Processes involving chlorinated hydrocarbons	Chlorinated hydrocarbons are used in the manufacture of insecticides, pesticides and organo-chloro pesticides. Effluents and emissions are toxic in nature.
12	Sugar (excluding Khandsari)	
13	Fibre glass production and processing (excluding molding)	<ul style="list-style-type: none"> i. The use of styrene in most methods of fiberglass production causes hazardous air pollution that is harmful to breathe at excessive levels. ii. It is mainly air polluting and hazardous waste generating industry. iii. In case of lead containing glass, it shall be categorized as Red.
14	Fire crackers manufacturing and bulk storage facilities	
15	Industries engaged in recycling/ reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, items under Sl. No. 18 namely “Components of waste electrical and electronic assembles comprising accumulators and other batteries included in Part A of Schedule III, mercury switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule II constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of Schedule III”.	
16	Milk processes and dairy products (integrated project)	
17	Phosphorous and its compounds	
18	Pulp & Paper (waste paper based without bleaching process to manufacture Kraft paper)	
19	Coke making, liquefaction, coal tar distillation or fuel gas making	It is a kind of petrochemical industry.
20	Manufacturing of explosives, detonators, fuses including management and handling activities	<ul style="list-style-type: none"> i. Explosives manufacture and use contribute some amount of hazardous waste to the environment. ii. Nitroglycerin produces several toxic byproducts such as acids, caustics, and oils contaminated with heavy metals. These

		<p>must be disposed of properly by neutralization or stabilization and transported to a hazardous waste landfill.</p> <p>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.</p>
21	Manufacturing of paints varnishes, pigments and intermediate (excluding blending/mixing)	<p>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.</p> <p>ii. Dust and odour may also be a problem.</p> <p>iii. Washing of vessels generates waste-waters.</p> <p>iv. Large quantity of hazardous wastes are also generated.</p>
22	Organic Chemicals manufacturing	
23	Airports and Commercial Air Strips	<p>i. The Airports are generating mainly the waste waters.</p> <p>ii. The airports/strips having discharge less than 100 KLD will be orange category.</p> <p>iii. If the score is normalized w.r.t. water + hazardous waste both, then all the airports will come under Orange category.</p>
24	Asbestos and asbestos based industries	Asbestos is carcinogenic and banned in many countries.
25	Basic chemicals and electro-chemicals and its derivatives including manufacturing of acid	<p>i. Standards prescribed for inorganic chemicals are adopted.</p> <p>ii. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.</p>
26	Cement	One of the 17 category of highly polluting industry
27	Chlorates, per-chlorates & peroxides	It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.
28	Chlorine, fluorine, bromine, iodine and their compounds	It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.
29	Dyes and Dye- Intermediates	One of the 17 category of highly polluting industry
30	Health-care Establishment (as defined in BMW Rules)	<p>i. Hospitals having total waste-water generation > 100 KLD.</p> <p>ii. The hospitals with incinerator will be categorized as Red irrespective of the quantity of the waste-water generation.</p> <p>iii. The hospitals having total waste-water generation less than 100 KLD and without incinerator will be categorized as Orange category.</p>
31	Hotels having overall wastewater generation @ 100 KLD and more.	<p>i. The hotels having more than 20 rooms and waste-water generation less than 100 KLD</p>

		<p>and having a coal/oil fired boiler are categorized as Orange.</p> <p>ii. The hotels having more than 20 rooms and waste-water generation less than 10 KLD and having no-boiler & no hazardous waste generation are categorized as Green.</p>
32	<p>Industries engaged in recycling/reprocessing/recovery/reuse of Hazardous Waste under schedule IV of Hazardous Waste under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, Items under Sl. No. 17 namely "Used Lead acid battery including grid plates and other lead scrap/ashes/ residues not covered under Batteries (Management and Handling) Rules, 2001.</p> <p>[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".]</p>	
33	Manufacturing of glue and gelatin	
34	Mining and ore beneficiation	
35	Nuclear power plant	
36	Pesticides (technical) (excluding formulation)	
37	Photographic film and its chemicals	
38	Railway locomotive work shop/integrated road transport workshop/authorized service centers	<p>i. Mainly water polluting industry. Water is used in the washing of locomotives, road transport vehicles during servicing.</p> <p>ii. This is valid for those centers having discharge more than 100 KLD.</p>
39	Yarn/Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing and colouring	
40	Chlor Alkali	Chlor-alkali have different units for NaOH, Cl ₂ , SBP, etc. which generate toxic effluents. Additionally, fuel consumption is also on higher-side.
41	Ship Breaking Industries	<p>i. The ship-breaking industry creates numerous hazards for the coastal and marine environment.</p> <p>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.</p> <p>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.</p> <p>iv. High concentrations of oil and grease are then found in the coastal waters, choking marine life.</p> <p>v. 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.</p>

		vi. 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.
42	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)	Mainly water polluting & hazardous waste generating.
43	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.
44	Tanneries	
45	Ports and harbour, jetties and dredging operations	Mainly water polluting & hazardous waste generating industry.
46	Synthetic fibers including rayon, tyre cord, polyester filament yarn	
47	Thermal Power Plants	
48	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.
49	Aluminium Smelter	
50	Copper Smelter	
51	Fertilizer (basic) (excluding formulation)	
52	Iron & Steel (involving processing from ore/ integrated steel plants) and or Sponge Iron units	
53	Pulp & Paper (waste paper based units with bleaching process to manufacture writing & printing paper)	
54	Zinc Smelter	
55	Oil Refinery (mineral Oil or Petro Refineries)	
56	Petrochemicals Manufacturing (including processing of Emulsions of oil and water)	
57	Pharmaceuticals	
58	Pulp & Paper (Large-Agro + wood) , Small Pulp & Paper (agro based-wheat straw/rice husk)	
59	Distillery (molasses/grain/yeast based)	

Specific remarks in respect of some of the industrial sectors. These sectors are either merged with other relevant sectors or deleted due to duplication. The overall details are as follows:

Sl. No.	Industry Sector	Remarks
1	<i>Common treatment and disposal facilities (CETP, TSDF, E waste recycling, CBMWTF, effluent conveyance project, incinerator, solvent/acid recovery plant, MSW sanitary land fill site)</i>	<i>i. All such facilities are classified as Red but special category projects as these are parts of pollution control facilities. ii. In case of CETP, the categorization will depend upon the category of member industries being served.</i>
2	<i>Processing of Emulsions of Oil & Water</i>	<i>It is a part of Petrochemical industries. Transferred and merged with the industrial</i>

		<i>sector namely 'Petrochemicals' at Sl. No. 56.</i>
3	<i>Heavy engineering including ship building (with investment on Plant & Machineries more than Rs 10 crores)</i>	<i>Most of the pollution generating processes/ operations under this category are similar to the industry category namely "Automobile Manufacturing (integrated facilities)" at Sl. No. 2 and may be referred accordingly.</i>
4	<i>Hydrocyanic acid and its derivatives</i>	<i>Have been merged with the red category industrial sector namely " Basic chemicals and electro chemicals and its derivatives including manufacturing of acid " at Sl. No. 25</i>
5	<i>Industrial estates/parks/complexes/areas/ export processing zones/ SEZs/ Biotech parks/ leather complex</i>	<i>The classification will depend upon the category(ies) of the industries operating/ proposed to be permitted in the area. In this context, guidelines prescribed in EIA Notification, 2006 shall be followed.</i>
6	<i>Industrial inorganic gases namely a) Chemical gas- Acetylene, hydrogen, chlorine, fluorine, ammonia, sulphur dioxide, ethylene, hydrogen-sulphide, phosphine b) Hydrocarbon gases- Methane , ethane, propane</i>	<i>These gases are generally secondary products and produced along with other main products. To be classified as per the main parent plant.</i>
7	<i>Reprocessing of used oils & waste oils</i>	<i>Already covered under HW Recyclers / Re-processors (Used oils /Waste Oils) under Orange Category</i>