

**POLICY  
ON  
SITING  
OF  
HIGH POLLUTING INDUSTRIES**

**Ministry of Environment & Renewable Energy  
and  
Ministry of Water Supply & Drainage**

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## **POLICY ON SITING OF HIGH POLLUTING INDUSTRIES**

### **1.0 Introduction**

As per the present legal framework of the country, there is no firm policy on siting of high polluting industries, except for the limited provisions under the Central Environmental Authority (CEA) Act and the Urban Development Authority (UDA) Act. The CEA Act deals with the permissible quality of effluent discharges from industries while under the UDA Act, areas are classified as residential, commercial, industrial etc.

Industries are located within industrial parks administered by the Board of Investment (BOI) and Ministry of Industries, or outside these zones as individual industries. There being no legal constraint, high polluting industries are permitted in any location, subject to scrutiny through an Environmental Impact Assessment (EIA). Polluting industries are varied in terms of the type and constituents of pollution, and as a result of this the scrutiny is more in general terms. It is not practicable to cover all of the polluting chemicals in an EIA.

Very often, the effluents from polluting industries are discharged directly or indirectly into water bodies used as sources for drinking water. Even if the industrial discharges conform to the prevailing discharge standards, the discharges from some types of industries can contain various chemicals and micro pollutants which are toxic and harmful to human health. The drinking water purification processes adopted in the country are not capable of eliminating these harmful substances.

Studies carried out by the National Water Supply and Drainage Board (NWSDB) and other agencies indicate that there is a deteriorating trend in the quality of river water.

Consequent to a Cabinet decision, a Task Force was appointed on 22<sup>nd</sup> April 2003, to recommend and implement mitigatory measures against pollution of drinking water sources. This Task Force was initially convened by the then Ministry of Housing and Plantation Infrastructure and continued by successive ministries in charge of water supply. The policy on siting of high polluting industries has been prepared on a directive of the Task Force.

### **2.0 Categorization of Industries**

Industries are primarily classified, as 'high polluting' or 'low polluting' industries by the Central Environmental Authority (CEA). Under high polluting industries, a wide variety of industries are listed. The impact of the effluents from these industries, on the quality of drinking water, depends on the constituents and quantities of the effluents discharged.

The high polluting industries are classified further into two types, viz. Type A – Industries that discharge effluents which are toxic and harmful to human health and Type B – Industries that discharge effluents with high pollution loads. Listings of Type A and Type B industries are given in Appendices A and B respectively.

There is a basic difference between these two types of industries as far as the quality of water and treatability are concerned. In the case of Type B industries, the effluent discharges could be satisfactorily treated using conventional wastewater treatment techniques, whereas for discharges from Type A industries, conventional treatment would reduce the pollution load but the toxic and harmful substances will only be partially removed. Thus, the treated effluents would contain toxic substances and micro pollutants, which even in small quantities could be injurious to human health, when they are consumed over a period.

Thus, Types A and Type B high polluting industries should be considered under two categories for the purpose of industrial siting.

### **3.0 Siting of high polluting industries**

The policy for siting of high polluting industries will be as follows:

a) **High polluting industries – Type A**

The Type A high polluting industries will not be permitted to be located upstream of drinking water abstraction points. The effluents from Type A industries should not be discharged upstream directly or indirectly (through a tributary or other wise).

The effluents from these industries should be treated to the designated national effluent standards and discharged to water bodies, which are not used as a drinking water source or downstream of the last drinking water abstraction point or to the marine environment. Where appropriate an interceptor sewer may be provided to discharge the wastewater downstream.

This policy shall be applicable to individual industries and industrial zones set up by the BOI, Regional BOI or Ministry of Industries.

The Type A industries should be preferably clustered within planned industrial zones. The relevant agencies should identify suitable areas for this purpose.

However, Type A industries will be permitted to be located upstream of drinking water intakes subject to an Environmental Impact Assessment (EIA). The project approving committee should be jointly chaired by the Central Environmental Authority and the National Water Supply and Drainage Board. A representative from the Ministry of Healthcare and Nutrition shall be a member of the project approving committee.

b) High polluting industries – Type B

The Type B high polluting industries will be permitted to be located upstream of drinking water abstraction points, providing a safe distance from any downstream intake point. The criteria for determination of the safe distance are given in Annex C.

The effluents from these industries should be treated to the designated national effluent standards prior to discharge.

The initial scrutiny of these industries should include; details of the treatment process to be adopted, competence of operational personnel, in-house testing facilities, record keeping and continuous monitoring of water quality, including monitoring by independent testing agency as appropriate.

c) Existing Type A high polluting industries

The existing Type A high polluting industries should be considered on a case by case basis. In the long term, there should be a programme to relocate these industries to suitable locations in conformity with the siting policy.

However, considering certain practical difficulties in resorting to such action, the following may be considered on a case by case basis.

- i) Minimize the use of substances proven or suspect to be toxic and harmful to human health.
- ii) Eliminate or reduce the critical pollutants from the effluent discharges by resorting to advanced treatment techniques.
- iii) Set specific, higher standards for effluent discharge.
- iv) Recycling of waste water to minimize the discharges.

Annex A

**Listing of Type A Industries**

(Industries that discharge effluents which are toxic and harmful to human health)

- Manufacture of pesticides, formulation and repacking.
- Chemical industries that generate toxic and non-degradable substances.
- Petroleum refineries producing gasoline, fuel oils, lubricating oils and grease and other products from crude petroleum production of LP gas, manufacture of petrochemicals.
- Processing of mineral ores such as graphite, limonite, mineral sands, monocyte.
- Manufacture of pulp and paper from straw, wood, rags and other fibers.
- Integrated cotton and synthetic textile mills involved in dyeing, printing and garment washing.
- Tanneries and leather finishing plants.
- Manufacture and formulation of paints, varnishes and lacquer.
- Manufacture and formulation of pharmaceuticals.
- Manufacture of soap, synthetic detergents and cosmetic products.
- Electroplating industries.
- Hazardous waste generating industries.
- Industries using radioactive substances.

## Annex B

### Listing of Type B Industries

(Industries that discharge effluents with high pollution loads)

- Iron and steel industries including manufacture of iron and steel products, smelting in blast furnaces to finishing in steel works and foundries.
- Non ferrous basic metal industries including manufacture of smelted and refined non ferrous metals (excluding heavy metals).
- Sugar factories and refineries.
- Distilling, blending and rectifying of alcoholic liquor.
- Manufacture of rubber products and latex processing.
- Meat processing industries.
- Processing of pasteurized, sterilized, skimmed and condensed milk.
- Butter, cheese and cream processing plants.
- Processing, canning and preserving of fruits and vegetables.
- Processing of oil from plant seeds.
- Manufacture of refined cooking oil and margarine.
- Soft drink and carbonated water industry.
- Manufacture of stamped, coated and engraved metal products (excluding heavy metals).
- Manufacture of crude and refined glycerin from vegetables, animal oils and fats.
- Large scale manufacture of sweets, toffees, jaggery from cane sugar and kitul.
- Production of prepared feeds for animals and poultry.
- Pottery and earthenware industry.
- Treating and preserving of wood (excluding copper chrome arsenate treatment).
- Manufacture of ice cream, chocolate or essential oils.

**Note:** Mercury, lead, chromium, cadmium, nickel are considered as heavy metals.

### Annex C

The criteria for determination of safe distance upstream of a drinking water abstraction point, for discharges from Type B high polluting industries shall be as follows:

- a) Minimum safe distance of one (1) kilometer shall be maintained for all such discharges.
- b) The computation of safe distance (Ds) in kilometers shall be,

$$D_s = Q_d / Q_{min} * 24$$

where,

Q<sub>d</sub> = quantity of discharge of treated effluent

Q<sub>min</sub> = minimum river flow

(This formula is based on the consideration that a safe distance of 3 km should be applicable for a dilution factor of 1/8).

- c) If the computed safe distance (Ds) is less than 1 km, the safe distance will be decided on a case by case basis.
- d) The total cumulative discharges from Type B industries within a distance of 5 km upstream from a drinking water abstraction point, shall be subject to a maximum of Q<sub>min</sub> / 8.
- e) In addition, there should be a restriction on permitting new industries, if it is found that, with the introduction of such industry, the "relevant standards for water abstracted for drinking water supply" cannot be maintained at the abstraction points.