

## Comprehensive Industry Document Chlor-Alkali Industry (Abridged)

### Foreword

The Water (Prevention and Control of Pollution) Act, 1974 provides for a consent system by which control of pollution at the sources of emanation prior to discharge into the environment can be administratively effected. The consent is a statutory document permitting discharge from a source stipulating primarily conditions of quality, quantity and location of discharge. The Central Board for the Prevention and Control of Water Pollution addressed itself to the task of evolving the conditions of quality of discharge for one of the two main sources of wastewater: (i) of the industries, and (ii) of domestic origin. At the outset it became apparent that the conditions of quality of discharge, commonly referred as effluent standards, have to be tailored specific to each type of industry. It also became apparent that information on the status of each type of industry in the country in respect of number of units, their locations, capacity, type of product, processes adopted, raw materials used and wastewater treatment presently adopted, was not readily available to the Water Pollution Control Boards created under the Act. Inplant control measures as a means of control of pollutant generation were also considered of significant importance.



Against the above background it was decided to prepare Comprehensive Industry Document on each type of industry touching upon the different aspects as narrated above. The primary objective of the document is to evolve standards for wastewater discharge and obviously the standards developed can only be non-specific to location. Techno-economic aspects of treatment formed the important component of the development procedure. The standard thus developed is termed Minimal National Standards (MINAS) and each unit of the type is required to conform to the Standards regardless of location. The State Boards have agreed not to relax the Standards but to tighten the same if location so warranted.

The present document is the third in the series of Comprehensive Industry Document (COINDS) and deals with Chlor-Alkali Industry. The present document is an abridged version of the comprehensive document submitted to the Board and in that it is a slight departure from the practice. This was necessitated by the very exhaustive contents of the original document. The main thrust of the document is on loss of mercury to the environment from mercury cell units of the industry. Such loss to the different components of the environment through various routes has wider ramifications than merely the impact on receiving water quality. The document encompasses a very wide range and is motivated by the concern for the health of people which after all should be our main concern. The problem of mercury assumes special significance due to its persistence coupled with its conversion into toxic methyl mercury in the water environment. Inhalation of mercury vapour ruins the health. The main document is a treatise on use, fate and effect of mercury, in our national context. The document peeps into areas beyond water pollution and rightly so due to the nature of the hazards associated with mercury.

The main comprehensive document and the present abridged version were prepared by Dr. S. Chatterjee, Consultant, Calcutta. Dr. K.R. Ranganathan, Environmental Engineer, coordinated the activities in preparing the documents.

The document should be useful to the industry, the regulatory agencies, the consultants and to all interested in pollution control and in the health of the nation.

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