



## AMBIENT AIR QUALITY OF DAMOH (NARSINGARH) CITY FOR CEMENT INDUSTRY: A CASE STUDY

Sameera Deep<sup>1</sup> (Research Scholar, Samrat Ashok Technical Institute Vidisha (M.P).)

Dr. A.K Saxena<sup>2</sup> (Professor, Samrat Ashok Technical Institute Vidisha (M.P))

**ABSTRACT:** Cement industry is a potential anthropogenic source of air pollution. It is a major contributor to dust, nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), and carbon monoxide (CO) in metropolitan areas.

Furthermore, it contributes about 5% of the global CO<sub>2</sub>, the famous green house gas. In cement industries, dust is emitted from *stock piles, quarrying, and transportation of raw materials, kilns operation, clinker cooling and milling*. Oxides of carbon, nitrogen, and sulfur are mainly produced as a byproduct of fuel combustion for power generation. Urban air quality is a matter of concern because of exposure of large number of people to it.

This paper assesses the ambient air quality status Damoh (narsingarh) city. One site under residential area, one industrial and one commercial area we selected purposively to spotlight an overview of the total air quality of this region. Damoh is an industrial city with its supremacy in cement manufacturing. The air quality was assessed based on measuring four air pollutants namely suspended particulate matter (SPM), Respirable Suspended Particulate Matter (RSPM), Oxides of Nitrogen (NO<sub>x</sub>) and Sulphur Dioxide (SO<sub>2</sub>). The analysis of air quality in narsingarh village for 2 successive months shows increasing trends of air pollution. The average concentration of SPM and RSPM at all the locations in each year has exceeded the prescribe limit by NAAQS. Apart from this SO<sub>2</sub> and NO<sub>2</sub> levels remain under prescribed limit with minor fluctuations. The study reveals that the industrial site has been heavily polluted in all aspects.

**Key words:** air quality, air pollutants, average concentration, trends, spatio-temporal analysis.

### INTRODUCTION

Environmental pollution is a common problem in both developed and developing countries. Air pollution is one of serious problems faced by the people globally, especially in urban areas of developing countries, which not only experiences a rapid growth of population but also industrialization which is accompanied by growing number of vehicles. Every year large quantities of toxic wastes are discharged into the environment from the ever increasing production of goods and from the burning of fossil fuels to generate the energy needed to sustain industrial and domestic activities. Sulphur dioxide, nitrogen dioxide and suspended particulate matter (SPM) are regarded as major air pollutants in India (Agarwal and Singh, 2000). Air is rendered impure by

ISSN : 2348-5612 © URR



**Note :** For Complete paper/ article please contact us [info@uresearchr.com](mailto:info@uresearchr.com)

Please don't forget to mention reference number , volume number, issue number, name of the authors and title of the paper