



Title: Ambient Levels of Primary and Secondary Pollutants in a Residential Area: Population Risk and Hazard Index Calculation over a Three Years Study Period

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Abstract: This paper aims at presenting data collected over the period of three years (2004-2006) in a residential area in the state of Kuwait. The data collected include ambient levels of primary and secondary pollutants with a number of metrological parameters. A series of unfiltered and filtered concentration roses were plotted to determine the predominant sources as well as the prevailing winds affecting the area under investigation. Local and international air quality regulations were cross referenced over the course of this study. The main objective was to determine whether this residential area could be considered as a safe site for further urban estate development and the risk of the population residing exposed to carcinogens in the ambient air. Although the hazard index values were within the safe range, the population affected with cancer due to benzene inhalation was increasing based on cancer risk assessment calculations.