SUMMARY

Concentrations of Particulate matter[Total Suspended particulates (TSP) and Fine dust(FD)], lead(Pb), Poly aromatic Hydrocarbons (PAHs), CO, SO_2, Total Hydrocarbons(THC) Non-methane Hydrocarbons (NMHC), Methane (CH_4)in the air were monitored on regular basis at seven selected intersections in the city of Colombo using standards methods available. Whenever necessary primary climatic data such as humidity, rainfall, wind speed were recorded. During the period of sampling, passing traffic counts were taken using tally counters.

Analysis was carried using above data to obtain a relationship between traffic data and pollutant levels along with primary climatic data. Attempts were made to show the degree of pollution with the ambient air quality standards available in other countries in the region and World Health Organization(WHO).

The results indicated that the vehicular traffic found in major roads of the city were high and it was above 35000 during day time(6 am-6 pm). The related pollutants like TSP and NMHC were found to be occurring at higher levels and exceeded the standards of WHO and standards of USEPA respectively. The TSP levels are relatively higher than that is found in the region. Data on fuel consumption shows that the diesel to petrol consumption ratio 3:1 and this could be one of the main reasons of existence of high levels of suspended particulate matter. Traffic congestions due to inadequacy of wider roads too contribute to such high levels. To reduce such levels by 50 percent of present values regulatory procedures are required to be implemented. Control of traffic flow pattern prevail in the city will be helpful to reduce these levels.

The pollution by Pb, SO_2 has some effects and it is likely to impair the urban air quality. The CO concentration were existed at low levels which indicated by its average 4 ppm while CH_4 was uniformly distributed in the ambient air of the city.

As the vehicle population in the country is increasing day by day, the above levels in the air could be increased to a condition hazardous to human unless proper vehicle emission regulations are not implemented.