

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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**POTENTIAL HAZRD OF NOISE, PARTICULATE MATTER
AND METALS ALONG THE RING ROAD**

Submitted By

Ashraf Gar Elnaby Mohamed Ibrahim

B.Sc. of Science (Chemistry/Zoology), Faculty of Science, Cairo University, 2007

A Thesis Submitted in Partial Fulfillment
Of
The Requirement for the Master Degree
In
Environmental Sciences

Department of Environmental Basic Sciences
Institute of Environmental Studies and Research
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APPROVAL SHEET
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Ashraf Garelnaby Mohamed Ibrahim

Potential hazard of noise, particulate matter and metals along the ring road

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In this study, the particulate matter and its contents of heavy metals (Cu, Pb, Ni, Zn, Fe, Cd, Cr, Co, Ag and Mn) and anions(B⁻, F⁻, Cl⁻, NO₂⁻, NO₃⁻ and SO₄⁻) and noise levels were monitored at Cornish EL Maadi (A), Gezirat El Dahab (B) and Al-Marioteya (C) . The data revealed that the total suspended particulate and its contents and noise levels at Corniche El Maadi Street (A) and Al-Marioteya (C) (all day) as well as at Gezirat El Dahab (B) (evening) exceeded the set total suspended particulate and noise regulations in Egypt. Overall, it was the buses, private cars + taxis, mini vans and mini truck that made the main bulk of traffic passing through the ring road on weekdays. However, the study revealed that the main category of vehicles contributing towards the recorded particulate matter and noise levels was the miscellaneous type. This means of transportation were slow and proceeded along the right lane of the road and thus had a more measurable impact upon the recorded total suspended particulate and its content and noise levels at the three monitored locations. However, the contribution from vans and mini-trucks towards the noise levels recorded was significant at Gezirat El Dahab and Al-Marioteya during Monday and Friday, respectively. Nonetheless, such contribution was not witnessed for Corniche El Maadi Street, where the miscellaneous category was a predominant noise contributing factor during both Monday and Friday.

Keywords: noise pollution; urban transportation; traffic; Cairo Ring Road; Maadi; total suspended particulate; heavy metals; anions; Gezirat El Dahab; Al-Marioteya.

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