

## EHS UNIT INFORMATION REPORT

<b>Purpose of Report</b>	Provide information on OH&S issues related to particulates from printers
<b>Issue:</b>	Particle Emissions from Office Printers
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<b>Date of Report:</b>	August 01, 2007

Reports in this week's media have suggested office printers could pose a significant danger to the lungs. The reports are based on research conducted by Prof. Linda Morawska of Queensland University of Technology (QIT). Her paper published in the American Chemical Society's Environmental Science and Technology journal investigated particulate emissions principally in the form of Combustion-Derived Nano-Particles (CDNPs).

CDNPs are produced from hydrocarbons such as carbon black, an elemental carbon that is widely used in rubber tires, gaskets, and in pigments for paints, plastics and inks.

Whilst Prof. Morawska found majority of the printers investigated were classified as non-emitters of the CDNPs under investigation. She also found that toner coverage and cartridge age could be the most significant factors affecting the emissions rates.

There are currently no relevant occupational exposure standards for the particles related to Prof. Morawska's paper.

### Recommendations:

To minimise the risk of CDNPs absorption from office based printers the following is recommended:

- All printers (laser, inkjet etc) should be:
  - installed and operating in accordance with the manufacture's recommendations
  - maintained in good working order and be serviced at appropriate intervals by competent service person
  - located in well-ventilated areas. ie not located in small unventilated rooms
  - turned off when not in operation/overnight.
- Waste products from printers (toner cartridges recycle bins, print heads, etc.) should not be stored in offices or if they are to be stored in offices then they should be sealed in plastic (snap lock) bags.
- Staff/Students should minimise the volume of printing to minimise any particle emissions and to conserve paper, resources and energy.