

Incinerator Emissions

ACID GASES

HEAVY METALS

PARTICULATE MATTER

DIOXINS/FURANS & OTHER CARCINOGENS

GREENHOUSE GASES

UNKNOWN POLLUTANTS OF UNKNOWN TOXICITY

Our Air is Already Burdened

- Particulate Matter PM2.5

- Nitrogen Oxides

- Ozone

Health Effects of PM2.5

Cardiac

- Heart attacks
- Rhythm disturbances
- Congestive Heart Failure

Respiratory

- Asthma
- Chronic Lung Disease

PM2.5

98th percentile, daily average values

Current Levels at Courtice : 28.6 µg/m³

Canada Wide Standard Criteria: 30 µg/m³

From Table A2-5, Appendix A, Air Quality Assessment Technical Study Report

Comments from Health Canada Reviewer On PM2.5

“Given that airborne levels of PM2.5 are already elevated in the vicinity of the project and that this contaminant is considered to be a non-threshold contaminant (i.e. adverse health effects may be observed at any level of exposure), (CCME, 2000) HC suggests that the AQTSR discuss best available technologies and procedures that may be applied to mitigate PM2.5 emissions from the proposed facility.”

Technical Reviewers Comment Summary Tracking Table, December 4, 2009

Project Team Response

“...no additional mitigation measures are recommended or required.”

Technical Reviewers Comment Summary Tracking Table, December 4, 2009

*Letter to G. Smitherman, Minister of
Energy and Infrastructure, from
Peel Medical Officer of Health, Dr.
David Mowat*

“My staff have been involved in the Clarkson Airshed Advisory Committee and are well aware of the existing level of concern around air quality in that community. Residents of Clarkson have been told that they live in a stressed airshed, with exceedances of several air quality standards, and were promised that attempts would be made to improve air quality by soliciting voluntary action on the part of industry. They currently perceive that, not only has no action been taken, but it is proposed to add another source of emissions. I, too, am concerned both about the health effects of the current air quality in this area, and about the impact of adding air emissions in the Clarkson area.”

May 1, 2009

Regarding Proposed Gas-Powered Peak Generator for Oakville, Ontario

Response from Ministry of Energy and Infrastructure to Dr. David Mowat, Peel MOH

“On May 12, the OPA, in recognition of concerns about the airshed, issued an addendum to their RFP that requires the generation facility to meet or surpass limits for NOx and CO that are 70% below the Ministry of the Environment's limits.”

May 2009

Regarding Proposed Gas-Powered Peak Generator for Oakville

Nitrogen Dioxide (NO₂)

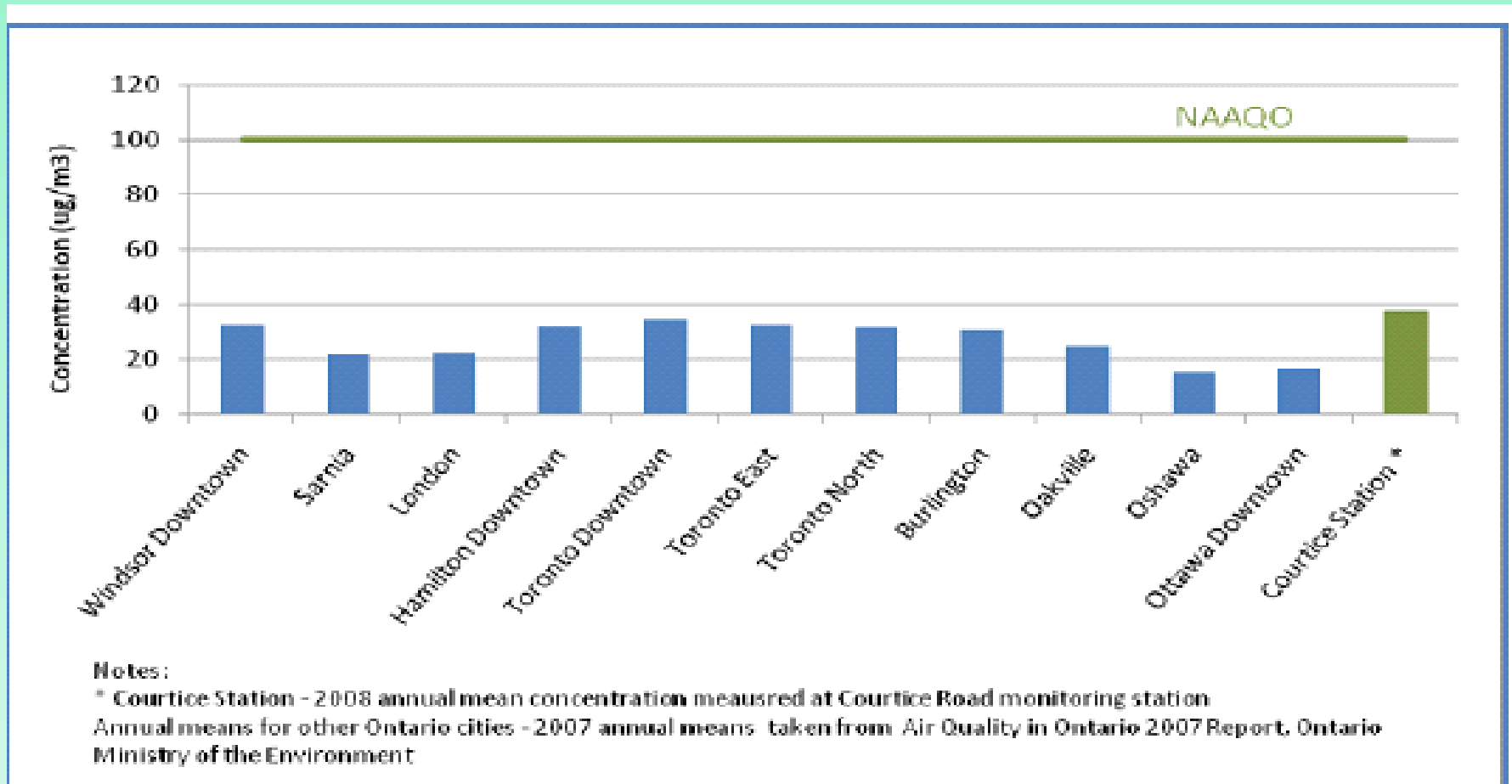


Figure 1-1 Comparison of NO₂ levels in Southwestern Ontario (Figure A-2-4 of Appendix A, Air Quality Assessment Technical Study Report - July 31st, 2009)

Health Effects of NO₂

Who is Vulnerable?

Children, Older Adults, Asthmatics, Diabetics

Premature Mortality

Heart disease

Lung Disease

Health Canada Reviewer Comments on NO₂

“Tables ... of the Site Specific Human Health and Ecological Risk Assessment – Technical Study Report (HHERATSR) **identify considerable increases in NO₂ levels as a result of the project.** ... Further, the predicted project-related **NO₂ levels at receptors for both project scenarios (140,000 tpy and 400,000 tpy) are predicted to increase approximately two times over baseline.”**

Technical Reviewers Comment Summary Tracking Table, December 4, 2009

Health Canada Reviewer-Continued

“Given that NO₂ plays a role in the atmospheric reactions that produce ground-level ozone, which is known to be associated with respiratory and cardiovascular health effects, and that NO₂ by itself is linked with respiratory health effects (EPA, 1995), HC advises that the AQTSR discuss mitigation measures that may be applied to minimize project-related emissions.”

Technical Reviewers Comment Summary Table, December 4, 2009

Project Team Response

“... additional mitigation measures are not recommended or required.”

<u>Criteria Air Contaminants</u>	<u>Incinerator Emissions</u> (140,000 tpy facility) Tonnes per year
Sulphur Dioxide(SO ₂)	44
Nitrogen Oxides	151
Carbon Monoxide	56
Total Particulate	11
Volatile Organic Compounds	61.2

Values from TABLE 4-5, *Air Quality Assessment Technical Study Report*,
December 4, 2009, *Durham/York Waste EA*

Heavy Metal Pollution

LEAD

- Probable human carcinogen
- Learning disabilities and CNS disorders
- Reproductive problems in women

MERCURY

- CNS disorders
- Reproductive toxin
- Endocrine disrupter

CADMIUM

- Probable carcinogen-lung cancer

Dioxins/Furans and other Organic Carcinogens

NO KNOWN SAFE DOSE!

- Cancer-causing
- Disrupts hormones/endocrine system
- Reproductive side effects-men and women
 - Developmental problems

INCINERATOR CONTRIBUTIONS TO REGIONAL INDUSTRIAL TOTALS

	140,000 tpy Facility	400,000 tpy Facility
Cadmium	17%	37%
Lead	7%	17%
Mercury	15%	33%
Benzo(ghi)perylene	24%	47%
Dioxins and Furans	26%	50%
Volatile Organic Compounds(VOC)	3%	7%

*Physicians Care About A Healthy
Environment!*

Durham Region Physician's Petition

Ontario Medical Association

Ontario College of Family Physicians