

May 9, 2005

Ashbridges Bay Treatment Plant Studies

In the early 1990s, the Works Department of the former Metropolitan Toronto planned major modifications and improvements to the operation of the Ashbridges Bay Treatment Plant (ABTP). An environmental assessment (EA) was initiated as required under the Ontario Environmental Assessment Act.

In 2001, to fulfil agreements arising from the EA mediation process, three studies were conducted at the request of the community: the *Biosolids Pellet Review Study: Human Health and Ecological Risk Assessment*; *Health Status Study for the South Riverdale and Beaches Communities*; and *ABTP Air Emissions Study*. The biosolids study was considered at the November 2004 meeting of the Board of Health. The health status and air emissions studies will be presented to a public meeting on May 11.

Air Emissions study results

- Studied four scenarios:
 - Emissions when incinerator in full operation (pre-1996)
 - Emissions during partial operation (2000-2002)
 - Emissions after incineration ceased (2003-2004)
 - Emissions after incineration ceased and odour controls installed (by 2010)
- Focused on 17 of the chemicals of most concern that may have been emitted by the ABTP, including arsenic, benzene, cadmium and mercury.
- Used computer models to analyze emissions of the 17 chemicals.
- Found that with the closing of the incinerators (2003) and the installation of odour control measures by 2010, the impact of ABTP emissions on local air quality is reduced.
- Found that the 15 chemicals known to be in ABTP emissions met Ontario Ambient Air Quality Criteria standards in both communities.
- Most of these 15 chemicals also met health criteria. All meet the health-based criteria by the 2010 scenario.
- The predicted maximum levels (24-hr. average) of chemicals from the ABTP are lower than the maximum Toronto ambient levels.
- Concluded that Toronto Water should continue to monitor the chemicals coming into and released from the ABTP to better understand potential emissions.
- Toronto Water should also periodically update the emission inventory of the ABTP as changes are made to plant operations.
- The City's Technical Services Division should examine the air quality impact of emissions from all sources in these communities.

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Health Status study results

- Results are based on data from various time periods: mortality from 1979 to 1990; cancer cases from 1985 to 1999; and hospital admissions from 1985-1998.
- Focuses on death and hospital admission rates from respiratory and circulatory illnesses, diseases that are known to be influenced by air pollution.
- Does not determine whether other potential health influences on these illnesses, such as income levels, smoking rates and nutrition levels, are more or less important than environmental exposures.
- Compared South Riverdale and the Beaches to comparison communities that were similar in socio-economic profile.
- Found cancer rates were no different than comparison communities.
- Overall mortality rates were higher in South Riverdale and the Beaches, as compared to their respective comparison neighbourhoods.
- South Riverdale had higher rates of mortality from circulatory and respiratory than its comparison communities.
- The Beaches had higher rates of mortality and hospital admissions from circulatory and respiratory illnesses.

Implications

- The Health Status study provides a picture of the health status of these two communities in the past, when the ABTP incinerator was in full operation.
- The study showed there were health status differences between South Riverdale and the Beaches and their respective comparison communities.
- These differences likely reflect a blend of environmental exposure and socio-economic differences between the study communities and their comparisons, although this study cannot determine actual causes.
- It is recommended that the Ontario Minister of the Environment consider cumulative impacts from new emission sources that add to existing ambient pollution levels before issuing a Certificate of Approval for new or expanded industrial facilities, particularly in communities with an elevated burden of health risks.