

From: Wan, Rudolf (ENE)
Sent: August 10, 2009 4:33 PM
To: Washuta, Greg (ENE)
Subject: FW: Revised odour modeling report- Richmond landfill

I have reviewed the updated report provided by XCG for the Richmond Landfill. The updated report does not change significantly my comments. I have amended my comments as per below attached:

The XCG report has questioned the completeness and validity of previous site-specific source characterization works and odour impact assessments conducted for the Richmond Landfill. As a result, the author of the report has come up with his own estimations of odour emissions and odour modelling for the site based on his own research. Nevertheless, the odour emission estimation and modelling presented in the report is itself questionable in the following areas:

(1) Although the report has pointed out that there are other odour sources in the site beside the fresh waste operation e.g. composting operation and landfill gas generation and release, the report has not provided adequate supporting information to support that the fresh waste operation is the only significant source. The ministry's experience is that odours from composting operation and from landfill gas release are always significant sources of odour from landfills.

(2) The quoted emission rate of 67,000 ou/s from fresh waste operation is an odour emission rate which is dependent upon the type(s) of waste and the mass or surface area of the waste. The use of that odour emission rate directly to the site without addressing or adjusting to the type(s) of waste and mass or surface area of the discharge is inappropriate.

(3) There is no supporting information on the dimensions of the area source used in the Screen3 model run.

(4) The use of the odour emission rate of 67,000 ou/s in the Screen3 and AERMOD dispersion model runs is not supported. Besides, there is no input and output files of the AERMOD run in the report. Therefore no comment can be made on the modelling. For example, it is not clear if the source is modeled as an AREA source, or an "initial vertical dimension" (sigma-z) has been defined for the AREA source.

(5) That the emission estimations in the report are based on "un-validated source test reports", the data quality of the emission estimation is considered as "marginal or uncertain" in accordance with MOE's Procedure Document.

That the odour emission estimations and impact study in the report are not based on site-specific data, or have not been assessed with the (limited) site-specific data, the conclusions of the report are not considered as definitive and conclusive.

Trust you found the above in order. If you have any further questions, please contact me.

Regards,

Rudolf Wan, P.Eng.
Dispersion Modeling Engineer, Air & Noise Unit
Certificate of Approval Review Section
Environmental Assessment and Approvals Branch
Ontario Ministry of the Environment
Tel: (416) 314-7784; Fax: (416) 314-8452
Email: rudolf.wan@ontario.ca