ATTACHMENT 7H

Application for an Environmental Assessment Certificate for the Mackenzie Green Energy Centre

Comment from Environment Canada via email dated September 27 (Phil Wong):

Environment Canada (EC) recommends that MGEC should commit to a single screening level test for trace organics, to be conducted in conjunction with one of the already planned quarterly manual stack tests for other regulated pollutants during the first year of operation. Standard protocol for trace organics monitoring would entail testing in triplicate. The recommendation for a single run is in recognition that the risk for elevated trace organics emissions from the proposed facility is relatively low. This recommendation would also allow MGEC to save substantially on the cost of testing. We believe that the incremental cost for this monitoring and analysis work would be in the order of $6000 - $8000.

If the results of the screening test shows that trace organics are less than the legal detection limit for dioxins and furans, and that PAH concentration is less than 5 ug/dscm (per CCME guideline for solid waste incinerators), then we propose that further trace organics monitoring is not necessary.

If the results show otherwise, then we suggest that MGEC commit to evaluate potential causes for the elevated level(s); make the necessary changes; and commit to re-testing within 6 months.

MGELP Response:

In our previous response to the request for testing of trace organic emissions from the MGEC we reported test data from a similar wood-fired power boiler in Prince George at the Northwood pulp and paper mill that is equipped with a multiclone for particulate matter control. These tests found PAH concentrations were less than 2 µg/dscm (microgram per dry standard cubic meter) and dioxin/furan concentrations were at least 40 times lower than Environment Canada's Limit of Quantification of PCDD/PCDF (32 pg TEQ /dscm). MGELP believes these results are an upper estimate of the emissions of trace organics likely to occur from the MGEC because MGEC will be equipped with an electrostatic precipitator to achieve much lower particulate matter emissions. The concentration of particulate matter discharged from the Northwood power boiler was 130-195 mg/m^3 (12% O_2) compared to 50 mg/m^3 proposed as the permit limit for the MGEC.

The dioxin/furan emissions measured in the tests of the Northwood power boiler are less than 1% of the Canada Wide Standard for new pulp and paper mill boilers burning salt-laden wood residue (note that this standard does not apply to the MGEC as it will not be burning salt-laden wood residue). Using a more conservative NPRI (National Pollutant Release Inventory) emission factor that is based on a variety of fuels, boiler designs, and firing conditions, dioxin and furan emissions from the MGEC may be 9% of the Canada-Wide Standard for new wood-fired power boilers at pulp and paper mills burning salt-laden wood residue.

Del Reinheimer, the Environmental Management Section Head at the regional office of the BC Ministry of Environment, has confirmed to Environment Canada and the Environmental Assessment Office that monitoring of dioxins, furans, or PAHs have not been required for boilers burning clean wood waste.

MGELP believes that the testing program recommended by Environment Canada is not warranted for the MGEC because of the low levels of trace organics known to be emitted by modern and efficient power boilers burning clean wood residue, evidence of very low measured concentrations of trace organics emitted from the Northwood power boiler compared to the standards reference by Environment Canada, and that such testing is not required for other similar facilities in BC. With respect, the rationale provided by Environment Canada does not support its request for screening level testing, as emissions from the MGEC will be lower than the emission standards for the types of <u>new</u> sources referenced by Environment Canada.