

FINAL MOTION - Ashbridges Bay Treatment Plant NLC, Jan. 8, 2008

The Clean Water Act requires that scientific assessments be conducted by municipalities. Funding is available from the province. The province has committed approximately \$120 million from 2004 to 2008 to enable municipalities to conduct technical studies and build the necessary professional capacity and expertise for the development of the assessment reports.

MOTION:

Repeating our request: That the City of Toronto Works Committee supply the ABTP-NLC with an **assay of the metals content in the biosolids** for copper, cadmium, lead, arsenic, aluminium, chromium, mercury, and any additional metals normally assayed, as well as regular **monitoring of pH, ammonia and related nitrogen compounds** within effluent discharge waters, by June, 2009, **after a nine month period** between March 1 and Dec. 31, 2008, **of no added hydrofluorosilic acid (HFSA)** to the drinking water. A base line monitoring of samples at the same locations should be taken first on several occasions.

Rationale

1. To establish scientifically whether the specific chemical, HFSA, added to Toronto drinking water, contributes to increased deposition of non-nutritional and toxic metals in biosolids, and excessive ammonia and pH disturbances in near-shore waters, whether from addition of heavy metals inherent in the HFSA chemicals, need for additional ammonia to adjust pH, corrosion of infrastructure, and leaching of metals due to synergistic reaction of HFSA with other water treatment chemicals, as current scientific evidence strongly indicates;
2. To comply with Mediation Agreement on continuous improvement of biosolids quality for beneficial use;
3. To provide information by deadline for decision-making on the Draft BRMP for future uses of biosolids, that cannot be obtained except by temporary interruption of addition of the specific chemical to drinking water, HFSA, for a minimum period of nine months;
4. To provide information for decision-making on purchase and installation of residential water meters with brass metal fittings now known to be vulnerable to increased corrosion by HFSA and treatment chemicals;
5. To provide scientific assessments as required by the Clean Water Act 2006.

WHEREAS the Mediation Agreement 1999 commits the City of Toronto to make efforts to continuously improve the safety and quality of biosolids, including reduction of toxic metals, for maximum beneficial use and minimum health and environmental adverse impact from disposal, dispersal, land application, and where no other avenue exists, other thermal process;

WHEREAS the City plans to install thousands of water meters where none currently exist, in efforts to reduce water waste, and these meters have brass fittings now known to leach lead and other metals into drinking water at point of use due to corrosion from compounds formed reactively with HFSA and treatment chemicals, and these leached metals will be discharged

into waste water when customers adhere to public health advice to flush taps for several minutes each morning before consuming the water;

WHEREAS the previous Motion from this NLC to City of Toronto Health Committee (March 16, 2006) with request for biosolids metals assay and near-shore water quality monitoring after temporary suspension of water fluoridation, was misinterpreted by Toronto Board of Health as a request to discontinue water fluoridation without referendum, when it was in fact a specific request to allow Works to conduct technical assessment of biosolids and effluent discharge in compliance with terms of a binding Mediation Agreement;

WHEREAS this Motion is not meant to challenge existing health policy of supplying fluoride ion in drinking water under the Fluoridation Act, but is meant to examine the effects of a specific chemical, HFSA, which is not fluoride ion but inorganic fluoride acid with inherent metal contaminants known to accumulate in waste water and biosolids, in terms of reducing environmental and public health effects of biosolids disposal and metals released from any future biosolids incineration at ABTP or elsewhere, that are of mutual, congruent concern to both ABTP-NLC and TBH;

WHEREAS the requirements of the Clean Water Act 2006 for municipalities to perform technical assessments to identify potential threats to source water (Sec. 15(2)), and the Safe Drinking Water Act 2002 (c. 32, s. 20(3)) forbidding the dilution of toxic substances (as per CEPA 2006 Schedule 1 list: inorganic fluorides, lead, arsenic, mercury) in drinking water, supersede the Fluoridation Act (Rev. 2001), and no new Certificate of Approval or referendum is required to **temporarily** suspend the addition of the specific chemical, HFSA, with its inherent contaminants of inorganic fluorides (24%), lead (1 mg/L) and arsenic (40 mg/L) which are known to accumulate in biosolids, to perform such assessments in the normal course of long term planning, source water protection, drinking water quality control and waste management practices;

WHEREAS the advice from qualified ABTP personnel was that nine months without HFSA would be required to wash out the system and the biosolids to provide an accurate assessment of reduction of toxic metals, if any, in the biosolids at the end of that period;

WHEREAS no other municipality has conducted this type of assay and the information is needed not only for planning purposes in Toronto but for all municipalities that add HFSA to water, process biosolids in a similar manner, and discharge fluoridated and ammonia-rich effluent into the Great Lakes watershed;

WHEREAS the City of Toronto Health Committee commissioned a scientific report from the U. of Toronto on dental effects of suspending water fluoridation, that is now peer reviewed and in the public domain, and shows no adverse dental effects of suspending fluoridation or reducing the public's exposure to HFSA and its inherent contaminants, lead and arsenic (rather the opposite) but does not answer the questions of metals content in biosolids and discharge water quality effects of the specific chemical, HFSA;

WHEREAS the City of Toronto Health Committee did not use the aforementioned report or release its information to councilors or Works Committee, depriving them of the opportunity

to make an informed decision on passing a Motion to temporarily suspend the addition of HFSA to conduct biosolids metals and near-shore water assays, and depriving them of information to make informed planning decisions regarding residential water meters that can unintentionally affect public health adversely by releasing toxic metals into drinking water at point of use;

WHEREAS the Health Committee has issued an internal Report refusing to allow suspension of fluoridation but has not provided a scientifically valid reason for disallowing inquiry into whether the addition of specific chemical, HFSA, affects the levels of metals in biosolids or ammonia in effluent discharge area waters;

WHEREAS the current Draft BRMP contains provisions made by the City allowing the incineration of biosolids (and by extension, dispersion of the metals in the biosolids from stack emissions in the ABTP area or other thermal plant) in the future;

WHEREAS biosolids contain levels of metals and large metallic particles currently in compliance with regulations governing maximum allowable concentrations, considered acceptable and of insignificant health risk for land application or burial, that are converted to sub-micron and ceramic particles when incinerated and pose known, significant health hazard recognized and reported by the City of Toronto Board of Health;

WHEREAS the fluoridation chemicals themselves contain inorganic fluorides (24%), lead (1 mg/L) and arsenic (40 mg/L), and varying levels of cadmium, mercury and radionuclides that are discharged into waste water and accumulate in biosolids;

WHEREAS the fluoridation chemicals are in no way necessary to provide potable water;

WHEREAS reduced need for added ammonia is very desirable;

WHEREAS the assays may be conducted easily, with financial savings to the City and fulfillment of precautionary principles;

THEREFORE it is desirable to allow formal and unbiased inquiry into whether temporary suspension of the addition of the specific chemical, HFSA to drinking water in the City of Toronto can reduce metals in biosolids and improve effluent discharge area water quality, to legally comply with the binding Mediation Agreement 1999.

Supporting documentation:

1. April, 2007 Staff Report from Dr. Hazel Stewart
www.toronto.ca/legdocs/mmis/2007/hl/bgrd/backgroundfile-3455.pdf
2. Lucier Chemical HFSA analysis 1990 www.waterloowatch.com
3. City of Toronto supplied HFSA analysis 2007 Mosaic Chemical
4. Public domain U. of Toronto public dental health practicum thesis, showing benefits to dental health when fluoridation is discontinued
5. Current peer reviewed scientific evidence of increased metals and toxic compounds in piped water with HFSA; current peer reviewed scientific evidence of increased blood lead in children drinking water with HFSA:

Coplan MJ, Patch SC, Masters RD, Bachman MS. 2007 Confirmation of and explanations for elevated blood lead and other disorders in children exposed to water disinfection and fluoridation chemicals. *Neurotoxicology*. Sep;28(5):1032-42.

Edwards M. Written version of testimony presented orally on March 4, 2004 to US House committee investigating facts pertaining to the reporting of high water lead in Washington, DC, on-line at <http://www.dwatch.com/wasa/040305h.htm>

Maas RP, Patch SC, Christian AM, Coplan MJ 2007 Effects of fluoridation and disinfection agent combinations on lead leaching from leaded-brass parts. *Neurotoxicology*. Sep;28(5):1023-31. PMID: 17697714 [PubMed - in process]

Masters RD, Coplan M. 1999 Water treatment with silicofluorides and lead toxicity. *International Journal of Environmental Science* 56: 435-449.

Masters and Coplan 2000 Association of silicofluoride treated water with elevated blood lead levels. *Neurotoxicology* 21(6):1091-1100.

Renner R. 2004 Leading to lead. *Scientific American* 291(1):22-4.

Renner R. Mis-Lead. *Environ Sci Technol Online News: Science News* May 31, 2006.
http://pubs.acs.org/subscribe/journals/esthag-w/2006/may/science/rr_mislead.html.

Relevant parts of various Acts and Regulations pertaining to fluoridation and drinking water are conveniently listed on the following website: www.waterloowatch.com

Post Meeting Clarification and Follow-up

- Clarification to the discussion on page 6 of the January 8, 2007, Meeting # 84, on digesters:

Digesters 1-4 at ABTP were Secondary Digesters (and not 1-8 as previously stated). Digesters 5-22 (total 16 digesters) are all Primary digesters. The Plant is currently in the process of converting digesters 1-4 into primary digesters. Once these upgrades are completed, digesters 1-4 will be brought online, and digesters 5-8 will be taken out of service for upgrades (thereby retaining the 15 day HRT). Once upgrades to digesters 5-8 are completed, it is anticipated that there will be an improvement to the current HRT.

- Follow-up Responses from Toronto Hydro Energy Services Inc. regarding the relative impact the amount of electricity generated represented with respect to different baselines.

1. The anticipated amount of electrical energy generated by the proposed Ashbridges Bay Biogas Cogeneration Plant would displace the electrical energy consumption for between 6,000 to 7,000 households.

2. Toronto Hydro Energy does NOT have access to any information regarding the relative rank of Ashbridges Bay Treatment Plants electrical consumption relative to any other Toronto Hydro Electrical System customers.

Please feel free to share these responses/informatio with the NLC. If you required further information or details please don't hesitate to contact me.