

CITY OF BURNABY

ENVIRONMENT AND WASTE MANAGEMENT COMMITTEE

HIS WORSHIP, THE MAYOR
AND COUNCILLORS

RE: GASOLINE ADDITIVE - MMT

RECOMMENDATION:

1. *THAT* Council receive this report for information purposes.

REPORT

The Environment and Waste Management Committee, at its meeting held on 1998 February 24, adopted the attached report regarding the use of the gasoline additive MMT.

The Committee noted an increased awareness of potential environmental impacts associated with the use of MMT. Recognizing the environmental concern, the Federal Government has banned the importation of MMT which will eventually eliminate its use in gasoline.

Respectfully submitted,

Councillor L. Rankin
Chair

Councillor D. Johnston
Member

Councillor D. Lawson
Member

: COPY - CITY MANAGER - DIRECTOR ENGINEERING - DIR. PLNG. & BLDG.

TO: CHAIRPERSON & MEMBERS
ENVIRONMENT & WASTE
MANAGEMENT COMMITTEE

DATE: 1998 02 19

FROM: DIRECTOR ENGINEERING

FILE:

SUBJECT: GASOLINE ADDITIVE - MMT

PURPOSE: To provide information to the Committee regarding gasoline additive - MMT and recent study underway to determine environmental impact of manganese in aquatic environment.

RECOMMENDATION:

1. THAT this report be received for information purposes.

REPORT

1.0 INTRODUCTION

At the Environment and Waste Management Committee Meeting on 1997 November 18, the Committee discussed environmental concerns regarding the gasoline additive known as Methylcyclopentadienyl Manganese Tricarbonyl (MMT). Subsequent to the discussion, staff undertook to provide further information regarding this matter.

2.0 GASOLINE ADDITIVE - MMT

MMT is used as an octane enhancer in lead-free gasoline to prevent "knocking" in automobile engines. Urban run-off studies undertaken by UBC/Westwater Research within Brunette Basin have shown elevated levels of manganese in sediments. The source of manganese in the aquatic system could be attributed to the usage of MMT in gasoline.

The environmental behaviour of metals such as manganese (Mn) in aquatic systems including their transport, mobility, fate, speciation, bioavailability and toxicity are influenced by a number of physical and chemical factors. The information from these factors must be integrated to determine trace metal dynamics in the system and to understand the cumulative effects of metals in aquatic systems.

To this end, a UBC student is currently undertaking a case study as a part of his masters thesis which will consider the physio-chemical interactions of elevated manganese concentrations noted in the sediments in the Brunette Basin. Sampling is being conducted at ten sites within the Brunette River Watershed and the study will be completed in summer of 1999.

It should be noted that, due to environmental concerns, the Federal government has legislated a ban on the importation including the inter-provincial movement of MMT. Retailed gasoline suppliers that currently use MMT as gasoline additive will cease the use of MMT once their current stock is depleted.

3.0 CONCLUSION

There is an increased awareness of potential environmental impacts due to the usage of MMT as a gasoline additive. Recognizing the environment concern, the Federal government has banned the importation of MMT which will eventually eliminate the use of MMT in gasoline. The effects of higher manganese concentrations in Brunette Basin due to the manganese based gasoline additive are being studied by a masters student at UBC. The study is anticipated to be completed in summer of 1999, and staff will contact UBC to obtain a copy of the study results.

W.C. 
DIRECTOR ENGINEERING

DD:

cc: City Manager

