

ITEM 1
MANAGER'S REPORT NO. 51
COUNCIL MEETING 89/08/08

RE: PROPOSED MUNICIPAL BY-LAW FOR REGULATING EMISSIONS FROM PRODUCTS CONTAINING CFCs (CHLOROFLUOROCARBONS)
MUNICIPAL MANAGER'S RECOMMENDATION:

1. THAT the recommendations of the Chief Public Health Inspector be adopted.

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TO: MUNICIPAL MANAGER 1989 AUGUST 01
FROM: CHIEF PUBLIC HEALTH INSPECTOR
SUBJECT: PROPOSED MUNICIPAL BY-LAW FOR REGULATING EMISSIONS FROM PRODUCTS CONTAINING CFCs (CHLOROFLUOROCARBONS)
PURPOSE: TO RESPOND TO A REQUEST FROM COUNCIL FOR INFORMATION ON LOCAL INITIATIVES THAT CAN BE TAKEN TO CONTROL EMISSION OF CFCs TO THE ATMOSPHERE

RECOMMENDATIONS:

1. THAT Council direct the Municipal Solicitor to prepare a By-law for regulating the recovery of CFCs prior to product servicing and or disposal.
2. THAT after adoption of a CFC By-law, staff distribute an educational tabloid throughout the Municipality explaining the environmental problems associated with CFC emissions, the need for local control and the CFC By-law requirements as more specifically noted in this report.

REPORT

SUMMARY:

This report provides Council with information on the research conducted to date by the Environmental Health Division regarding the opportunity for the Municipality to take local initiatives on the control of emissions from products containing CFCs.

This report recommends the development of a By-law requiring the capture of CFCs that are currently vented to the atmosphere during servicing and or disposal of products containing CFCs.

1.0 INTRODUCTION:

During the 1989 February 20 meeting of Municipal Council, the following Motion was adopted,

"THAT Municipal staff prepare a report on the opportunity for Burnaby to take some local initiatives in eliminating the local use of CFC based products and to specifically address the feasibility of as quickly as possible ceasing all use of such products in the Municipality of Burnaby, such as styrofoam cups or foam plates in favour of more environmentally friendly products."

The following report is in response to the Motion of Council.

2.0 BACKGROUND:

Chlorofluorocarbons (CFCs) and Halons are a group of highly persistent synthetic chemicals that are used in a wide variety of items including refrigerators, air conditioners, cleaning solvents, home insulation, fire extinguishers and styrofoam.

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It is now recognized by the scientific community that when these chemicals are released into the atmosphere, they are destroying the earth's protective ozone layer and contributing to a "greenhouse" effect. The continual destruction of the ozone layer also means that more harmful ultra violet B radiation reaches the earth's surface. Exposure to ultraviolet B radiation has been linked to skin cancer, suppression of the immune system and eye injuries such as cataract formation. In addition, CFCs are known to exacerbate smog formation in urban areas, impair agricultural and forest productivity and accelerate the degradation of some plastics and paints.

There has been considerable international effort by governments and industries to substitute existing CFCs with less ozone depleting chemicals. An international agreement, known as the Montreal Protocol, pledges twenty four (24) signatory countries including Canada to reduce atmospheric releases of CFCs and Halons.

3.0 INITIATIVES TAKEN BY VARIOUS LEVELS OF GOVERNMENT:

3.1 Federal Environment Canada

- a) Protocol Implementation - Ozone Depleting Substances Regulations have been published in the Canada Gazette, Part 1, to implement the consumption reduction targets set out in the Montreal Protocol.
- b) Regulating a Reduction of Greater than 85% - A draft national regulation under the Canadian Environmental Protection Act (CEPA) has been released and calls for a reduction of at least 85% of controlled CFCs by no later than 1999.
- c) Prohibiting Specific CFC Uses - Draft regulations under CEPA have been released. The proposed regulations prohibit the use of ozone depleting substances for non essential uses or where substitutes are available. Items proposed include a ban on import, manufacture, and sale of products noted below by January 01:
 - aerosols (excluding some medical and fire safety products).
 - food packaging foam, including food and beverage containers.
 - portable halon fire extinguishers for home use.
 - small pressurized canisters including refrigerants, air horns and party streamers.
- d) Further Control Measures - various dates have also been proposed for the prohibition of remaining CFCs in use.

3.2 Provincial Ministry of Environment

The B.C. Ministry of Environment has not announced formal plans yet. However, the Ministry is working with Environment Canada and G.V.R.D. staff in developing a strategy.

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3.3 City of Toronto

On 1989 April 06, the Toronto City Council passed a By-law "To Prohibit and Regulate the Manufacture, Sale, Distribution, Use and Disposal of Certain Products, Materials, and Equipment Containing or Manufactured with Chlorofluorocarbons and Halons".

It is currently staff's understanding that the City of Toronto has allocated an annual budget for three years (based on 1988 costs) of \$200,000 for monitoring and enforcement of the above noted By-law.

3.4 Greater Vancouver Regional District

On 1989 April 26, the G.V.R.D. Board directed its staff to establish a CFC Task Force consisting of Municipal, Provincial and Federal representatives. The subject task force, having met twice already, has a mandate to develop a regional strategy that is compatible with the efforts of both Federal and Provincial jurisdictions. The task force's short term initiatives include the elimination of CFC use in G.V.R.D. and member municipality analytical laboratories, municipal purchasing restrictions and development of public/industry information program. The long term initiatives include CFC recovery with a potential for recycle or destruction, and CFC control via By-law.

The task force's report outlining the strategies proposed and implemented will be submitted to the G.V.R.D. Board by the fall of 1989.

The Burnaby Environmental Health Division represents our Municipality on this task force.

3.5 Burnaby Finance Department, Purchasing

The Purchasing Department does not purchase styrofoam products that are known to contain CFCs. As previously stated, the Federal Government has requested effective 1990 January 01, a ban on the sale, manufacturing and import of all food containers containing CFCs.

The purchasing agents of member Municipalities of the G.V.R.D. are currently developing a regional CFC purchasing policy.

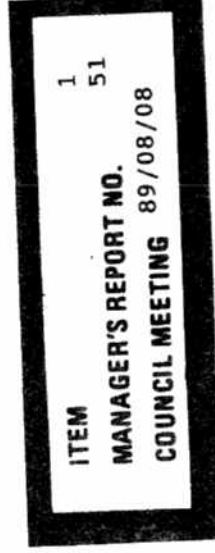
4.0 IDENTIFIED OPTIONS FOR MUNICIPAL CONTROL OF CFC EMISSIONS:

4.1 CFC Control Options

Emissions from CFC based products can be categorized into those with "prompt" and those with "banked" releases. The major source of "banked" emissions is from refrigeration and air conditioning applications. Most emissions occur when products are serviced or discarded although some emissions are also associated with manufacturing. It is estimated that 90% of "banked" CFC emissions come from refrigeration and air conditioning appliances. The major sources of "prompt" emissions are from the manufacture of plastic foam products and the uses of CFCs as cleaning solvents.

The three major ways to control CFC and Halon emissions into the atmosphere are:

- a) Substitution with non or less ozone depleting chemicals or products.



- b) Reduction of CFC losses during product manufacture and use.
- c) Recovery of CFCs prior to product servicing and or disposal.

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As previously noted, items (a) & (b) are being regulated at a national level in accordance with international targets. Item (c), recovery of CFCs could be subject to regulation and enforcement at a Municipal Government level.

5.0 RECOVERY OF CFCs:

Investigations have revealed that the technology for reclamation/recovery of CFCs is available at reasonable costs. Furthermore, there are two businesses in the Lower Mainland that have a "closed" system for recovering CFCs during repairing or disposal of equipment containing CFCs. One of these businesses, J.P.A. Appliances, already has a contract with Burnaby for removing CFCs from white goods picked up by the Engineering Department.

A survey of appliance service, automotive-air conditioning servicing and fire equipment businesses located in Burnaby has indicated that the majority of these businesses dealing in repair and or disposal of CFCs or Halon containing equipment do not have a recovery/reclamation process in place. Furthermore, there are no manufacturers or major buyers (i.e.: mainly secondary manufacturing industries) of CFCs in Burnaby.

The current minimum cost of purchasing a CFC recovery system is \$3,000. The CFCs, if uncontaminated, can be recycled. However contaminated CFCs cannot be recycled and would have to be stored in an environmentally safe manner.

While the issue of recovery and recycling CFCs can be addressed in the short term, the long term issue of disposing CFCs contaminated with oil needs to be resolved. To this end, Professor Tom Bell, S.F.U. Chemistry Department is involved locally in developing safe and economical disposal methods for contaminated CFCs.

6.0 MUNICIPAL BY-LAW REQUIRING RECOVERY OF CFCs DURING PRODUCT SERVICING OR DISPOSAL:

The Environmental Health Division is recommending the development of a Municipal By-law which would eliminate unnecessary venting of CFCs to the atmosphere during appliance repair and disposal. The intent of the By-law is to require companies servicing equipment which contain CFCs to utilize recovery systems and properly store, reclaim or dispose of captured CFC gases in an environmentally acceptable manner.

Should Council concur with the need for a CFC By-law, staff would recommend a 12 month period to allow existing refrigeration and appliance servicing businesses within our Municipality to provide CFC recovery systems.

New target businesses would be required to have a CFC recovery system prior to the Environmental Health Division forwarding a recommendation to the Finance Department for the issuance of a Business Licence.

The Municipal Solicitor is of the opinion that the development of a Municipal By-law for controlling emission of CFC's during servicing of appliances etc., is within Council's authority under provisions of the Health Section of the Municipal Act.

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7.0 MUNICIPAL ENFORCEMENT OF A CFC RECOVERY BY-LAW:

Currently the Municipality of Burnaby has approximately forty businesses that repair appliance and refrigeration units and numerous automotive air conditioning servicers. Should Council concur with the need for a CFC recovery By-law, the 12 month recommended implementation phase-in would allow staff to identify and visit target businesses, conduct CFC and Halon audits and explain the By-law requirements.

The enforcement of a CFC By-law can be part of the regular industrial, commercial inspection currently conducted by the Environmental Health Division's Environmental Protection Section.

In addition, it is proposed that an educational tabloid brochure be developed and distributed throughout the Municipality explaining the environmental problems associated with CFC emissions, the need for local control and explaining the CFC By-law requirements and to inform the public and the industrial community of what they can do to protect the ozone layer. The approximate cost in preparing and distributing the proposed brochure would be \$13,000. Should this be adopted by Council, the recast budget for the Environmental Health Division would reflect this cost.

8.0 CONCLUSION:

In response to Council's directive to staff for a report on local initiatives that can be taken to contribute towards the reduction of CFC emissions, this report recommends the preparation of a Municipal By-law which would require the recovery of CFC gases that are currently vented to the atmosphere during servicing of products such as refrigeration units.

This report noted that the Municipality's Finance Department is not purchasing food beverage containers that consist of CFCs. In addition the import, manufacture and sale of food beverage containers and other certain products containing CFCs will be banned in Canada by 1990 January 01.

Recognizing the serious global environmental effects from emissions of CFCs, a Municipal By-law requiring the recovery of CFC gases during servicing of certain products is an important initiative that can be taken by Municipal Council in contributing to the national environmental objective of eliminating CFC emissions to the atmosphere.

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cc: Medical Health Officer
Director Administrative &
Community Services
Municipal Solicitor
Purchasing Agent
Director Finance

George V. Harvie

G.V. Harvie, C.P.H.I.(C)
CHIEF PUBLIC HEALTH INSPECTOR

