

ITEM 1
MANAGER'S REPORT NO. 39
COUNCIL MEETING 91/06/17

TO: MUNICIPAL MANAGER 1991 JUNE 12

FROM: ACTING CHIEF PUBLIC HEALTH INSPECTOR

SUBJECT: LETTER OF CORRESPONDENCE RECEIVED BY COUNCIL AT ITS
REGULAR COUNCIL MEETING HELD ON 1991 APRIL 08,
REGARDING HIGH-TENSION TRANSMISSION LINES ALONG
BOUNDARY ROAD

PURPOSE: TO PROVIDE COUNCIL WITH INFORMATION REGARDING THE
POSSIBLE HEALTH RISK ASSOCIATED WITH LIVING IN
CLOSE PROXIMITY TO HIGH-TENSION POWER LINES AND TO
CLARIFY THE ISSUE OF JURISDICTION OVER HIGH-TENSION
POWER LINES.

RECOMMENDATION:

1. THAT a copy of this report be forwarded to all petitioners.

REPORT

1.0 INTRODUCTION:

At its regular Council Meeting held on 1991 April 08, Council received correspondence expressing concern with regard to high-tension transmission lines along Boundary Road. The concern raised by petitioners was the possible serious health hazard associated with residing in close proximity to 230 Kv lines. The other issue of concern, the aesthetic environmental damage created by the high-tension transmission lines could better be addressed by B.C. Hydro. Mr. Kelly Gibney at B.C. Hydro was contacted regarding questions posed in Dr. Muriel Groves letter, received as correspondence at Council's regular meeting held 1991 May 06. A copy of the same letter has been sent to B.C. Hydro and a response will be made by Mr. Wyman and Mr. Boatman of B.C. Hydro. However, the following information was provided to the Environmental Health Division by Mr. Gibney in response to Dr. Groves questions.

1. Why are all 230 Kv lines in Vancouver underground, with the exception of those along Boundary Road?

When lines were put through Vancouver, rights-of-way were not available due to the extent of developing in the area.

Even though the cost of underground lines are between 5 and 20 times higher than the cost of installing overhead lines, this high cost was lower than the cost of acquiring rights-of-way to place above ground lines.

2. Why are transmission lines above ground in urban areas? In many western European countries, urban lines are underground, including low voltage lines.

The answer to question (1) partially answers (2) however, many high-tension transmission lines in western Europe are above ground.

2.0 HEALTH RISKS:

The Environmental Health Division contacted the B.C. Radiation Protection Service Branch, this being the Provincial Agency responsible for providing technical advice on this issue. Mr. Brian Phillips, Director of the Radiation Protection Service Branch, Environmental Health Protection Services, indicated that experimental research involving animals and cells etc. conducted over the past two decades have repeatedly demonstrated no health problems caused by electric and magnetic fields at levels that people are ordinarily exposed to. However, epidemiological research has confused the situation by simultaneously verifying the laboratory findings that humans are not at risk and suggesting a low level association between human exposure and some types of cancer. When the research to date is taken as a whole there simply is no reliable, consistent evidence to conclude that fields surrounding power lines, appliances, etc. pose a risk to human health.

In an article from the United States Environmental Protection Agency, the following was noted:

A controversial report, "Evaluation of the Potential Carcinogenicity of Electromagnetic Fields," recently released by the Environmental Protection Agency, links cancer with the presence of electromagnetic fields (EMF).

An earlier draft copy, released in 1990 June, recommended calling extremely low frequency (ELF) EMFs "probable human carcinogens" and said the studies reviewed "show a consistent pattern of response which suggests, but does not prove, a causal link" between EMFs and cancer.

The final copy of the report states that "at this time, such a characterization regarding the link between cancer and exposure to EMFs is not appropriate because the nature of the interaction between EMFs and biological processes leading to cancer is not understood."

In 1991 January, the U.S. EPA Science Advisory Board Nonionizing Electric and Magnetic Fields Subcommittee met to begin its review of a draft document prepared by the EPA's Office of Health and Environmental Assessment entitled "Evaluation of the Potential Carcinogenicity of Electromagnetic Fields." The draft document reviewed information pertaining to the potential carcinogenicity of EM fields. The recommendation to date is that while there are epidemiological studies that indicate an association between EM fields and certain types of cancer, other epidemiological studies do not substantiate this association and that there is insufficient data to determine whether or not a cause and effect relationship exists. They further indicate that further research is needed.

A Canadian study is currently underway to examine possible links between exposure to low frequency electric and magnetic fields and the risk of leukemia in children from birth through the age of 14. The study is being carried out by the Division of Epidemiology of the B.C. Cancer Agency

and the School of Occupational Health at McGill University. Data will be collected until the end of 1994 with another year expected for analysis. Currently there is a great deal of funding centered on research projects that are pursuing the association between cancer and exposure to electric and magnetic fields. It has been suggested that it will be two to three years before it will likely be substantiated or refuted. The present state of knowledge makes it impossible to say that a risk exists. The objective of the Radiation Protection Service in this regard is to continually appraise the scientific findings and assess the implications that these findings have upon exposure to people in British Columbia.

3.0 JURISDICTION:


The subject High-Tension above ground 230 Kv power lines are located on a 132 feet corridor of road allowance between Burnaby and Vancouver extending from Burrard Inlet to Lougheed Highway and Boundary Road. Approximately 99 feet of the right-of-way is on the Vancouver side of the Vancouver/Burnaby boundary and 33 feet on the Burnaby side of this same boundary. The high-tension lines are located entirely on the Vancouver side utilizing space within the 99 feet of right-of-way owned by the City of Vancouver. The B.C. Utilities Commission is the single regulating body. Although, the High-Tension transmission lines are owned, operated and maintained by B.C. Hydro any alterations made to these lines, are governed by the B.C. Utilities Commission.

The B.C. Utilities Commission has indicated that, if for any reason changes or alterations are made to these high-tension transmission lines that may impact on Vancouver or Burnaby, an application would be made by B.C. Hydro to the Planning and Building Inspection Departments. This ensures that all permits, bylaws and regulations concerning Vancouver and Burnaby are adhered to. This process would allow input from all departments having concerns within each respective Community.

4.0 CONCLUSION:

At its regular Council Meeting held on 1991 April 08, Council received correspondence expressing concern with regard to the possible health risk associated to residents living in close proximity to high-tension transmission lines along Boundary Road. Staff have reviewed the most current and up-to-date scientific information on the above subject. In all correspondence and scientific materials reviewed there seems to be epidemiological studies that indicate an association between EM fields and certain types of cancer and other epidemiological studies that do not substantiate this association. It will likely be 1994 or later before the association between EMFs and cancer can be substantiated or refuted. The present state of knowledge makes it impossible to say that risk exists. The Environmental Health Division will continue to research articles and agencies for the most up-to-date information on health risks associated with EMFs.

KCJ/gl
cc: Medical Health Officer
Director Administrative &
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