



November 8, 2004

Honorable Allan W. Klein
Administrative Law Judge
Office of Administrative Hearings
100 Washington Square, Suite 1700
Minneapolis, Minnesota 55401-2138

Re: Route Permit for Transmission Line
EQB Docket No. 04-81-TR-Air Lake-Empire
OAH Docket No. 6-2901-16161-2

Dear Judge Klein:

EQB staff has reviewed the written comments that were submitted into the record of the above-entitled proceeding by a number of interested individuals and entities. These written comments essentially confirm the testimony that was received at the public hearing. It is readily apparent from all the information in the record that there are conflicting views over the route to select between Highway 3 and the Empire Township Substation and between Highway 3 and the new Vermillion Substation through the City of Farmington.

There was one point raised in the comments that the staff would like to respond to, and that is the matter of electromagnetic fields (EMF). In their letters, Scott Johnson, who owns property along 210th Street, and Tim Vagts, who lives along 210th Street, both raise a concern about the presence of electromagnetic fields near the power line.

The EQB discussed the health effects of EMF in the Environmental Assessment. Exhibit 14 at pp. 17-19. In the Environmental Assessment, the EQB referred to a white paper prepared by the Minnesota Department of Health in September 2002 after several years of review of the available evidence on the possible health effects of EMF. *A White Paper On Electric And Magnetic Field Policy And Mitigation Options*, September 2002. In the white paper at page 36, the Department of Health wrote, "The Minnesota Department of Health concludes that the current body of evidence is insufficient to establish a cause and effect relationship between EMF and adverse health effects." The white paper is available at:

<http://www.health.state.mn.us/divs/eh/radiation/emf/emfrept.pdf>

Recently, the EQB Board adopted a finding you made in the Lakefield Junction 161 kV transmission line project in southwestern Minnesota, (EQB Docket No. 03-64-TR-Xcel), that there “is at present insufficient evidence to demonstrate a cause and effect relationship between EMF exposure and any adverse health effects.” Report and Recommendation, July 1, 2004, Finding No. 51. The EQB Board adopted that finding when it issued a route permit to Xcel Energy for the new 161 kV line on September 16, 2004.

With his comment letter, Scott Johnson attached an article about EMF health effects written by a person named Neal Lawrence. An internet search identifies the article as one originally published in the April/May 1996 edition of a magazine called “Midwest Today.” The data and the magazine article are old and not entitled to the kind of credibility that other research work reported in more scientific journals is entitled to.

Mr. Vagts in his letter makes reference to a report released by the California Department of Health Services on EMF in 2002. The report is “An Evaluation of Possible Risks from Electric and Magnetic Fields from Power Lines, Internal Wiring, Electrical Occupations and Appliances and Policy Options in the Face of Possible Risks from Power Frequency Electric and Magnetic Fields,” California Department of Health Services (2002). (The California report was actually referenced in the Environmental Assessment at page 18 under Other EMF Studies.)

The Minnesota Department of Health was aware of the California work when it released the white paper in 2001, see pages 23-24 of the white paper, and has posted a response to the California study on its webpage.

<http://www.health.state.mn.us/divs/eh/radiation/emf/caemf.htm>

A copy of the Department of Health response is included with this letter and the staff requests that it be included in the administrative record of this proceeding. In its response the Department of Health states that it has concluded that there is no scientific consensus on the report’s conclusions and that there are scientific limitations in California’s evaluation. The Department concludes that it will continue to track EMF developments in California and elsewhere.

Another organization that is continuing to track developments on EMF is the World Health Organization. The World Health Organization began an “EMF Project” in 1996, and it continues today. Some of the research by WHO can be found at:

<http://www.who.int/peh-emf/about/WhatisEMF/en/>

A copy of an article by the World Health Organization summarizing the health effects of EMF is attached to this letter, and the staff requests that this material be included in the administrative record. WHO writes at page 6 of the printed version of the article:

In the area of biological effects and medical applications of non-ionizing radiation approximately 25,000 articles have been published over the past 30 years. Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. However, some gaps in knowledge about biological effects exist and need further research.

At page 7, WHO identifies a number of “key points,” including the following: “Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health.”

The analysis of the electric and magnetic fields expected from this proposed line is included in the Application (Exhibit 2) at pages 60-69. The maximum electric field below this line is estimated to be 1.6 kV per meter. The standard applied by the EQB is 8 kV per meter.

The EQB has not established a standard for magnetic fields. As you recognized in the proceeding on the proposed 161 kV line in Jackson and Martin Counties, Florida has established a standard of 150 milligauss and New York State has a standard of 200 milligauss. In the 161 kV proceeding, you found that the maximum magnetic field associated with that line was 39-58 milligauss. Finding No. 53. GRE has calculated that the maximum magnetic field associated with this line will be less than 30 milligauss. Application, pp. 63-65.

While EMF is a matter of concern to landowners and is an issue that the EQB will continue to monitor, along with the Department of Health, staff believes that at this time there is no new evidence regarding potential health effects of EMF to change any of the findings that have been recently adopted by the Board. Regardless of the route ultimately selected by the EQB Board, this line can be constructed and operated in conformance with the requirements applied by the Board to ensure public safety.

Thank you very much for considering our comments. We also appreciate hearing from all those citizens who testified at the hearing and submitted written comments. The staff and the Board will seriously take into account all the information that has been brought forth in this proceeding.

Sincerely,

Alan Mitchell

cc: Michael Bradley, Esq.
Lisa Agrimonti, Esq.