



October 20, 2010

Mr. Thomas May
Chairman, President and Chief Executive Officer
NSTAR Electric and Gas Corporation
800 Boylston Street
Boston, MA 02199-8003

Mr. May,

We are writing to express concern about the planned use of herbicides to manage vegetation in transmission line rights-of-way on Cape Cod. Cape Cod aquifer underlies the entire land surface of Cape Cod and is the principal source of drinking water for area residents. This aquifer is designated a Sole Source Aquifer by the US Environmental Protection Agency. By definition, if this source of water were to be deemed unfit for human consumption, there is no viable alternative for providing water to residents on Cape Cod who depend on this aquifer. This aquifer is especially vulnerable to contamination due to the high permeability of Cape Cod's sandy soil. Contamination of this aquifer would create a significant public health hazard.

The potential for groundwater contamination and human exposure to the herbicides intended for use by NSTAR has not been adequately assessed, nor have the human health risks that may be associated with such low-dose, long-term exposures. Any leaching into the groundwater will likely result in thousands exposed to low doses of these contaminants. Prolonged exposure to low doses of these contaminants could potentially have serious health effects. Several recent studies suggest that glyphosate, for example, can produce endocrine disrupting effects, even at low doses.

Additionally, as NSTAR plans to use several herbicides, one must consider that the toxicities of these chemicals have not been assessed in combination. The cumulative health effects of exposure to mixtures of environmental toxicants are often not simply additive (i.e., $1+1 = 2$). Combination effects may be greater than the sum of the effects of each compound (i.e., $1+1 = 3$).

In such circumstances, precaution is the best approach. We urge you to pursue nontoxic means of vegetation control in the interest of public health for residents of Cape Cod.

Sincerely,

Handwritten signature of Richard W. Clapp in cursive.

Richard Clapp, DSc, MPH
Professor Emeritus

Handwritten signature of Madeleine Kangsen Scammell in cursive.

Madeleine Kangsen Scammell, DSc
Assistant Professor

ⁱ Cabaton, N., Dumont, C., Severin, I., Perdu, E., Zalko, D., Cherkaoui-Malki, M., et al. (2009). Genotoxic and endocrine activities of bis(hydroxyphenyl)methane (bisphenol F) and its derivatives in the HepG2 cell line. *Toxicology*, 255(1-2):15-24.

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Richard, S., Moslemi, S., Sipahutar, H., Benachour, N., & Seralini, G. E. (2005). Differential effects of glyphosate and roundup on human placental cells and aromatase. *Environmental Health Perspectives*, 113(6): 716-720.