

## STATEMENT OF CONCERN – CHILDREN SHOULD NOT HAVE TO INHALE URANIUM PARTICULATES

To whom it may concern:

— February 10 2020

Uranium is a radioactive heavy metal. It poses both chemical and radioactive health dangers.

Contrary to what the Medical Officer of Health and the CNSC have said, science indicates that uranium is a carcinogen. The International Agency for Research on Cancer states: "Internally deposited radionuclides that emit alpha particles are carcinogenic to humans." Uranium is one of those materials.

Modern public health practitioners recognize that a great many illnesses, including cancer, are caused by environmental factors — and can, in many cases, be eliminated or avoided. To protect children, lead was removed from gasoline. To protect non-smokers, smoking in public places has been banned. The use of asbestos has largely been discontinued for health reasons.

The precautionary principle requires the avoidance of chronic exposures to heavy metals and to unnecessary radiation exposures, especially for young children.

If BWXT begins producing CANDU fuel pellets from uranium oxide powder in Peterborough, we know that the amount of uranium particulates released into the air will increase by a factor of several thousand. Those most affected by this dust will be young children attending the elementary school right across the street from the BWXT plant. The powder, much finer than flour, with particulates smaller than the finest human hair, can be inhaled into the deepest parts of the lung. There it can lodge for a long time, irradiating the sensitive tissues.

Inside the body, uranium dust bombards living cells with alpha particles that are known to be cancer-causing. All alpha particles are identical, regardless of whether they come from radon gas or from uranium powder. The alpha-radiation damage to a single cell can, in some cases, cause a fatal lung cancer decades later.

The good news is that the danger can be completely eliminated by not allowing BWXT to start the pelleting operation in this residential Peterborough neighbourhood. Luckily, there is no need for pelleting to begin there, because the demand for CANDU fuel is on the decline and BWXT has offered no reason other than convenience.

The legal mandate of the CNSC is to protect human health first and foremost. One of the basic principles of radiation protection is that all unnecessary exposures to ionizing radiation should be eliminated unless there is a clear justification. The benefits to the individuals being exposed or to society at large must be shown to outweigh any dangers of the radiation exposure. The children at Prince of Wales Elementary School do not derive any benefit from uranium pelleting but may bear the health risks for the rest of their lives. It is our opinion that any increase in cancer risk to these children caused by uranium pelleting is unjustified.

Peterborough residents and elected officials can help to protect their youngsters and other fellow citizens from unnecessary exposure to this airborne pollutant by saying “no” to pelleting.

*Cathy Vakil, M.D., Canadian Association of Physicians for the Environment (CAPE)*  
*Gordon Edwards, Ph.D., Canadian Coalition for Nuclear Responsibility (CCNR)*