

LETTER OF CONCERN TO:

- Dr. Hamidah Meghani**, Commissioner and Medical Officer of Health,
Halton Regional Administration Centre, 1151 Bronte Rd, Oakville, ON L6M 3L1
- Dr. David Williams**, Chief Medical Officer of Health
Ministry of Health and Long Term Care, 21st Flr, 393 University Ave, Toronto, ON M5G 2M2
- Dr. Elizabeth Richardson**, Medical Officer of Health
City of Hamilton, Public Health Services, 110 King Street West, 2nd Floor, Hamilton ON L8P 4S6
- Hon. Eric Hoskins**, Minister
Ministry of Health and Long-Term Care, 10th Floor, Hepburn Block, 80 Grosvenor Street,
Toronto, Ontario M7A 2C4
- Hon. Glen R. Murray**, Minister
Ministry of the Environment and Climate Change
11th Floor, Ferguson Block, 77 Wellesley Street West, Toronto, Ontario M7A 2T5
- Hon. Bill Maura**, Minister,
Ministry of Municipal Affairs, 17th Floor, 777 Bay Street, Toronto, Ontario M5G 2E5
- Hon. Kathryn McGarry**, Minister
Ministry of Natural Resources and Forestry, Suite 6630, 6th Floor, Whitney Block,
99 Wellesley Street West, Toronto, Ontario M7A 1W3
- Hon. Eleanor McMahon**, Minister (and local MPP)
Ministry of Tourism, Culture and Sport, 9th Floor, Hearst Block, 900 Bay Street, Toronto, Ontario M7A 2E1
- Hon. Kevin Flynn**, Minister,
Ministry of Labour, 14th Floor, 400 University Avenue, Toronto, Ontario M7A 1T7
- Dr. Dianne Saxxe**, Commissioner
Office of the Environmental Commissioner, 1075 Bay Street, Suite 605, Toronto, ON M5S 2B1
- Ms Ellen Schwartzel**, Deputy Commissioner,
Office of the Environmental Commissioner, 1075 Bay Street, Suite 605, Toronto, ON M5S 2B1
- Dr. Jean Zigby**, President
Canadian Association of Physicians for the Environment, 405-215 Spadina Ave, Toronto, Ontario M5T 2C7
- Dr. Virginia Walley**, President
Ontario Medical Association, 150 Bloor Street West, Suite 900, Toronto, Ontario, M5S 3C1
- George Habib**, President and CEO
The Lung Association of Ontario, 18 Wynford Dr, Suite 401, Toronto, ON M3C 0K8
- Dr. Wes Stephen**, Chief of Staff
Joseph Brant Hospital, 1230 North Shore Blvd., Burlington, ON, L7S 1W7
- Mayor Rick Goldring**
City of Burlington, 426 Brant Street, PO Box 5013, Burlington, Ontario L7R 3Z6

FORTERRA BRICK PLANNED QUARRY – NEW EAST CELL, (BURLINGTON ONTARIO)

A HEALTH & ENVIRONMENTAL CONCERN FOR RESIDENTS

We are a concerned group of medical and science professionals residing at Westhaven Drive and other nearby streets in Burlington, Ontario. Of concern is the proposed expansion (of the new East Cell) of the Forterra Brick shale quarry in our neighborhood. Clear-cutting and extraction is planned for fall 2016/winter 2017.

As medical and scientific professionals in our community we are aware of the potential adverse health effects due to the proximity of homes to the quarry. In addition to the residents on Westhaven Drive, those in surrounding areas, including Tyandaga, could potentially face health risks as a result of the deforestation and shale quarrying activities for years to come.

Of particular concern is exposure to respirable dust. It is well known and documented that inhalation of shale dust causes multiple respiratory diseases. For example, asthma, allergic alveolitis, chronic bronchitis, COPD, pneumoconiosis and pulmonary fibrosis are of concern (1,2). Chronic exposure to quarry dust is associated with reduced lung function, obstructive lung diseases, and increased respiratory symptoms and needs periodic evaluation of lung function status (3, 4, 5, 6). It can cause skin irritation from allergic reactions and eye irritation.

Studies on occupational health have found that dust exposure is associated with a yearly decline in pulmonary function in the exposed worker (5). One study demonstrated that any exposure is harmful and the reduction in lung function was not significantly associated with years of exposure (7). Although most research is performed on quarry workers, studies support that there is risk from non-occupational exposure to quarry dust to people residing adjacent to quarries exposed to the airborne dust (8). In some cases these particles have been found some 750 metres from various quarries.

Shale has naturally occurring silica (9, 10). Inhalation of silicates causes pulmonary silicosis leading to irreversible lung fibrosis, which can lead to respiratory failure. It is also a proven risk factor for the development of lung cancer and a known carcinogen. Various connective tissue diseases, such as rheumatoid arthritis, scleroderma and systemic lupus erythematosus are also caused by silicosis (9).

Countless occupational health studies recommend the use of personal protective equipment, in particular respiratory protective equipment when handling shale (1). In fact, a document published by the Glen-Gery Corporation in 2015, (*a company with 125 years of industry expertise*) published a safety data sheet written for employees outlining the health hazards of shale mining operations for brick manufacturing (10). They include:

- *Limit inhalation of clay dust.*
- *Contaminated work clothing must not be allowed out of the workplace.*
- *Wear protective gloves, clothing, eye protection and face protection when handling.*
- *Wash hands thoroughly after handling.*

In some cases, we will be living meters away from this operation. What precautions must we take? Are we expected to take similar precautions to those of workers in order to live in our neighbourhood 24 hours x 7 days a week – essentially exposure all the time?

Noise from the quarry operations is another concern. Adverse health effects from regular exposure to consistent noise are well researched, including hypertension, ischemic heart disease, stress, annoyance and tinnitus.

There is clear evidence of the health risk to quarry workers supported by extensive research. The health risks to the community are real. How can Forterra ensure that there is no negative impact on the health of the residents? On what research can they base this assurance?

We cannot assume that we are safe from a quarry that is nearby our neighbourhood. Our community, particularly those most vulnerable, including the elderly and children must be protected from the life-long health consequences from this dust exposure. We feel strongly that the health consequences of this project moving forward are potentially severe enough that the quarry expansion should not proceed. The license for the quarry did not take into consideration residential development that occurred in the years following. However, it should do so now. The review of aggregate licenses should be a regular occurring common practice in this day and age, especially based on what we now know about certain human health impacts when aggregates (shale, sand, gravel, etc.) and mixed use residential, business and educational facilities become integrated within our urban developments.

In your positions, we urge you to get involved in order to ensure that Forterra Brick's plans for deforestation and long term quarrying is fully investigated to avoid potential irreversible long-term effects on the health of our community and the overall environment.

Sincerely,

Health and Science Professionals
Residents, Burlington, ON

Please email: tecburlington@gmail.com

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2. Encyclopedia of Occupational Health and Safety, Jeanne Melger Stelman, 1998, Fourth Edition, page 1069.
3. Respiratory symptoms and ventilatory functions among quarry workers in Edo state, Nigeria. Isara, Ada, Aigbokhaode, Alenoghena. The Pan African Medical Journal, April 2016; 23.
4. Pulmonary problems among quarry workers of stone crushing industrial site at Umuogbara, Ebonyi State Nigeria. Nwibo, Ugwuja, Nwambeke. International Journal of Occupational Environmental Health. Oct 2012. page 178-85.
5. Dust exposure is associated with increased lung function loss among workers in the Norwegian silicon carbide industry. Johnsen, Bugge, Foreland. Occupational Environmental Medicine. Nov 2013. page 803-809
6. Biopersistent granular dust and chronic obstructive pulmonary disease: a systematic review and meta analysis. Bruske, Thiering, Heinrich. PLOS One. Nov 2013. eCollection.
7. Lung function impact from working in the pre-revolution Libyan quarry industry. Draid, Ben-Elhaj, Ali AM. International Journal of Environmental Research and Public Health. May 2015. page 5006-5012
8. Non-occupational exposure to silica dust. Indian Journal of Occupational and Environmental Health. Bhagia. Sept 2012. Pages 95-100.
9. Community Health and Shale development guidebook. Goodson, Arcuri, Version 1, Nov 2015. <http://solutions-network.org/site-communityhealthguidebook/stage-three-posts/what-health-considerations-are-there-8/>
10. Glen-gery Corporation. Safety Data Sheet. Jan 2015. https://www.glengery.com/images/brick/msds/msds_clay_shale.pdf

SIGNATURES OF CONCERNED HEALTH AND SCIENCE PROFESSIONALS (2)

DR. ANDREAS FREITAS

Name:

Andreas Freitas MD
Burlington, Ontario

Name:

Burlington, Ontario

DR PETER KRAUS

Name:

Peter Kraus
Burlington, Ontario

Name:

Burlington, Ontario

Dr. Heather Whittingham

Name:

Heather Whittingham
Burlington, Ontario

Name:

Burlington, Ontario

Dr. Brian Kelemen

Name:

Brian Kelemen
Burlington, Ontario

Name:

Burlington, Ontario

OM BHARGAVA

Name:

Om Bhargava
Burlington, Ontario

Name:

Burlington, Ontario

Roger Jacobs PhD.

Name:

Roger Jacobs PhD.
Burlington, Ontario

Name:

Burlington, Ontario

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