



**SUBMISSIONS
OF LAKE ONTARIO WATERKEEPER AND GORD DOWNIE
TO ONTARIO MINISTRY OF ENVIRONMENT**

**RE: APPLICATIONS FOR APPROVAL, AIR AND WASTE
DISPOSAL SITE, LAFARGE CANADA INC.**

DOCUMENT: EBR REGISTRY #IA04E0466 & #IA03E1902

SUBMISSION DATE: MARCH 21, 2006

Application Processor
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Executive Summary

On February 1, 2006, two notices of proposal for an instrument were loaded to the Environmental Bill of Rights Registry. In both cases, the proponent is Lafarge Canada Inc., located in Loyalist, Ontario. One proposal (#IA04E0466) is for an approval to discharge into the air. The second proposal (#IA03E1902) is for an approval for a waste disposal site. These two proposals are part of the same undertaking: to import and burn tires, bones, plastic, and other waste at Lafarge's cement kiln. **This single submission from Lake Ontario Waterkeeper and Gord Downie is a comment on both EBR Registry documents.**

Lake Ontario Waterkeeper and Gord Downie ("We") make the following recommendation:

1. The Ministry of Environment ("MOE") deny the applications for approval under s. 9 (air) and s. 27 (waste) of the *Environmental Protection Act*.

In the alternative, we ask that (as a minimum) the Director immediately require that a hearing be held pursuant to Part V of the EPA.

Background

Our concerns about proposals of this kind are already on the record. Waterkeeper submitted comments to the MOE in February, 2005 regarding the province's Scrap Tire Diversion Program Plan. In that submission, we outlined our concerns about the environmental impacts of burning tires at cement kilns and urged the MOE to reject any policy that includes burning tires. We wrote to the Ministry of Environment in January, 2006, stating our interest in this particular project. We have also published three newsletters exploring the potential impacts of burning tires and waste near Lake Ontario and been quoted in local newspapers on this issue.

Our concerns about the Lafarge proposal are shared by a number of local non-governmental organizations and area residents. Most notably, the Loyalist Environmental Coalition and Dr. Alban Goddard-Hill, former medical officer of health for Hastings and Prince Edward counties, have voiced their support for increased scrutiny and a more protective process.

In fact, concerns about tire burning seem to emerge in every place tire burning occurs. It is fought by communities all over the world, in large part because of the unique composition of tires and the incredible threat to health and the environment that they pose. There have been serious campaigns to halt tire burning at cement kilns other countries, including the United States (Florida, Montana, New York, Texas), the United Kingdom, and Germany to name a few.

On February 27, 2006, Waterkeeper wrote to the Ministry of Environment to request an extension to the public comment period for these proposals. The MOE granted this request, extending the deadline to April 2, 2006. We appreciate the Ministry's receptiveness to our request.

The extended public comment period provided us with an opportunity to visit the MOE's Toronto office, study the supporting documentation for the permit applications, and probe the implications of this proposal more deeply. We appreciate the Ministry's and Lafarge's prompt willingness to allow access to this information.

Introduction

The Lafarge facility is located in Loyalist, at the eastern end of Lake Ontario. From an environmental perspective, this region is one of Lake Ontario's most thriving communities. In Southern Ontario, 75% of wetlands have been lost because of human activities like draining and infilling. The remaining 25% of wetlands are stressed because of pollution, regulated water levels, and encroachment. The north shore of western Lake Ontario has lost nearly 100% of its natural wetlands, making the eastern region even more vital to the health of the lake.

For more than 2,000 years, people have fished from waters of this region. This perpetual fishery has been a symbol of the area's incredible natural wealth. While each successive generation has

introduced new languages, cultures, and economies to the region, each one has shared one activity in common: fishing.

Unfortunately, the fish populations are declining while harmful impacts on humans who consume fish and game are on the rise. The second most common reason for fish consumption advisories on Lake Ontario is dioxin contamination (32%). This is a dramatic increase from 3% of restrictions in 2002-2004 and 1% of restrictions in 2000-2001 – it results from our increased understanding of the harmful effects of dioxins and the prevalence of contamination in Lake Ontario fish.¹

Some experts suggest that as much as 100% of the toxic loadings (including dioxins) in some Great Lakes communities come from air pollution². Airborne contaminants are deposited into Lake Ontario, concentrating in the food chain, and becoming more harmful than they ever were before. It is no surprise, then, that a region with contaminated fish also has contaminated air. Males and females in the Quinte community are more likely to die from chronic obstructive pulmonary disorders (bronchitis, emphysema, asthma, etc.) than in other parts of the province, including other Great Lakes Areas of Concern³.

This is a unique community with an historic connection to its fishery, elevated levels of contamination, and alarming rates of chronic obstructive pulmonary disorders; a proposal to burn potentially harmful waste in this region should receive transparent, rigorous scrutiny. We submit that this has not happened. Instead, the limited environmental analysis that accompanies this proposal is based on the flawed premise that “Point of Impingement” standards are the paramount environmental consideration. This narrow view fails to address true environmental and human impacts and undermines other provincial environmental objectives.

We submit that the Lafarge application must be studied in light of the following issues:

- Background contamination in eastern Lake Ontario
- Better understanding about cumulative impacts of trace amounts of contaminants

The project also has enormous policy ramifications for the Province of Ontario, and it raises many questions that should be addressed in a transparent, thorough, and candid process. They include:

- How should Ontario address the municipal waste disposal crisis? If we choose incineration, are cement kilns the best option?

¹ *The 2005-2006 Guide to Eating Ontario Sport Fish*. Ontario Ministry of Environment.

² United States Environmental Protection Agency. *Deposition of Air Pollutants to the Great Waters, Third Report to Congress, June 2000*.

³ Elliott et al, *Mapping Health in the Great Lakes Areas of Concern: A User-Friendly Tool for Policy and Decision Makers*. Environ Health Perspect. 2001 Dec;109 Suppl 6:817-26.

- Should Ontario facilities accept and incinerate more municipal waste from the United States?
- How will the province regulate so-called “incremental” increases in pollution, in light of existing contamination in many Ontario communities?
- Are we comfortable blending known contaminants into cement and spreading them around Ontario?
- Should we allow industrial facilities to invest millions into new technologies that, at best, will maintain the *status quo* when it comes to toxic emissions?
- In light of the fragile state of the Great Lakes, in light of the wealth we have squandered in the last century, will the Province of Ontario begin to err on the side of caution when issuing Certificates of Approval for projects that have been known to have environmental impacts in other jurisdictions?
- How do projects that generate energy – such as this one – fit into Ontario’s energy supply mix?
- Is there a contradiction between the province’s efforts to close publicly owned coal-fired power plants and energy-from-waste proposals designed to save private companies money on fuel?

If this project proceeds while these questions remain unanswered, Lafarge Canada may unintentionally write the province’s environmental policy and displace the Government of Ontario’s broader goals and objectives.

Grounds

The grounds for our request are as follows:

- A. The current applications for approval under s. 9 (air) and s. 27 (waste) mischaracterize this incineration program, thereby circumventing due public process.
- B. These same applications are vague and incomplete.
- C. Approving this project would undermine provincial policy in the areas of energy and waste.

A. The current applications for approval under s. 9 (air) and s. 27 (waste) mischaracterize this incineration program, thereby circumventing due public process.

The Bath Plant Alternative Fuel project is no ordinary alternative fuel project. Lafarge is offering to accept waste – consisting of pellets, tires, plastics, etc. – to help reduce its fuel costs. Its goal is to create a key destination for municipal waste from Ontario, Quebec, and the United States. This will also be the first operational tire-burning cement kiln in Ontario.

There are major implications that must be considered, including the environmental impacts and municipal waste management policies. Unfortunately, the proponent has been negotiating with the Ministry of Environment to frame its project in a way that would avoid a mandatory public hearing:

Lafarge has learned from its discussions with your Ministry that if the amount of municipal waste incorporated into the fuel pellets exceeds the waste of 1500 persons, that a mandatory public hearing must be held under Section 30 of the EPA ... Given these realities, Lafarge wishes to clarify its application to indicate that the amount of municipal waste integrated in the fuel pellets will be kept to less than the waste of 1500 persons. The details of how this can be ensured can be worked out at a later date.⁴

If the current s. 27 (waste) application is granted, Lafarge hopes to increase the amount of municipal waste it receives. The proponent has asked that the MOE exempt a future expansion from the mandatory public hearing as well:

Furthermore, should your Ministry determine that a Section 32 hearing be required, Lafarge wishes to reserve the option to return to the flexible approach taken in the initial application wherein the total volume of solid alternative fuels be held to less than 100 tonnes per day with no specific additional restriction on fuel pellets.⁵

Fuel pellets are, of course, included in the definition of municipal waste in the EPA Regulations, and the Part V hearing is mandatory, not discretionary. Recent reports confirm that Ontario municipalities including York Region⁶, Kingston⁷, and Halton⁸ explicitly state their intent to send waste incineration to Lafarge and/or suggest more broadly that municipal waste may be incinerated and blended with cement in the future.

Any doubt that Lafarge hopes to avoid a public hearing is quelled by the following statement:

⁴ Lafarge North America. Letter to David Bell (MOE). April 8, 2005.

⁵ Lafarge North America. Letter to David Bell (MOE). April 8, 2005.

⁶ See, for example:

- York Region. *The Regional Municipality of York to contract with Dongara Developments to convert waste into alternative fuel*. Press Release: December 16, 2005.
- Mike Adler. *Garbage pellets may fuel factories*. Vaughan Citizen: November 18, 2004.

⁷ See: *Kingston Biosolids Management Strategy Final Report, 2003*

⁸ See: *Halton Solid Waste Management Strategy, Draft September 2005*

An EPA Public Hearing will be costly and unnecessarily delay the approval process and is not the only means available to your ministry to provide answers to the local public.⁹

These statements indicate a clear and unmistakable desire to avoid a public hearing. This is unfortunate, given that the purpose of a hearing is to provide a fair, transparent process by which citizens participate in the decision-making process and agree upon the terms and conditions necessary to protect the health of their communities.

Mischaracterizing the nature of the project minimizes the opportunity to make informed decisions. The International Joint Commission (“IJC”) has eloquently expressed how important it is to manage our incinerators wisely, in order to protect the Lakes:

The Commission has noted over the last several years that further reduction in the amount of persistent toxic substances produced or transported and deposited in the Basin via the air pathway is crucial to safeguarding and remediation of the Great Lakes. Additional quantities of dioxin and other compounds from sources such as municipal waste incinerators could be viewed as representing an excessive burden to the Basin.¹⁰

Mischaracterizing the nature of the project also minimizes the opportunity to mitigate potential environmental impacts. Incinerating tires, in particular, poses a number of environmental threats. Numerous studies¹¹ suggest that burning tires can lead to dramatic increases in emissions of dioxins, PAHs, and metals. Dioxin emissions are of special concern in this instance: dioxins are regarded as the most carcinogenic substances known to science; they cause health problems including infertility, learning disabilities, endometriosis, reproductive disorders, birth defects, and damage to the immune system.

B. These same applications are vague and incomplete.

The applications fail to describe the project in detail. They also omit a number of significant issues. For example:

⁹ Lafarge North America. Letter to David Bell (MOE). April 8, 2005.

¹⁰ International Joint Commission. *A Policy Statement on Incineration of Municipal Waste*. Endorsed September 1996. Section 4.0.

¹¹ See, for example:

- Mukherjef, A.B. et al. *The Effects of Switching from Coal to Alternative Fuels on Heavy Metals Emissions from Cement Manufacturing*. Proceeds of the 6th International Conference on the Biogenchemistry of Trace Elements Guelph (ON) Canada, Jul 29-Aug 2, 2001
- Proctor and Redfern, Ltd. *A Review of Emissions Performance of Cement Kilns Using Tire-Derived Fuel*. Don Mills, Ontario, (July, 1995).
- California Integrated Waste Management Board, (CIWMB). *Tires as a Fuel Supplement: Feasibility Study*. Sacramento, CA, (1992).

- **The term “scrap tires” is not defined.** Thus, it is unknown whether Lafarge will include recently used tires or stockpiled tires, whether there will be restrictions on the type of tires (for example, tires containing self-sealing chemicals), or whether the tires will be shredded off-site or on-site, if at all.
- **The term “non recyclable plastics” is not defined.** Thus, it is unknown whether the plastics are domestic or industrial waste, what they were previously used for, and what level of contamination might be present. If these plastics are from municipal sources, then those sources and the quantity of waste must be identified, in keeping with the municipal waste provisions of the *Environmental Protection Act*.
- **The term “shredded materials and byproducts with biomass characteristics” is alarmingly broad.** Such products could include, according to the proposal, pulp & paper, forestry, agricultural, and “other” byproducts. With different physical properties, potential contaminants, and theoretical levels of contamination, it is impossible to state with certainty that adverse effects will not occur.
- **The source of municipal waste is not described.** Thus, it is not clear if this proposal masks a new waste incineration policy for Ontario municipalities. Recent media reports suggest that the pelletized municipal waste may come from York Region¹², which could trigger a hearing under the *Environmental Protection Act*. Other municipal waste strategy documents (including the *Kingston Biosolids Management Strategy Final Report, 2003* and the *Halton Solid Waste Management Strategy, Draft September 2005*) include references to either municipal waste incineration at Lafarge or blending of municipal waste incinerator ash with cement.
- There is no description in the project notice regarding the **transport of waste materials to the Lafarge facility**. It is not known if they will arrive by truck, train, or ship, so it is not known if mitigation of environmental impacts can or will be part of the undertaking.
- **“Point of Impingement” standards** are emphasized as if they are the sole criterion of an environmentally sound undertaking. These standards are not designed to protect aquatic or plant life. They may protect against the acute effects of single, concentrated pollutants, but they do not address chronic, long-term exposure to a variety of contaminants.
- There is no **comprehensive baseline data** that documents current air, water, and soil quality in the region. This data is critical if we are to understand whether diluting contaminants from the facility in the air, water, and soil of the community is a safe and wise approach to environmental protection.

¹² See, for example:

- York Region. *The Regional Municipality of York to contract with Dongara Developments to convert waste into alternative fuel*. Press Release: December 16, 2005.
- Mike Adler. *Garbage pellets may fuel factories*. Vaughan Citizen: November 18, 2004.

- There are no **site specific studies** showing the current and expected concentration and loadings of contaminants in humans and the environment.
- **No studies or expert opinions** accompany the project application to verify Lafarge's claim that the project is a good thing. (According to the *Kingston Whig-Standard*, Lafarge has "hired a Queen's professor Barry (sic) Jackson to help us tell our story that this is actually a good thing to do¹³"). At best, Lafarge's supporting documentation suggests that some contaminant releases under some conditions will be no worse than the *status quo*. According to the IJC, total releases are defined as, "the sum of those to the atmosphere *and* in the residuals." These releases, states the IJC, must decrease when a new facility is permitted¹⁴. There is no indication that such releases will decrease with this undertaking.
- Lafarge's predictions do suggest there will be increases in air emissions from the use of alternative fuels: NOx up to 20%; SOx up to 30%; CO up to 50% with "higher peaks"; Zn up to 150%; CO₂ up to 2%.¹⁵ We suspect that these estimated increases may be conservative and may not account for the wide variety of variables in the source material and incineration process. The short public comment period (60 days) and the lack of meaningful, site-specific data, however, limited our ability to commission an independent expert. Data from tire burning at cement kilns in other jurisdictions does suggest that careful study and scrutiny are still required to provide for the protection and conservation of the natural environment.
- **There is no odour analysis** that indicates what the expected odour levels will be and provides a plan for mitigation.
- **There is no description of the kind of pulp & paper or agricultural byproducts that will be used.** Pulp & paper byproducts of unknown quality may also release toxins into the environment. Chlorine in paper, for example, could add to the releases of dioxins. Similarly, agricultural byproducts of unknown quality could emit chemicals including pesticides.
- **The waste site proposal raises additional questions.** No details are provided regarding on-site waste management, transportation of wastes to the site, storage of wastes, etc. Without these basic details, it seems premature to issue an approval for a waste disposal site.

¹³ Pritchett, Jennifer. "A burning issue," *Kingston Whig-Standard*. March 9, 2006. Quoting Glenn Widish, manager of the Lafarge plant near Bath.

¹⁴ International Joint Commission. *A Policy Statement on Incineration of Municipal Waste*. Endorsed September 1996. Principle iv.

¹⁵ Ukrainetz, Paul (Process Engineer, Corporate Technical Services). "Bath Permit V, CofA (Air) Permit Application, Impact of Alternative Fuels on Kiln Emissions," *Memo to Nick Veriotes (Bath Plant Environmental Manager)*. February 23, 2003.

- Burning and blending waste at cement kilns is often referred to as a “win – win” because waste is diverted from landfills and turned into energy. Leftover ash can be mixed into the cement product, again being diverted from landfills and replacing the need for fresh aggregate. Unfortunately, **blending ash into the cement product means blending in contaminants such as metals**. Since blending ash with clinker is a relatively new method, we understand very little about the environmental impacts of diluting these toxic substances and distributing them across the province. To make matters more difficult, it is impossible to predict the potential for contamination in this case because of the vague project description. For both reasons, more study on the long-term consequences of this approach is warranted.

- The proposal to import materials from Quebec, New York, Michigan, Ohio, Pennsylvania, New Hampshire, Vermont, New Jersey, and Massachusetts raises **unanswered jurisdiction and international trade questions**. We are concerned that Lafarge and the Ontario Ministry of Environment may not be able to control the quantity and/or quality of the waste coming from other jurisdictions. We are also concerned that, if the Ministry of Environment allows this undertaking to proceed, it may not be able to “turn back the clock”. Under international trade rules, the province might not have the power to prohibit the import of wastes for fuel in cement kilns, even if there are adverse impacts.

- The **impact on neighbours** has not been adequately addressed. The application omits “Residential” in its statement of Adjacent Land Use¹⁶. In fact, there is private property zoned “R1” located near the southeast corner of the Lafarge site. This residential land abuts Lafarge to the west, north, and east and is much closer to the facility than the “Selected Off-site Receptor”. (See enclosed maps) This property is owned by The Tragically Hip, which includes Gord Downie, a co-applicant to this submission.

- **Zoning** issues have not been addressed. Neither the project’s supporting documentation (provided by Lafarge) nor Loyalist Township’s Official Plan appears to indicate that the Lafarge property is zoned for waste disposal (“M5”). The s. 27 (waste) application refers to “Lot:3, 4 Conc:Broken Front, Loyalist, Ontario” which is zoned for industrial use only.

Without this information, the proposal is incomplete and approvals are premature.

¹⁶ Application for a Provisional Certificate of Approval for a Waste Disposal Site. Dated December 29, 2003 by Ministry of Environment. Reference # 30885UQTF7.

C. Approving this project would undermine provincial policy in the areas of energy and waste.

Policy and legal trends in Canada and Ontario support our position that air emissions from eastern Lake Ontario should be reduced and that releases of harmful substances like dioxins and furans should be prohibited. Samples of this policy context include:

- Pursuant to the *Canadian Environmental Protection Act*, the federal Toxic Substances Management Policy and the CCME Policy for the Management of Toxic Substances, dioxins and furans are slated for virtual elimination. This undertaking appears likely to result in an increase – not elimination – of dioxin emissions.
- The Government of Ontario has recently adopted a strong “clean air” stance, implementing tougher regulations, closing the province’s coal plants, and actively combating transboundary pollution. This undertaking has the potential to introduce new sources of air pollution.
- The purpose of the *Environmental Protection Act*, under which permits for this undertaking would be issued, is, “to provide for the protection and conservation of the natural environment.” (Section 3.(1)) Based on the issues raised in this submission, it is not clear that issuing certificates of approval at this time would promote the purpose of the EPA.
- The Ministry of Environment’s Statement of Environmental Values is designed to guide decision-making under the EBR. This statement suggests that the MOE will:
 - Consider the cumulative effects on the environment; the interdependence of air, land, water and living organisms; and the interrelations among the environment, the economy and society ...
 - Place priority first on preventing and second on minimizing the creation of pollutants that can damage the environment ...
 - Exercise a precautionary approach in its decision-making. Especially when there is uncertainty about the risk presented by particular pollutants or classes of pollutants, the Ministry will exercise caution in favour of the environment ...
 - Remain committed to public participation ... and,
 - Ensure that decisions on instruments reflect these values.

Waterkeeper believes that, if the MOE applies this Statement to this undertaking, it will conclude that certificates of approval should not be granted.

Request

Lake Ontario Waterkeeper and Gord Downie make the following recommendation:

2. The Ministry of Environment deny the applications for approval under s. 9 (air) and s. 27 (waste) of the *Environmental Protection Act*.

In the alternative, we ask that (as a minimum) the Director immediately require that a hearing be held pursuant to Part V of the EPA.

Submitted by:

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