

“Go to Work on Monday One More Time”:
*An analysis of the compensation process for occupational
disease at General Electric in Peterborough*

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The development of industry has created many new sources of danger.
Occupational diseases are socially different from other diseases, but not biologically.

- Henry E. Sigerist (1891-1957)

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Abstract

This paper provides a historical, socioeconomic and political analysis of the compensation claims process for former General Electric workers in Peterborough. To provide context to the issue, the literature analyzes the evolution of the compensation process, the history of asbestos and occupational cancer in Canada and more specifically, Ontario, chemical causation considerations and the government and large industry's participation in these issues. In order to examine the complexity of the compensation process in Peterborough, the key players involved in the process were interviewed and include representatives from CAW/Unifor, Occupational Health Clinic for Ontario Workers (OHCOW), OWA (Office of the Worker Advisor), Workplace Safety and Insurance Board (WSIB), Occupational and Environmental Health Coalition of Peterborough (O&EHC-P), as well as former workers and their families. The testimonials deliver insight on issues such as the range of asbestos and chemicals used in the plant, the lack of causation data to support workers' claims, the use and abuse of science in the process, the socioeconomic relevancy of GE in Peterborough, the environmental devastation created by the manufacturing industry in the city and the tensions between the intended and applied responsibilities of the key players. The overall findings were that the workers feel invisible to the major players involved, ignored by the community and overwhelmed by the system. To provide a deeper understanding of these issues, there are three groups of case studies examined: the compensated, the uncompensated and the families. The recommendations include a need for a concerted effort by all key players to ensure the workers' right to a fair and just compensation process, enhanced education within the community on occupational health and safety, legislation reform, increased causation data, community mobilization efforts and environmental studies examining the water, air and soil in Peterborough and surrounding areas.

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I would like to acknowledge the arduous struggle workers and their families have endured throughout the compensation process in Peterborough and elsewhere. I dedicate this paper to all workers and their families, both alive and deceased, whose lives have been consumed by occupational disease. I offer a special thank you to the workers, their wives and their sons and daughters for giving me the opportunity to share their indispensable stories of strength, pain and faith. By extension, I would like to thank the coalition members who assist these workers on a constant basis and who provided me with the unique opportunity to interview these workers.

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Chapter 1: Introduction

*The last time I went near my job
I thought my lungs were broken
Chest bound down like iron bands
I couldn't breathe for choking*

I'm going to go to work on Monday one more time.

-Si Kahn

'Get out of there'

“My girls were 15 and 17 when they lost their dad and they sat at the table for supper when he said the chemicals will kill him,” explains Sandy LeBeau.¹ Her husband, Ron LeBeau, worked at the General Electric plant in Peterborough, Ontario for 20 years. During his time at GE, Ron worked in the armature department as a crane driver, tank operator and crane hitcher. Along with many other employees in the plant, Ron was exposed to various hazardous, degenerative and lethal chemicals, for example, asbestos which was known to be rampant in the armature department. His wife's initial understanding was that his elevated position would give him an advantage. “And his comment to me, he said, 'Are you kidding? I'm up on the crane as well, Sandy.' So, you're not just getting one chemical, fumes going up; you're getting all of them.” LeBeau explains what chemicals her husband was exposed to on a regular basis:

They'd dip motors into a big vat or whatever of epoxies and Ron did most of the dumping of the epoxies into this big drum. And he was a muscular type fellow and he didn't mind getting dirty (laughs) and his clothes showed it. And then the motors would be dipped and then they would have to be baked. And the ovens were the size of, apparently, a single car garage, to my understanding. They said that he never worked with asbestos and yet they covered the ovens with asbestos blankets. His gloves or mitts or something were asbestos. When he was in the crane, it was an open crane and the brakes were asbestos brakes so there was nothing to stop him from inhaling even that stuff. And then they would have to clean the motor... when the stuff come off for cleaning them, it was like glass, like amber glass. So, he would come home and it would be in his clothing and his hair and stuff and because you were getting it on your hands and your arms, this epoxy stuff, he would have to wash with thinners which is very carcinogenic.

Over the 20 years he worked there, Ron LeBeau saw some of his colleagues pass away as a result of cancer or other acute illnesses – many of whom were under 50. While the workers'

¹LeBeau, Sandy. Personal interview (in person). 3 May 2014.

testimonials reveal that the workers were not conscious of the severity of asbestos exposure, Ron LeBeau claims he became aware 15 years after he started working at GE when he read a Workplace Hazardous Materials Information System (WHMIS) report on chemicals. As there is no specific WHMIS report on chemicals, LeBeau is most likely referring to the material safety data sheets (MSDSs) and worker education programs which were dictated under the system in the late 1980s by Health Canada's *Hazardous Products Act* and *Controlled Products Regulations*.

Around the same time, Ron LeBeau's brother-in-law was diagnosed with asbestosis. Ron LeBeau's sister worked for Trent Metals and her husband worked for General Motors. She told Ron to 'get out of there.' Despite knowledge of his fate, the tight job market and financial pressure of raising a family had to take precedence. According to Sandy LeBeau, "I think by the time he had put 15 years in it, like what damage is done, is done. You have a family. Between the wage and the benefits, you know, with children, that makes a difference. And, where do you go to get the same type of thing, you know, he would've loved to have left GE but when you've got a family it's like, how do you do this? Five years after he read the WHMIS report, Ron died of stomach cancer within three months of being diagnosed.

The doctor's first reaction was, "this is not a young man's disease," Sandy recalls. "The first part of December he had lost, I think it was around 40 pounds by that time and then by the 9th of February, he had lost 100 pounds. So, it wasn't the kids' dad anymore – he always had a beard. He tried two things of chemo...He worked at GE right until November, December; the first of December. And he died three months later," Sandy explains.

Ron LeBeau was 39 years old and one of many hundreds who died under the age of 50 working at the General Electric plant in Peterborough. According to Sandy LeBeau, Ron was one of three crane drivers under 42 that died within the two previous years of either cancer or heart attacks.

Sandy LeBeau filed a compensation claim against the company for the death of her husband shortly after he passed away. She notes Ron LeBeau did not want her to hire a lawyer as he was afraid she would end up losing the house. As it has evolved, LeBeau has not had a great experience going the compensation claim route. She states, "I found out – it was later in the fall – that no claim had ever been put in for Ron. So, then it got started and whatever. Then his file went underneath someone's desk for a while and they didn't realize it was under the desk

and there's been a lot of shady things that you just think, give me a break, you know." Lebeau, who continues to work as a hairstylist, asserts that the money is important to her both symbolically and financially:

GE has oodles of noodles of money so if they paid someone \$10 000 or whatever – I'm just throwing that out as a figure – does that make somebody happy and say well, that's fine, you admitted you're wrong or does it need to go to WSIB so they really get a slap on the wrist because it's not a financial thing, it's also the slap on the wrist and you have to recognize this is wrong. I'm at the point in my life too that financial means a lot because I have no retirement and Ron's pension that I get for him is only worth \$260 a month. So, what do you pay with that? The gas bill? Like, people say, when are you going to retire? There's no retirement in my life.

It has been 19 years since Sandy LeBeau filed the claim on her husband's behalf and she has not received any money from Ontario's workers' compensation system.

Ron LeBeau is one of 230 workers who worked at the GE plant in Peterborough who filed for workers' compensation because of illnesses, diseases and deaths that they believed were related to their workplace exposures to asbestos and other potentially lethal chemicals. These workers were part of a larger group of GE employees who in 2004 took part in an occupational health intake clinic set up by the Canadian Auto Workers (CAW, now Unifor) and the Occupational Health Clinics for Ontario Workers (OHCOW). During that process, approximately 700 workers were assessed for work-related illnesses, most of which were cancer. The result was the 230 asbestos-related claims mentioned above, 112 of which were accepted by the Workplace Safety and Insurance Board (WSIB). To date, 107 of these workers have received some form of compensation.

As this year marks the ten year anniversary of the intake clinic, it is an appropriate time to question the situations of those who remain uncompensated in Peterborough. The relevance of this study is to highlight the need for accountability of the compensation system and the players involved. Specific to this issue, the compensation system will be investigated to answer questions such as: the extent of the workers' exposure to asbestos and other chemicals, the method of which their exposures are recorded, the various players responsible for supporting the workers in their claims, the mechanisms of accountability for the players to do so, the extent of their commitment and responsibility and underlying social, political, economic and medical factors which complicate the likelihood of the workers receiving compensation. By asking such questions, the overwhelming pattern which emerges from the uncompensated workers'

perspectives is a general feeling of disillusionment and abandonment by most of the players involved. Overall, these players include OHCOW, WSIB, CAW/Unifor, the Office of the Worker Advisor (OWA)² and GE.

The common sentiment expressed by the workers and their families is they are disillusioned by the complexity of the compensation system (specifically the scientific/medical elements), the perceived lack of interest by the union and the underlying economic incentive of the company. The paper outlines the workers' response to these factors as well as the perspective of the players involved, providing credence to the workers' claims in a broader context. The predominant external forces revealed are the lack of causation data, the corruption of corporate-led science, the lack of accountability mechanisms for all players and the socioeconomic relevancy of GE in Peterborough and its effect on the community's conscience. By providing this context, the aim is to highlight the inefficiencies and inequalities which can arise out of the compensation process and to provide solutions to alleviate tensions and induce a system centred on the rights of the workers and their families.

²The OWA is an independent agency of the Ontario Ministry of Labour and represents workers at the WSIB and WSIAT but is not part of either board (OWA, "About the OWA").

Chapter 2: Literature Review

*The doctor says I smoke too much
He says that I'm not trying
He says he don't know what I've got
But we both know he's lying*

I'm going to go to work on Monday one more time.

-Si Kahn

Prior to analyzing the participants' testimonial, the historical, political and economic context of the compensation process in Ontario must be outlined. Therefore, this chapter will explore the evolution of Ontario's modern compensation system, a qualitative and quantitative analysis of occupational cancer, Canada's historically unique and contentious approach to asbestos, the complicit role of government and big industry, particularly the latter's manipulative influence on science and the evolution of the intake clinic model.

History of Ontario's compensation system: Who wins the jackpot in the 'forensic lottery'?

In order to understand the complexity of the compensation claims in GE in Peterborough, it is important to situate this issue within the history of workers' compensation in Ontario. The roots of today's compensation system grew out of the European model which dictated a mandatory state-run compensation process. The European brand flourished in the late 1800s and early 1900s and was adapted to Canadian legal realities in the first two decades of the 20th century. Ontario's 'modern' workers' compensation system was legally entrenched by the 1915 Workmen's Compensation Act which was based on a draft act drawn up by Sir William Meredith and modified by the Conservative Government of the day. The 1915 Workmen's Compensation Act system entrenched a "no fault system," replacing tort law as the legal avenue for work-related incidents. This method instigated a trade-off where workers would surrender their right to sue the company in exchange for benefits ("History of Workers' Compensation," 2013). According to publications supported by the injured workers' community, the Meredith Principles are: no fault, compensation for the length of the disability, collective liability funded by the employer, the Workers' Compensation Board (WCB) as a public independent organization and a non-adversarial approach to the workers' compensation claims, adjudication

and appeals process (Storey, 2011, 2-3). The justification of such a system was that the board would be completely independent from the prevailing political forces, including the whims and wishes of the Minister of Labour.

As Robert Storey notes, the 1915 Workmen's Compensation Act was a defining moment for workers as the odds were previously stacked against them in the court system. However, Storey also recognizes its potential pitfalls, where the application of assured compensation was not necessarily on par when comparing the amount rendered by different classifications of workers. More specifically, skilled workers stood to lose more of their income because the compensation granted was 55 per cent of their income, rendering a greater impact on women workers and the economic survival of injured workers' families in general (2009, 391).

Katherine Lippel also views the "no fault" system as a cautious victory due to the barriers it can create in suing the company for human-rights related violations such as physical or mental health problems associated with sexual harassment or bullying allegations (2012, 521). In advancing her arguments, Lippel references Terence G. Ison's negative assessment of the use of tort law for personal injury claims as a "forensic lottery" and agrees with its general premise on the misuse of the court system (Ibid). However, Lippel states that the absence of tort does not automatically indicate the presence of a non-adversarial system since the claim can still be unfairly addressed. In other words, the shift from tort law did not necessarily eradicate the notion of the "forensic lottery" but, instead, changed the players and altered the aggregate limits and winnings in an essentially dealer-led game. Ison supports Lippel's observations and notes that Meredith did not address how decisions should be made by the board and as a result, have been addressed poorly (2013, 10). Yet, it should be noted that Meredith's responsibility was limited to the failings of the contemporary system and to lay out broadly what needed to be done to bring greater justice to injured workers and their families. Regardless of origin of responsibility, Ison posits that the application of the law by the Board can be very capricious. He notes, "Most unjust decisions at a board can be expected in primary adjudication, where the law may sometimes be seen as decorative literature, or a statement of aspiration," as well as when a decision is made with someone who is unfamiliar with the case facts, largely due to a lack of direct communication between the decision maker and the claimant (2013, 13).

One important and progressive element of the Meredith report was his favourable position to compensate workers for industrial diseases, where six compensable chemicals were

mentioned: anthrax, lead, mercury, phosphorus, arsenic and ankylostomiasis. The cause and effect relationship and the number of diseases listed was highly restrictive but was reflective of the approved data in the U.K where Meredith collected the evidence from. Tim Driscoll, Mark Wagstaffe and Neil Pearce explain, the purpose of providing “schedules” is to distinguish which illnesses are viewed as having a strong causal connection to the workplace (2011, 65).

According to the authors, the claimants with a strong causal relationship are granted swift access to compensation – what they refer to as a “fast-track process” (Ibid). While this observation is reasonable, the authors provide an oversimplified assessment that there is a lack of scientific evidence to establish a connection between illnesses and non-work related exposures as the cause, as opposed to looking at insufficiencies in data causation evidence. The shortcomings of scientific causation are indeed a reality (to be discussed shortly) but were not approached from a critical standpoint by these authors, a pattern which is echoed through mainstream assessments of occupational health and safety.

The consequence of perceiving classifications in such a manner is that the remainder of the claims are judged on a case by case basis through regulations, as opposed to setting legal precedents which the individual approach warns against. The pattern of individualizing the workers' claims is indicative of a larger socioeconomic reality. While the 1970s witnessed a watershed moment for with the creation of the Occupational Health and Safety Act (OHSA), the decade also marked the mounting force of neoliberal policy and ideology. Author Garry Gray writes that the notion of who is responsible for safety or, as he calls it, the “safety offender,” is becoming increasingly blurred by the power of neoliberal ideals. In the same vein, Gray posits:

The reason for this is that in the day-to-day regulatory sphere, workplace safety is undergoing a process of ‘responsibilization’ as governments reconfigure their role in directions consonant with now dominant mantras of neo-liberal policy. Workers are assigned ever greater responsibility for their own safety at work and are held accountable, judged, and sanctioned through this lens. In the area of organizational safety, workers and employers are supposed to be ‘equal partners.’ with a shared responsibility towards workplace safety. However, despite the neo-liberal discourse of 'equal partnership,' the responsibilization strategy process does not affect all parties equally (2009, 326).

Under the guise of a “shared responsibility” system, this system places the burden on the individual worker to produce the burden of proof. The result is that many workers invest a lot of energy into a system which is not in their favour. Even those who do reap the benefits are often left feeling undeserving. For example, in a 2007 Quebec study by Lippel, workers, including

those who had been swiftly compensated, “reported being 'treated like a criminal' or feeling like David confronting Goliath” and that those who had a positive experience said they felt “‘lucky’” to have been supported by their union or “‘proud’” to have made it through the process (quoted in Lippel 2012, 523). This sentiment finds reinforcement in the work of author Allard Dembe who notes that injured workers in general report negative experiences with the workers' compensation system, describing it as “unfair”, “uncaring” and “adversarial” due to obstacles such as minimal assistance from their employers and workers' compensation insurers, stigma and fear of job loss and consequential punishment (2001, 408). Even more relevant is Dembe's mention that those who miss work are often labelled as stigmatized “malingerers” and experience difficulty having their claims recognized as legitimate (Ibid). This example demonstrates the notion that the burden of proof rests on the shoulder of the workers whose bodies and minds are already injured. Moreover, the reactions by these workers demonstrates the zero-sum nature of the compensation process, as they are made to feel privileged to acquire compensation, as opposed to having a basic right to it, thereby discouraging workers from launching a claim in the first place.

The prejudicial nature of the system is glaringly apparent when examining the treatment of “invisible” occupational diseases. Musculoskeletal disorders (MSDs) and mental health issues are prime examples of “invisible” occupational diseases which were some of the last conditions to be recognized by the compensation board as legitimate. As summarized by Storey, Allard Dembe notes the suspicious approach doctors and compensation board officials had towards those with work-induced back pain in the 1910s until the 1980s: “Because they could not 'see' the injury either with their naked eye or via x-rays, it did not exist. Hence the injury was either the result of ageing or it was a fabrication” (quoted in Storey, 2009, 396). As Lippel notes, “Those with visible, physical injuries that occur as a result of acute trauma are less likely to have a confrontational relationship with a compensation system than those who suffer from soft tissue injury, neurological damage, mental health problems, or from controversial illnesses,” such as lung cancer or asbestosis (2012, 522).

To examine the bias against “invisible illnesses,” the overall treatment of causal factors of occupational cancer will be reviewed, with a focus on asbestos-related cancers, such as asbestosis and mesothelioma. This analysis will not only analyze the role of government and employers but also the role of science in perpetuating unequal treatment of occupational diseases.

Occupational cancer and asbestos: 'Canada's invisible epidemic'

Cancer was only considered an occupational disease by the Ontario compensation board as of 1947. Since accepted as compensable, the procedures for identifying work-relatedness have evolved and vary with the nature of the work force (Chovil et al, 1981, 1237). The treatment of occupational diseases has also evolved with epidemiological developments in cancer and occupational disease research which is often influenced by political realities (to be discussed shortly). Prior to understanding the assessment process, it is important to understand the overall gravity of occupational cancer using more recent statistics. In 2007, the Canadian Cancer Society estimated cancer as the leading cause of premature death in Canada, with approximately 72,700 persons dying annually (quoted in Payne and Pichora, 980). The Canadian Strategy for Cancer estimates that at least 50 per cent of those cases are preventable and that occupational exposure to carcinogens has been identified as a contributing factor (qtd. in Payne and Pichora, 2007, 980; Ison, 2012, 5). On a global scale, the International Labour Organization (ILO) states that over 2 million workers die each year of occupational causes and that cancer represents the largest component of occupational disease mortality (quoted in Brophy et al, 2007, 236). See **Figure 1** for mesothelioma rates from 1980-2006 in Ontario.

While these statistics are telling regarding the gravity of occupational cancer in Canada, it is important to recognize the methodological shortcomings of cancer research in relation to work-relatedness. In general, there is an issue with consistency in data collection and sharing between workers' compensation boards and other cancer registries. Dr. Lorraine Marrett, a senior scientist with Cancer Care Ontario, asserts the cancer registry is based on records generated for other purposes and does not identify individual causes. Marrett notes that there is no effort to collect occupational histories and that lung cancer is the biggest occupationally induced cancer. Yet, she states the long latency period is one of the many complex difficulties in trying to isolate and identify the workplace as the source, referring to the process as “a nightmare” (quoted in Stelmakowich, 2006, 38).

In a study of mesothelioma compensation claims in Ontario, Jennifer Payne and Erin Pichora note that cancer registries contain information regarding cancer diagnosis rates but generally lack occupational exposure data, while compensation board databases generally under-report work-related cancers but have workplace exposure data (2009, 148). In their earlier work, like Dr. Marrett, they note inherent problems in attributing cancer to occupational exposure, such

as the long latency of disease development, where the average latency period ranges from 20-30 years (2007, 981). Payne and Pichor raise the example of mesothelioma, where the amount of compensated claims increased since the 1970s and surpassed the number of lung cancer claims from the mid-1990s on until 1999-2003, when the numbers were comparable between lung cancer and mesothelioma (Ibid). The authors note the “burden of mesothelioma” will continue to rise in Ontario “reflecting a legacy of exposures as long as 20 to 40 years” (2009, 151). In a recent feature article on asbestos in Canada, journalist Tavia Grant notes that mesothelioma developed in waves, such as after the Second World War when miners, mill workers and ship builders “came home caked with dust” (2014, Part 4). Grant posits, “The continued imports, along with mesothelioma’s long latency period and continuing exposures to asbestos that is already in place across the country, add up to a dire prognosis: Canada’s invisible epidemic hasn’t even peaked yet” (Ibid, Part 1).

While the latency period and data collection flaws are somewhat passive methodological shortcomings, the history of occupational disease in Canada – and elsewhere - has been rife with intentional scientific misgivings, particularly with asbestos-related diseases. Formerly coined “the magic mineral,” asbestos has been recently called “the most pervasive hazard in the world” due to its far-reaching fatal effect (Brophy et al, 2007, 236). Asbestos is an umbrella term for a group of fibrous minerals divided into two types: serpentine, and amphibole (Tweedale and McCullough, 2008, 2). Serpentine includes one form of asbestos, called chrysotile, or “white asbestos” and amphibole includes amosite, crocidolite, tremolite, anthophyllite and actinolite, or, “brown” and “blue” asbestos (Ibid; LaDou, 2004, 285; Bowker, 2003, 122). The word asbestos originates from Ancient Greek and translates as “ominously” or, in today's context, “unextinguishable” (Grant, 2014, Part 3). Its durability, thermal resistance and fibrous nature makes it extremely useful in the building industry as it can be spun, mixed with cement and used for insulation (Tweedale and McCulloch, 2008, 3; LaDou, 285). Asbestos was also used for common products in the early 1900s such as adhesives, cigarette filters, dish towels, banknotes, ironing boards, berets, tampons, condoms, mattresses and talcum powder (Tweedale and McCulloch, 2008, 18) The qualities that allowed for its widespread use are also the reasons the material is extremely deadly as the fibres are so microscopic, they “can persist in the lungs until death,” especially with amphiboles (Ibid). The most common lethal diseases created by asbestos are asbestosis, mesothelioma and lung cancer – where asbestos fibres can remain dormant in the

body for years. Studies have also shown that asbestos can also cause various cancers including stomach, colon-rectum, larynx, pharynx, kidney and esophagus cancer and that asbestos fibres can be passed on to newborn babies if their mothers have been exposed to asbestos fibres (Bowker, 2003, 110). Author Michael Bowker notes that “these are devastating illnesses that cause the human body to waste away, the victims suffering not only from the physical pain but also the knowledge that more money is spent trying to prevent cat leukaemia or in the construction of one stealth bomber than on finding a cure” (Ibid, 111).

Canada has a particularly unique and harrowing history in its use and abuse of asbestos in our borders. In fact, from the 20th and 21st century, mines in Quebec, Newfoundland, British Columbia and the Yukon produced 61 million tons of chrysotile (Brophy et al, 2007, 121-122). Of these various locations, Quebec has been the epicentre of production since the 1870s with the creation of the first asbestos (chrysotile) mine. Despite the known health effects, production continued up until 2011, when the last mines were closed in Quebec. Over the years, Canada has been one of the most complicit forces in the world, specifically in the export industry, where asbestos products were being sent to developing countries in large quantities by monopolies such as Johns-Mansville. Dr. Brophy, Keith and Schieman describe Canada as being, “engaged in the global trafficking of a lethal commodity,” as Canada exported over 300 000 tons of asbestos to developing countries in 2000 yet only consumed less than 5000 tons in 2000 (2007, 238). See **Figures 2 and 3** for more import and export statistics. (2007, 238). Given the industry and government's knowledge of the potentially lethal consequences of asbestos exposure, this dynamic demonstrates the contentious human rights aspect that Brophy, Keith and Schieman refer to above. For, it seems to infer that those in developing countries have a lesser right to their health and life.

The Canadian government is a central perpetrator of these abuses as they have played an active role in the flourishing asbestos industry. As early as the 1920s, the Canadian Department of Health and the Department of Mines gathered information from international sources on the effects of asbestos and was informing American asbestos corporations on the substance's debilitating effects in the 1930s (Allen-Kazan, 2004, 122). However, this knowledge was never relayed to the workers or the general public, including those who were sick and dying from asbestos exposure at work (Ibid). In essence, the profitability of their labour was deemed greater than their right to life and a safe work environment. Not only did the government conceal the

detrimental health effects of asbestos but they also made no effort to ensure safe working practices to limit the intensity of their exposure. This was demonstrated in the 1950s in asbestos mines and mills in Quebec as well as in Canadian manufacturing plants, where “employees were found covered in dust, asbestos mixing areas were wide open with fibres all over and no masks were being worn by workers” (Ibid).

With mounting pressure against Canada to ban asbestos, the Canadian government actively lobbied for the continued mining of asbestos. In an effort to protect the industry, the Canadian government fabricated rhetoric about the “safe use” of chrysotile. In fact, for the past two and a half decades, the Federal and Quebec governments funnelled millions of dollars into an asbestos industry lobby group called “The Asbestos Institute” which was more conservatively renamed “Chrysotile Institute” in 2004 (Grant, 2014, Part 5). To determine chrysotile as a safe form of asbestos, the government-backed industry tried to demonize other forms of asbestos. As Bowker notes, “the deadly nature of amphibole fibres were used as a 'promotable villain' to deflect criticism from the harmful effects of the chrysotile fibres” which he says is still considered the “environmentally friendly mineral” (2003, 123). Bowker points specifically to the Canadian industry for actively creating this discourse, such as by using the safety rhetoric to appeal to the World Trade Organization in 1998 when France tried to ban asbestos altogether under the Rotterdam Convention. The Rotterdam Convention obligates countries that produce toxic substances to disclose the potential harm of the product (Ibid, 125). The Canadian government continued the lobbying efforts against the Rotterdam Convention from 2006-2011 (Brophy et al, 2007, 237; Grant, 2014, Part 5). With international pressure, Canada eventually had to concede to the Convention in 2012, a year after the last asbestos mines were closed in Quebec. As journalist Tavia Grant notes, “Even though Canada’s own asbestos industry has dwindled from pre-eminence to insignificance — the country’s last two mines closed in 2011 — the federal government has dragged its feet as other nations have acknowledged asbestos’s deadly impact and moved to protect their populations from it” (2014, Part 5). Despite the fact that the mines have now shut down, the Health Canada website still currently states that “Chrysotile is different from the amphiboles both structurally and chemically. It is generally accepted that chrysotile asbestos is less potent and does less damage to the lungs than the amphiboles” (“Health Risks of Asbestos,” 2012). This statement demonstrates the validity of the safety rhetoric and the Canadian government's vehement disregard for the many victims whose

lives have been claimed by asbestos exposure.

Big industry's manipulation of science

The government's negligence towards the deadly nature of the asbestos industry was ominously bolstered by corporate-funded science. In looking at their sordid relationship, Laurie Allen-Kazan notes: "Arguably [the industry's] most potent weapon was the corruption of science from within to create a counter-discourse and thereby promote doubt about the toxicity of asbestos" (2004, 125). The lethal nature of asbestos was discovered close to a century before the last Canadian mines were closed. Looking at its development, Tweedale and McCulloch note asbestos-related research was largely influenced by geography and politics (2008, 51). Therefore, it is important to look at the development of scientific evidence regarding the toxicity of asbestos in countries such as the U.K. and U.S. and how it influenced the Canadian industry.

As the asbestos industry started thriving in the UK in the early 1900s, there was a parallel growth of scientific reports about the substance's potential harm. As early as 1906, scientific observations were made by Montague Murray in Britain during an occupational disease commission where he drew a connection between a man who worked with asbestos for ten years and extensive lung fibrosis (Ibid, 2008, 53). Research began to build in the UK and culminated in a detailed study in 1927 by Ian Grieves, a local doctor in Leeds, who looked at an asbestos textile plant of approximately 100 workers who worked with crocidolite (Ibid, 54). Grieves' thesis, entitled 'Asbestosis,' found the disease "debilitating, progressive and almost inevitable," where a worker's life could last as little as 15 years after exposure (Ibid). Such findings led to a government inquiry in 1928 by Merewether and C.W Price which gained publicity through its publication in a U.S. academic journal. This publicity put pressure on the American, Canadian and South African asbestos industries to produce studies. Overall, the studies by companies such as MetLife, Johns-Mansville, T&N and IHF concluded that around half of the workers would lose their lives prematurely due to asbestos exposure (Ibid, 74). However, the workers were never told about these findings and the documents were buried, as were many bodies of workers who laboured in the plants.

While the asbestos industry was very successful at suppressing knowledge of the dangers of asbestos in the first half of the 20th century, the latter half was met with notable resistance. One of the most influential and ground--breaking studies emerged in the 1960s when Dr. Irving Selikoff revealed his findings on mesothelioma. Selikoff's study, which was presented in 1964 at

the New York Academy of Sciences Conference, revealed the relationship between the high rate of cancer and asbestos exposure at Thetford Mines in Quebec (Allen-Kazan, 2004, 122). The subsequent exposure of Selikoff's studies on the severity of mesothelioma was an extremely large threat to the asbestos industry. As a result, the asbestos industry was very persistent in its attempts to discredit Selikoff, both personally and scientifically. For example, the fact that he was Jewish with "foreign" qualifications was referenced by many, even up until 2004 when an asbestos industry consultant claimed Selikoff had no medical degree – all of which demonstrate the gravity of Selikoff's threat to big industry (Ibid, 92-96). Speaking to this threat, Tweedale and McCulloch note, "Shooting the messenger is a well-recognized syndrome in science, especially in the field of occupational health, where scientists who threaten commercial interests are – to say the least – not applauded" (2008, 92).

The attack on Selikoff and authors of other asbestos studies is indicative of larger scientific corruption by both corporations and governments. With the profit-oriented nature of big industry, these manipulative practices are often inherent in considerations of occupational disease and unfortunately those who bear the burden are the workers. The scientific realm enjoys a reputation of independence, impartiality and authority but this reputation can be tarnished by potentially manipulative factors such as the funding of the studies, the mandate of an academic journal, the potential to misrepresent data and the interpretation of scientific language by both the scientific community, big industry and the general public. Workers have historically suffered from these compounding factors when it comes to research on the causation of occupational diseases and the lack of this research for compensation claims.

Katherine Lippel and Stephanie Premji examine the treatment of musculoskeletal diseases (MSDs) to portray larger barriers confronted by workers in the compensation process. Overall, Lippel and Premji note some of the following issues: the ambiguity and conservative nature of scientific language and its ability to be employed for special interest purposes, a reluctance on behalf of scientists to publish clear affirmations of work-relatedness in peer-reviewed journals and a general favouritism towards negative results with no mention of the potential methodological shortcomings of the study (2008, 179-181). Some possible justifications they provide are that scientists may interpret their role as more independent or "rigorous" and that they do not want to go against the interest of the employer who they may be associated with and that peer-reviewed policies and mandates pressure scientists to be impartial

(Ibid, 179). Terence G. Ison complements their observations regarding the propensity for negative results and states:

It is sometimes asserted that any positive medical opinion, usually from a worker's doctor, should be rejected because it is not 'objective.' Using these rules of exclusion is clearly illegal. It follows that any board doctor's report based only on the lack of 'objective' medical evidence is not a medical opinion at all. It is an erroneous opinion on a question of law (2013, 11).

In another article, "Statistical Significance and the Distraction of Scientific Proof," Ison notes the common practice whereby statistics are manipulated to the disadvantage of claimants, particularly in mortality rate studies (2009). To Ison, the deficiency of "scientific proof" is largely related to the inadequacy of statistical analysis. He posits, "[a]lmost by definition, the controversial medical questions are those for which no 'scientific proof' is available. The most superficial and the most commonly irrelevant 'medical' opinions that I have read have been those that rely on statistics of unknown validity, or on the lack of 'scientific proof'" (Ibid, 159).

Building on these notions, author David G. Egilman takes a more ideological approach to the abuse of science, looking at the interrelationship between politics, economy, regulations, and ideological norms with an overarching look at profit and power relations. In Egilman's view, the system of corporate priority setting, decision making and influence "produces disease" because the actors mentioned above hold the value of money and profit over human health and the environment (2005, 331). Egilman states:

When occupational and environmental health stories make the headlines of the popular press, however, observers are often left with impression that the offending corporation is a "bad apple" in an otherwise healthy barrel. As the articles in this issue show, there are simply too many bad apples to blame the problem on individual products, scientists, or even corporations. The problem is with the barrel. In other words, the current economic and political system (both in the United States and in the global context) privileges corporate actors and actually provides incentives for the production of injury and disease rather than its prevention (2005, Ibid).

Egilman's assessment points to an imbalance of power, where the socioeconomic rationale of a society determines the worth of a human being. For example, he says in tort law, economic damages are largely based on wage loss, where "a janitor killed by benzene-induced illness would be 'worth' less than a CEO killed in the same way" (Ibid, 332).

Chemical causation data

In addition to raising the importance of power, profit and socioeconomic dynamics in

compensation considerations, Egilman documents the abuse of science and matters of causation related to chemical exposure. Considering the length of time it took for asbestos toxicity to be recognized despite the blatant causal relationship, the likelihood of compensation related to chemical exposure is very grim. Beryllium is an example of a dangerous chemical which has been widely used in many manufacturing settings, particularly those that produce electronic equipment. The lightweight chemical is extremely toxic and can cause chronic beryllium disease (CBD) which is a crippling ailment that scars the lungs (Michaels and Jones, 2005, 96-97). The potency of Beryllium is demonstrated by the fact that CBD has been diagnosed in those who work for a short period of time – a matter of weeks each year for one accountant – as well as in people who live in close proximity to beryllium factories (Ibid). Despite various scientific studies supporting the potentially fatal impact of beryllium, the treatment of the chemical has suffered a similar fate as asbestos, where scientific studies are manipulated by big industry and government to protect profit – a reality Egilman would say is indicative of systemic forces.

More specifically, authors Michaels and Jones note that an abundance of research drawing causal links beryllium and lung cancer was undermined by statistics produced in 2002 from a product-defence firm called Roth Associates (99). They contend this was done by skewing the data so that the incidences of lung cancer caused by beryllium were no longer statistically significant – an observation which complements the analyses of Lippel, Premji and Ison. In conjunction with their research, Michaels and Jones note that the analysis was published in a non-epidemiology journal and that “the industry now touts its study as evidence that everyone else is wrong” (2005, 100). Along with the other authors, Michaels and Jones note this pattern is not unique to the beryllium industry and that the conclusions by industry-induced science shares similar patterns of ambiguous evidence to prevent the creation of regulation (Ibid). The authors posit:

Emphasizing uncertainty on behalf of big business has become a big business in itself. The product-defense firms have become experienced and successful consultants in epidemiology, biostatistics and toxicology. In fact, it is now unusual for the science behind any proposed public health or environmental regulation *not* to be challenged, no matter how powerful the evidence (Ibid, 100).

In Canada (see **fig. 4**), Ontario has specified eleven substances which are particularly hazardous: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride (Stelmakowich, 2006, 39). According to

the Ministry of Labour, the current regulations outline a specific legal amount of time and degree a worker can be exposed to such chemicals (Ibid). One major issue is the lack of collection of comprehensive exposure reports which would help establish causation between chemicals and cancers. Yet, there are some who have explored such a relationship. For example, a Federal Study conducted by Health Canada in 2004 determined that occupational exposure to mineral, cutting or lubricating oils, asbestos and benzidine is associated with bladder cancer. The study focused on male workers across Canada from 1994 to 1997 (Beharie, 2004, 50). Cancer Care Ontario is on the verge of adapting software originating from Finland which would accumulate and calibrate local data on recognized carcinogens and cross reference the type of industry, workers and exposure to produce estimates of the number of workers exposed to certain chemicals (quoted in Stelmakowich, 2006, 39). The preliminary results reveal a link between lung, skin and bladder cancer to exposure to silica, wood dust and diesel exhaust (Ibid). In general, the most common occupational cancers include bladder, lung, skin, and mesothelioma (Stelmakowich, 2006, 40; "Occupational Cancer," 2008). While such studies have been conducted, an article by an anonymous author entitled, "Priority issues in occupational cancer research: Ontario stakeholder perspectives," posits efforts to identify carcinogens in the workplace have lessened in the past few decades and that between 4 per cent and 10 per cent of cancer deaths in developed countries are estimated to be due to preventable occupational exposures (2011, 3). Developing studies would help distinguish causation related to workplace exposures and lifestyle choices (e.g. smoking, drinking) and hopefully avoid the age-old tendency to focus blame on the individual worker as opposed to looking at the broader work environment and its more daunting and pressing hazards. Moreover, it is important to look at the pattern of workplace exposures across industries by examining the individual workplaces and making broader connections to establish stronger causation portfolios.

Discussions

All of these discussions provide the contextual framework for the Peterborough case study. The historical perspective on the compensation system is designed to elucidate the compensation procedure and how its evolution has influenced workers, such as those in Peterborough. More specifically, to show the how the notion of a "shared responsibility" system has largely developed into a practice of buck-passing responsibility to the individual worker. As discussed early in the chapter, the odds are stacked against the worker, where they are left feeling

privileged to have their claim considered, as opposed to having a right to their health and safety. This paper provides an outlet for such disenfranchised individuals, in hopes of underlining shared barriers.

One of the shared barriers which is raised is the issue of exposure equations, where there is a large burden of proof forced upon the worker to provide substantial causation evidence. The historical outlook on asbestos exposure considerations was intended to highlight the struggle by the workers to challenge powerful forces, (e.g. the government and big business) and their far-reaching influence on the scientific and medical community. While there were eventual feats regarding asbestos exposure and causation data, since the claims are determined on a case by case basis, the process is still potentially subject to arbitrary and unrealistic verdicts which the worker has little protection against, by comparison. This dynamic is even more pronounced when considering chemical exposure, which is also discussed in the literature review and manifested in the testimonials of the workers. The powerless state of the individual worker, plagued with occupational disease, is the narrative that drives this study. In doing so, it confronts the complex issues discussed in the literature review in an effort to dissect the incidence of occupational disease at GE and its impact on GE workers, the involvement of various key players and an overall analysis of the intersection of these factors.

Chapter 3: Methodology

*The last time I went near my job
I thought my lungs were broken
Chest bound down like iron bands
I couldn't breathe for choking*

I'm going to go to work on Monday one more time.

-Si Kahn

This paper was informed by a variety of primary and secondary sources in an effort to investigate the complexity of the compensation file in Peterborough. The secondary sources include academic journals, newspaper articles, books, newsletters, press releases, dissertations and quantitative research studies. The primary sources include twenty interviews conducted over the course of six months. Throughout the research process, the main difficulties I encountered were the depth and sensitivity of the issue, the complexity of the players involved, the treatment of criticism against certain players and situating the issue within a broader socioeconomic climate.

Participant details and interviewing process

The interviews included five O&EHC-P representatives (two of which are also former workers), a biophysicist, five former workers, three wives of deceased husbands with compensation claims, one daughter of a deceased father with a compensation claim, one widow whose husband was compensated, five CAW/Unifor representatives and one former OHCOW representative. As can be seen, I attempted to interview a variety of interested parties to include different perspectives and investigate where the culpability lies. However, not all players were interested in adding their perspective to the dialogue. The Vice President of Communications at GE was contacted but there was no response received. The local representative at CAW (Unifor) local 524 in Peterborough also did not respond to an email request. The WSIB manager involved in the Peterborough file politely declined an interview on behalf of her Director but did not state a reason. Initial contact was made with one of the OHCOW representatives covering the file but once the interview questions were sent, there was no response received.

It is important to note that the absence of these interviews potentially limit the scope of analysis, particularly in Chapters 4 and 5, as some of the bodies (i.e. OHCOW, WSIB and CAW

local 524) are subject to criticism by the workers. However, this is taken into consideration, particularly in Chapter 5 when discussing the contextual factors which contribute to the workers' assessment of the compensation process. In terms of demographic representation, there were 12 women interviewed and 8 men interviewed. Some of the interviews by women were mainly discussing their husband or fathers' compensation claims, which was an important perspective to include as it provided insight into how the process affects workers' individual lives. The racial demographic of my sample, where most workers were Caucasian, was fairly representative of the era the former workers were in and the overall demographic of Peterborough. One anonymous worker mentioned that the demographic was predominantly Caucasian men, aside from a small minority of Indigenous and women workers (2014). Another anonymous worker said that today, there is more of an effort to hire racialized employees as well as women (2014). Their analysis of this changing demographic was that in addition to equity initiatives, the changing demographic was reflective of management's effort to find workers who were not from Peterborough, perhaps so they were not aware of the past health concerns (Ibid).

Each interview ran approximately 60 to 90 minutes long, all of which were audio-taped with the written or oral consent of each participant. Interviews were conducted mostly in person but also via phone or email. Fifteen interviews were conducted in person, four by email and one by phone (as well as one follow-up interview by phone). All of the worker interviews were conducted in person intentionally as I felt their stories deserved a personal approach. Putting a face to the name humanized the workers which I thought was important in order to do justice to their stories. Moreover, the ones conducted via email were largely due to time restraint, particularly with the transcription process.

Due to the sensitivity of the topic, the confidentiality agreement, approved by the McMaster Research Board of Ethics in March 2014 (see **Fig. 5** for Ethics Approval), was very strict in terms of the anonymity of the workers. In the letter of information (see **Fig. 6**), former workers were advised not to use their name or any information or story which would make them identifiable and that they would be referred to as simply a former worker and either "successful" or "unsuccessful claimant." All participants were advised that if there were any comments they would like to keep "off the record," the comments would not be used. The data collected was stored on my password-protected computer and any documents obtained were kept in a locked desk in the privacy of my home. The participants were provided with the option of deciding

whether or not they would like the data to be used for future research on the topic and if they refused, the data would be destroyed. Potential harms, risks or discomforts were reduced by the voluntary nature of the study, where participants could end the interview at any time, refuse to answer questions and remain anonymous. As mentioned above, a letter of information was provided to each participant, who gave either their written or oral consent. The original withdrawal date was May 1st with the completion date of May 31st, 2014. However, given the complexity of the topic and the significant number of people interested in being interviewed, the withdrawal date was changed to August 1st with a completion date of August 31st, 2014.

Despite the recommended anonymity set out in the confidentiality agreement, aside from two workers, all of the workers and their widows requested their names be mentioned, with some vehemently insisting. Moreover, most provided access to WSIB, WSIAT and other files pertaining to their case, encouraging their use. Their insistent response was very telling for me as it seemed to indicate a sense of desperation for their cases to be heard. For the most part, this sentiment was confirmed by their testimonials which expressed a general feeling of invisibility due to an expressed lack of care or follow-up on behalf of the players involved to address their case in a thorough manner. Such feelings were expressed in response to questions such as: “How would you describe the manner in which your case has been handled by the various players;” “Who do you feel is the most capable of addressing your claim?;” and “What response have you received from [“x” group]?”

Although the voluntary nature of the study reduced harm for the participants, the nature of the issue rendered very emotional responses by the workers, widows and deceased workers' children, and, to a lesser extent, other participants. The testimonials were filled with emotions such as anger, sadness, regret, fear, pain, anxiety, hurt, frustration, confusion, disbelief, skepticism and mistrust. Out of these emotions, I believe hurt, sadness, frustration, anger and mistrust were some of the strongest expressed by the participants mentioned, with a general feeling of being overwhelmed by these emotions and the workings and misgivings of the compensation process. While I tried to remain as neutral as possible during the interviews, it is only natural that such emotions affected my own response to the issue afterwards. By no means are my emotions anywhere close to the depth felt by the workers, their widows and their children but every time I recall each interview, the depth of their emotion is internalized to a certain extent given the tragic nature of the subject, regardless of the politics behind the issue. I found

this emotion somewhat of a barrier for me as I had to re-live the interviews and their injuries every time I listened to the interview or thought about how to organize them in the paper.

I found that workers, their widows and their families also expressed a lack of general knowledge of the compensation system due both to the complexity of the system and a lack of information provided to these participants by the various players. I could sympathize with the workers as I found it difficult to navigate the complexities, ambiguities and inconsistencies of the compensation system when examining this case and the Canadian compensation system in general.

From my understanding, the participants therefore did not seem to place as much blame on those with whom they had less direct contact such as the WSIB, WSIAT, OHCOW or OWA personnel or process, compared to their feelings towards the CAW. Their encounters with the former personnel was reported as much more brief and professional. Yet, the participants did express some frustration with the brief nature of the encounters and the fact that their WSIB and OWA case manager changed multiple times. They reported this change often occurred without their knowledge, which they felt was intentional. The workers' dealings with OHCOW was also sporadic, such as during the intake clinic but they were very appreciative of the work conducted particularly by Dr. Kerin and Occupational Hygienist Sonya Lal.

Overall, the workers and their families expressed a high degree of anger and mistrust with the union, CAW (Unifor). From my understanding, their discontentment rose from the trust the workers and their families invested in the union as their representatives. I found this dynamic the most challenging barrier for me as I come from a union background and want to be careful not to feed anti-union sentiment. However, I also point out the greater forces that may be at play. For example, I found that the company was seldom talked about or described as the main culprit despite their primary responsibility, which will be discussed in relation to the historical and socioeconomic relevance of GE in the community. Therefore, in my discussions, while I do not shy away from potential misconduct of certain players, I endeavour to place their actions/inactions within larger contexts.

The testimonials of the workers and their families was quite positive towards the O&EHC-P coalition as they have assisted the workers in their struggle for compensation, from producing media releases to contacting the workers' representatives and helping them with their paperwork. As mentioned, the group was formed under the direction of the CAW to create a

community advocacy force, given the issue's environmental relevancy. The coalition assisted in recruitment and provided the names of workers and their families who were interested in being interviewed for the thesis. Their relative independence from other groups as well as their worker-centric ideology and willingness to work with the other groups involved eased any concerns I had initially regarding conflicts of interest in the recruitment process. Moreover, in general, my recruitment process was through word of mouth, also known as “snowball sampling,” whereby participants recommended other participants who were then recruited, and so on and so forth (Glesne, 2006). This research concept was one identified by Corinne Glesne in her study on qualitative research methods (Ibid).

Aside from their workers and their families, the recruitment process was facilitated by email. Some of those participants also recommended other individuals who I contacted for interviews. In my discussions, while certain individual names were mentioned in the testimonials, I made an intentional choice to stay away from pointing fingers at individuals in general. Yet, it is important to note those that will be mentioned by name in the discussion due to the fact that their position is relevant to contextualize the issue. More specifically, for the coalition, those include Marion Burton, President of the Peterborough Labour Council and Co-chair of the coalition, Kathy Dracup-Harris, coalition community member with a background in public health, Heather Brooks-Hill, Co-chair of the coalition with a background in palliative care and Don McConnell, former GE worker and John Ball, former GE worker and former secretary of the OHS GE committee. From the CAW/Unifor, the positions which will be mentioned are: Sari Sarainen, *the current* Director of Health, Safety the Environment, Nick DeCarlo, the former National Health and Safety Representative, Nadia Anton-Collins, financial secretary and paralegal of CAW Local 707, Nancy Clark, Health and Safety Coordinator at CAW Local 555 and Scott McIlmoyle, financial secretary at CAW Local 112, many of whom assisted in the intake clinic process. Other individuals who will be referenced are: Biophysicist Jeremy Carver who is also the former Associate Dean of Basic Science at University of Toronto and Co-Founder and President and CEO of the International Consortium on Anti-Virals and Brenda Parsons, who was the Interim Executive Director of the OHCOW clinic during the intake process.

The potential benefits, outlined in the letter of information, include the opportunity for participants to express their point of view and to create a greater understanding of the debate and

the perspectives of the various players involved. The overall approach to the data emulates the methodological strategy characterized by Sandra Kirby and Kate McKenna who advocate for critical social research in a book entitled “Methods from the Margins” (1989). Kirby and McKenna advocate for an approach which recognizes those who live on the margin and to examine their visibility by looking past mainstream understandings to explore more complex considerations (Ibid). Therefore, not only do they push for research focused on marginalized groups, but also marginalized approaches to the research questions raised, with an ultimate goal of pushing for social change. This active approach is undertaken throughout this thesis as I aim to not only highlight the invisibility of the workers, but also, to identify the political and socioeconomic framework the issues operate. By identifying these underlying currents, the hope is that this method of research will put pressure on the compensation system and the various players involved so that these issues enter the mainstream psyche.

Chapter 4: Workers' Reactions

*The politicians in this state
They're nothing short of rotten
They buy us off with fancy words
And sell us out to cotton*

I'm going to go to work on Monday one more time.

-Si Kahn

Chapter 4 provides an analysis of the compensation process in Peterborough from the perspective of the workers and their families. The chapter begins with a historical overview of Peterborough largely through the testimonials of the workers, outlining the rise and fall of the city's significant manufacturing industry and subsequent unemployment issues. Such issues are extremely important to consider when contextualizing the issue.

The chapter then moves inside the walls of GE, where the workers describe their exposure to asbestos and chemicals. This discussion outlines the intake clinic process which leads into a criticism of the scientific reports conducted during the compensation process. Further, the chapter explores the researcher's potential conflict of interest, the date the report was initiated, the methodological approach and the representation on the plant floor.

The last section of the chapter is dedicated to describing case studies of the following main groups: the uncompensated, the compensated and the families of both groups. This discussion is intended to highlight the individual relationship to the compensation system and various players involved in the compensation process, as well as insight into the work, health and the history of exposure of certain workers who represent a larger group of many former GE workers.

Unplugging the "The Electric City"

General Electric has maintained a fundamental presence in Peterborough for over a century as a main job creator and significant economic force. The plant was initiated as far back as 1891 when workers were invited to an official opening of the "Canadian Works at Peterborough" event, drawing in 1000 local citizens ("Peterborough Facts," 2014). In 1892, the Canadian General Electric Company Limited was federally chartered, round the clock production began and electrical products were manufactured (Ibid). Peterborough became the epicentre of

manufacturing, with the creation of other large industries such as Quaker Oats (previously America Cereal Company and now PepsiCo), Outboard Marine, Westinghouse and Rolls Royce, earning it the nickname, “The Electric City.” Diane Carl, widow of GE worker and compensation claimant, Art Carl, reflects on GE's significance:

They were a big, big employer. At the time, when I worked there and well, when our kids were younger, there had to be probably 6000 people, maybe. When they had a children's Christmas party, they had to hold two sessions in the memorial centre – GE was the biggest employer in the city...In the 60s, probably up to about 70. When they had the picnic, the whole of the Nickel's Oval was used for the GE picnic. I mean they were a big employer. So, you can be sure this city didn't rock the boat about a lot of things, you know. Because a lot of people's livelihoods depended on it (2014).

Once a bustling industrial complex and beacon of production, the confines of the GE property is now a ghost town. From around 6000 workers in the 60s and 70s, current estimates range from 600-1500 workers remaining at GE, in the nuclear and motors departments, with continual lay-offs and buildings razed on a yearly basis (“Who Are Peterborough's Top Employers?” 2014; Deeth, 2014; Kovach, 2014). In January of this year, the company announced layoffs of 200-250 workers due to a short-term drop in the demand for motor production (Deeth, 2014). Yet, GE is still one of Peterborough's main employers, falling a distant second behind Peterborough Regional Health Centre (“Who Are Peterborough's Top Employers?” 2014). A recent article in June 2014 states that there are currently 600 employees and quoted an employee who asserted job creation is imminent with destined market growth(Kovach, 2014). Aileen Hughes, the widow of Morris Hughes, states that when Morris retired in 1990, there were 6000 people still working at the plant. Hughes notes:

Morris had 65 repair men working for him. Now they've got nothing, nothing. He used to cry, he'd say, 'Oh, give me some apprentices' because the year Morris graduated from his apprenticeship there was 52 boys that graduated at the same time. And now, they get one every two years they're lucky. And they said oh well don't worry about it, we can bring them from England or Scotland or god knows – why can't we train our own kids, never mind, as Morris used to say, give me a boy with grade 11 education as long as he's willing to go to school and take blue print reading and math (2014).

She continues on to claim GE buildings are being knocked down, as recently as two weeks ago. When asked what it would mean for the city if the plant fully shut down, Hughes responds:

Oh my god, it would be death for this city. Well, it's practically death for this city right now. I mean, we had a great big Westcloths, we had Johnson Motor over here, we had

Outboard Marine, we had [Siemens] Milltronics, Quaker Oats is operating on a skeleton crew, I mean it's hardly worth it to go in there and work. I mean, every decent plant we had is closed, everything we had is gone; there's nothing here for the kids. You take my grandchildren, they're all scattered, there is nothing for them, there's no work (2014).

As Hughes notes, unemployment is rampant and jobs are scarce in Peterborough. According to Statistics Canada, in April 2014, the unemployment rate reached 11.6 per cent, the highest jobless rate in Canada, compared to a national rate of 6.9 per cent in April and 7.4 per cent in Ontario (“Peterborough's April unemployment rate by far highest in Canada,” 2014). However, the threat of job loss is not a recent phenomenon in Peterborough, or, more specifically, amongst GE workers. Some of the GE workers and their widows mentioned a persistent fear of job loss due to outsourcing over the past 30 to 40 years (Crossley 2014; Condon 2014).

Cindy Crossley, the daughter of a deceased claimant notes:

He also was very loyal in the GE too because he felt that they allowed him to go back to school and do better and they gave him a job for his lifetime. Even though, I don't remember a day that went by that he wasn't fearing that they were going to pull out because it seemed like it was in a constant (2014).

Her mother, Sandra Condon, adds: “It was all the time held over their head. Like, ‘I'm not sure if we're going to stay.’ So, it kept them on edge” (2014). Due to the economic pressure in the city, many of the participants said the workers were thankful to be employed by Peterborough's largest manufacturer (Carl 2014; Hughes 2014). Diane Carl, along with her deceased husband, was hired by GE:

[He got a job] by going up there day, after day, after day until he got a job. He didn't want to go to school so you had to have work – if you don't go to school you had to have a job. So he was very happy to get a job there...Sixteen. As soon as he was old enough. So, he was, I mean, I was too when I got a job, I was 16 too, you know. So I was very happy to get a job there. Better pay than banks and offices (2014).

Aileen Hughes, another widow of a deceased worker, remembered:

He was in grade 10 so he tried going back to school for his grade 11 but he just, had no – he worked in a theatre doing ushering, he would do a few jobs trying to make enough to pay board somewhere, but he just couldn't do it. So, he went and applied for an apprenticeship at GE. Well, at that time you could go in on an apprenticeship providing that you agreed to go to night school and take math and blue print reading (2014).

Hughes shows her husband's first pay stub and laughs – Morris Hughes received \$29.30 for forty hours of work (Ibid). Yet, she states they managed to live off of that for four years during which time they had two kids and got married (Ibid). An anonymous participant recalled:

Started there a week after I turned 16. Got kicked out of school. My stepfather said you're too big for me to feed so get a job. So I went out there every day for a week and I guess they got sick of me bugging them (2014).

As revealed by the participants, the workers generally started from ages 16-17 and were put on “boy's jobs.” An anonymous participant reflected: “Back then, women weren't allowed to work after 11pm at night or the company had to supply them with a ride back and forth. So, I got hired on what they call a boy's job. Once you turn 18, they put you onto a man's job” (2014). The “boy's job” started off in the punch press department, where machines were operated to cut holes in materials. After they graduated from the punch press, the participants report that they pursued positions such as welders, motor assemblers and inspectors. The work history of the interviewees reveal that each individual held a variety of different positions over the years they worked there – a method one worker said was intentional as it made him more employable when lay-offs occurred (Anonymous, 2014).

Asbestos Use: “Plucking the Goose”

Regardless of the departments in which the participants worked, they all report exposure to asbestos to a certain extent. Former worker and compensation claimant Roger Fowler remembers “[a]sbestos was in the air; a day like today, that sunlight, if you had that window and the sun coming in there, you would see these fine cuttings in the air. Like, the asbestos was everywhere” (2014). John Ball, former worker and health and safety officer at the plant notes:

There was asbestos in every building to some degree. The wire and cable, in there, you could almost pick handfuls of dust out of the air, it was like a snow storm. If the sunlight was shining down through the building rooftop windows, it was just like a pillar, shaft coming down through the asbestos fibres (2014).

Aileen Hughes, whose husband died of mesothelioma, states:

He went in there in 1948 on his apprenticeship and he went into the wire department and that's where they had what they called the 'braiders,' and these 'braiders' put this – it was like a cloth coating on the kettle and the ironing cords and all of that stuff. Well this machine, it fluffed up the asbestos and wound it on the wire and then this other one

pulled the coating over it. Well, he did not directly work on that machine but when that machine broke down, he had to fix it so he said you had to go in and take a little broom and clean all this asbestos fluff off of it before you could get in to work on it (2014).

Similar to other participants, Hughes states, “He would've had 43 years of exposure, yeah. So I mean, like, you can't actually say the wire department gave it to him or the fractional motors or large motor and generator – because he was everywhere” (Ibid).

Former health and safety representative, John Ball, provided a picture taken in 1997 of asbestos in the plant. (Fig. 7). During the interview Ball pointed to the picture (Fig. 7) to help illustrate why he fought for a separate lunch room:

This is one of the places they eat. What I was pointing out right here, that was an asbestos blanket that I was using, I was working on that job. In fact, the reason I took this, I was ordered out of there by the foremen because these guys were complaining I was throwing sparks into their eating area – this was a manufacturing floor. Like there's chemicals there by the tonne, never mind asbestos and welding going on. And I was told, you can't weld there, I said fine, this is a rush job, where do you want me to do it? In the washroom? Fine, I went and got the company photographer – he was standing out on a balcony over here – I said, can you take a picture of that? He said, 'As long as you don't tell anybody'. So he took a picture of it – I then filed a complaint with the Ministry of Labour and I took the Ministry of Labour all through two buildings there I said, these are the lunch areas. 'Oh my god' [they said]... We got a lunchroom over here after that (Ibid).

In addition to the workers' testimonials about the use of asbestos gloves and blankets, one anonymous participant described a job dedicated to working with asbestos called “plucking the goose” (anonymous, 2014). He posits:

Once or twice a year they done what they call 'plucking the goose' - they had big bins on the roof of the wire and cable and it sucked all the asbestos up through this bin almost into a little cabin, eh? And we had to go in and empty that out. The other fellow says, 'well you had protective equipment.' I said, 'we had cloth coveralls and a pair of cloth gloves' and I said, 'they always done it during the shutdown which is July so, naturally, you're not going to work in many clothes.' We used to have snowball fights with it. We didn't know what it was, eh? They called it plucking the goose. And out of all the guys left, I think it was 18 of us on the gang at that time, there's only three of us left, and two of us have got cancer (Ibid).

He also remembers that since they did not know the danger of asbestos, the labour gang pulled a prank on another worker by picking him up and throwing him into the bin, which was full of asbestos. Four years later, he notes the worker died of a heart attack in his early 50s – which he

claims was a common occurrence, particularly in the Wire and Cable Department, where most of them died of cancer or heart attacks under the age of 50 (Ibid). The former worker states the work was welcomed because it was done on a Saturday when they would be paid overtime for their labour. He claims they were called “the labour gang,” which undertook odd jobs when employees were laid off in the summer (i.e. during the “shut-down”).

The “shut-down” was referred to by some of the other workers as well. For example, Cindy Crossley, the daughter of a deceased worker and claimant, states:

It was the worst of the worst but it gave him extra money because he worked through the shutdown. So, instead of taking that time off, he never really had that break. He didn't do it always, forever but there was a certain crew, you know, way back and they were the shutdown crew and they went in and did all the worst jobs. And it wasn't seen by everyone because it's during shutdown time. There's all kinds of stories that before they came to do inspections, how they would bring trucks in, and when they still had dirt floors, and they would have to, they would take loads of stuff out from the floor just so that it would be a better, clean inspection. Maybe they did tests of the floor – they probably, I imagine, replaced it with better soil. I don't know how they did it but it was wrong. And there were memos from the Minister of Labour...But they said that our plant was beyond, not beyond repair, but something to that effect – they knew back then that it was a horrible, horrible work environment. So, we can plead ignorance to a certain degree but that it's not complete ignorance. They knew what was going on (2014).

The O&EHC-P produced a press release on July 2nd, 2013, called, “Shutdown Jobs: ‘The Dirtiest Jobs’” where they state that the shut-down jobs ran once a year, anywhere from three to five weeks with an additional “danger pay” of 10 cents more per hour. The release asserts that despite the danger pay, many of the workers may not have realized the dangerous nature of these jobs and therefore did not report it during the initial intake clinic. This was the case for Cindy Crossley who explains that her family was reminded of the shut-down at her father's funeral when a former employee “mentioned it quietly” to her husband. The O&EHC-P document also claims the employees who worked during the shut-down were nicknamed “the greenies” as they were most often junior employees and most recent hires as well as those seeking more money (2013). The report states that “‘Chemical Soups’; is the phrase that best describes the toxins in the tanks. One of the toxins in the tanks was nicknamed 'the epoxy icicles' [by the workers]” (Ibid). Member of the coalition and former health and safety representative, John Ball, claims that the company stopped using asbestos for production officially between 1986-88. He suspects, however, that it is still in the building (2014).

In addition to posing risks to the workers at work, some participants claim asbestos followed workers home as General Electric sold asbestos to them for personal use. One participant notes: “They sold the asbestos; it was a dollar per garbage bag, or two dollars for a refrigerator full. So I said, naturally, everyone gets the refrigerator box. I said, GE sold it to the employees to put in their attics for insulation” (Anonymous, 2014). After the participant became aware of the effects of asbestos, they were angered by GE's denial of selling asbestos in 2004 and tried to make OHCOW aware of the transaction (Ibid). The anonymous participant notes their actions were not appreciated by the company and contends that later they were called into the office by their manager and threatened that they would be fired as “GE's always been good to [them]” (Ibid). They recall, “The next day when I went to work, my union guy, our business agent...he grabbed a hold of me by the arm he said, ‘you stupid ass’, he said, ‘if you can't prove everything you said, they'll not only fire you, he said, they'll sue you.’ I said, ‘I didn't lie about anything...’” (Ibid).

John Ball corroborated this story:

One of our guys, [identity protected] used to pluck the goose. On the wire and cable building were the 'braiders' where a tone of asbestos was going on. Like part of it stuck to the wire; the wire had epoxy on it – so part of it stuck on the wire, the rest went out through the collector on the roof. And that was a big smoke pile of asbestos. The younger guys in the plant like [identity protected] go up there and get arm full of this loose asbestos, stuff it into boxes and [identity protected] and other guys would truck it into the city for insulation in attics. The company says, 'no we never sold it, we never gave it out.' Well, pardon me but we got a copy of the work's news published by GE advertising it for sale. So whether they were lying deliberately or just didn't know – I couldn't believe they just didn't know because it was pretty common knowledge. Now, if you have a home insulated with asbestos, you notify GE and they make arrangements for it to be removed very quietly (2014).

Aileen Hughes' husband told her a similar tale:

Over these machines, the 'braiders' they called them, there was a big fan in the ceiling. Up above that fan was a building. Now, they used to – that fan sucked a lot of that asbestos fluff into that little building and [identity protected] job was he was up there with a fork filling that into garbage bags and they used to sell it out to the employees for insulation in their house (2014).

Pointing behind her Hughes states “[t]hat house out there right behind me has asbestos in the ceiling” (2014). She had a suspicion there was asbestos in it so she notified the renters who lived there and claims that they found it “stacked with asbestos” (Ibid). “But, you know, you would've

thought if GE thought this was causing a problem – wouldn't you have thought they would've said something? But it all boiled down to that all mighty dollar – that's exactly where it's at. And isn't that a shame” (Ibid). When asked if she knew if it was cleaned out, Hughes claims it is private property, and, therefore, unfortunately became the owners' problem (Ibid). According to an anonymous participant, the company organized a clean-up of the houses, under pressure from OHCOW's doctors. However, they claim the families were forced to sign a gag order so that they could not disclose details of the clean-up (Anonymous, 2014). They assert, “I don't know how them people sleep. But one of the largest multinational corporations in the world, they didn't get that way by being nice” (Ibid).

Chemical Exposure: 'Chemical soup' and 'Beryllium sandwiches'

As well as reporting high asbestos exposure, the workers describe constant encounters with many potentially dangerous and carcinogenic chemicals. The list of chemical exposures reported by the participants include substances such as mercury, cadmium, vinyl chloride, hydrochloric acid, polycyclic hydrocarbon, lead, benzene, chromium, ethylene oxide, nitrogen oxide, silica, acetone, arsenic, toluene, toluol, silica, steel kut oil, *trichloroethane (or methyl chloroform)*, kerosene, rialene and epoxies (2014). According to the workers, these chemicals were used on a regular basis, for example when the motors were baked in an annealing oven. Other chemical processes included ionizing radiation during welding processes. Former worker, Don McConnell, asserts, “You'd drink a coffee in the morning, you could taste the chemicals right in it when you took a sip, you could taste it right in your mouth – from being in the air and you're breathing it in, see, it begins in your mouth and your coffee on the way down” (2014). When asked what kind of chemicals he used, McConnell responds, “Well in the armature department we used to have a varnish, it was like 1500 thinner and tar or asphalt. Well we'd take that in our bare hands and then at break time or lunchtime, the way we got it off, we washed our hands in 1500 thinner... we never used no gloves, [we were told] 'it wouldn't hurt us so don't worry about it’” (2014). John Ball claims the thinner was methylethylketone, amongst many other chemicals used (2014). He explains:

I brought in a book on the plating department there and we used everything there in the book: cyanide, all different types of acid, chromic acid, nitric acid – nitric acid is one of the most corrosive known to man! You drip that on the floor it just keeps going like a nuclear meltdown. They had a valve break in the old carpenter shop and they had a whole

tank of nitric acid there...the valve broke and it was going on the floor and it just kept going down. They had the fire department in in haz suits and blocked off both ends, etc. and they were pumping water down there with 3 inch hoses for hours and hours trying to dilute this acid enough that it would stop. Well, it probably got right into the water table there anyways because it was down a number of feet. That's the sort of thing we were working with. And yet, well, in the plating department, they actually did have a system there. If there was a cyanide spill, the direction you would run is with the wind, not you know, to run into the prevailing wind. Do you know which way the wind is blowing? And the actual words were: 'If your brother works with you and he collapses in front of you, don't stop to pick him up or you'll be with him.' That's how deadly that stuff was. We had great huge tanks of it. Right beside it we had acid tanks (Ibid).

One worker reported having a substantial amount of uranium in their urine at one point when they were working in the nuclear loading room (2014).

And I wanted out of the loading room because I knew it was affecting me and the woman said, no you're staying there. So I put a grievance in, fought it and finally got out of the loading room. But most of the people in the loading room died of cancer...And the first organ in the body, from what I understand is, it affects is your kidneys. And I've got 9 cysts on my right kidney and three on my left kidney (Ibid).

Another worker's family doctor discovered "a spot in their lung" but the worker insisted they were wrong because they worked in the nuclear department and were x-rayed every two years (2014). Their family doctor contacted the GE doctors who said they had lost the worker's x-rays from the last decade, which he now believes was intentional (Ibid). The worker asserts that he blames the company as well as the local union representation, as he claims one time the local President ran out the back door when he tried to seek follow-up on his claim.

Despite the reported constant use of chemicals, many of the workers did not know the potential debilitating effects of the chemicals until much later when WHMIS and other safety reports were more widely circulated. When asked if he knew about the effects, Roger Fowler, whose case is featured later in this chapter, responds:

Nah, not back then, not really, not until later in the 80s, until PCBs came on board. Not really, they didn't worry about things like that (laughs). And of course, we didn't either. ...It might have toluene in it or different chemicals and you just dump this chemical in something and wash things in it, you know what I mean? Like you didn't prepare yourself to do that – we didn't put on masks, safety shields and gloves up to here – we didn't know! And I'm not sure even if the company knew at that point in time (2014).

One participant reports asking his superior about the dangerous nature of Beryllium:

I said what about this Beryllium, I've heard some stuff about it? 'Oh, there's nothing wrong with Beryllium.' He says, 'You could eat a Beryllium sandwich, it wouldn't hurt ya.' Then I find out that the KBG or something was using it to poison people because it can't be traced in the human body. And we had work stoppages in there when one of the machines blew up one day and Beryllium was floating all through the air (2014).

While some workers were not aware of the effects, others report they had an intimation of the effects based on their physical reactions. For example, Cindy Crossley, the daughter of a deceased former worker and claimant, asserts:

Oh, dad knew from the beginning. His sense of smell changed right from the very beginning on his first job, he said he always had, what was that smell he had, a burning odour... I don't know how he described it but he was hyper sensitive to smells, hypersensitive and yeah, he always knew. His fingers would break down, even with the copper gloves on. They would all break down because of the epoxies they used. When he went on vacation he healed up... (2014).

One anonymous worker describes an incident that occurred in the armature building when they were dipping tanks in varnish and then heating them up in BPI tanks, which made him aware of the toxicity of the chemicals:

Well, somebody screwed up and the tank blew up, the fire department had to be called in. Within a year, three of the firemen have passed away, dead. And we were there the day after, scraping walls and scraping the floor ready to clean the place up and I'd never had a migraine headache until 1969; I ended up with migraines over it (2014).

According to the worker, such incidents led some to rally for personal protective equipment (PPE) and heightened health and safety training, particularly in the 1980s (Ibid).

Oh, well I went at the union over the coveralls because we were handling all these dangerous chemicals... anti-abrasives, very toxic. A lot of the paints and thinners - toluene, lacquer, paint thinners and carotene paints and some other paints... And you couldn't go home wearing those clothes of yours. Like that had to stop. We had to get coveralls. So, finally in negotiations, we got the coveralls, it was a safety thing that came through. So 'maybe we can shut [identity protected] up if we get him this,' but we had that, I made sure we had all the breathing equipment: the masks, the gloves, you know, I wanted the rubber gloves. Some of the guys were going in there using the wrong masks for the wrong jobs. They were putting their hands in – you have people putting their hands in mercury, putting their hands in lacquer or toluene – that stuff is going into your blood stream, you know? Why wasn't the company enforcing what was going on? (Ibid).

John Ball, former worker and executive officer of the union and secretary of the health and safety committee, took it upon himself to learn about the occupational hazards throughout the workplace. Ball also pursued labour studies outside of the workplace at Sir Stanford on a part-time basis and took courses offered by the Ontario Federation of Labour (OFL) and the CAW (2014). Ball describes the type of incidents that encouraged his involvement in OHS issues:

So I ran for steward in the department. First time I didn't get in. Second time I got in as steward and the first thing I did was file a grievance on a trichloroethylene tank because I had moved into another building. I was working right here and you know, 20 feet away was a trichloroethylene tank and I watched the man on there getting sicker and sicker...And I was welding 20 feet away and the fumes would get so bad I couldn't breathe. I'd go outside to get some fresh air until the trichlor dried up on the floor. But this guy, I could see, and he'd hang right over the tank like this, just inhaling it, eh? (Ibid).

Ball notes that despite his efforts to raise alarm to the company by going through the local MPP, the person he feared was at risk died months before the grievance hearing:

Anyways, never got the case out but the man died, I think he was 36, 38...a matter of months for this grievance hearing, eh? And [identity protected] knew him personally, knew his family so he also knew the doctor that he had been dealing with and the doctor showed him the autopsy report on the quiet and I said, what did it say, Pete? It said he died of acute anxiety. I said no, I don't think so. I said, could it have been acute anoxia, I said, what else did it say? He said well, his liver had holes right through it just like someone had taken a knife and poked holes through his liver. I said, that's anoxia...This is what got me so involved in the health and safety end of it, why should the man die? He was a good guy, good to work with – didn't know him that well. But, we had another young guy in his 30s working on an epoxy tank out on the other side – he died and so on and so forth (Ibid).

Ball refers to himself as a rabble-rouser akin to Stan Gray, claiming he was persistent in his efforts to protect the workers and push for higher safety standards (Ibid). Ball states:

Like, we had one case where we were drilling interpolls...Well, the drill bit would get red hot if it didn't have the dasco tap on it to keep it cool and to help it cut so the dasco tap was burning under the drill, it was generating *methyl chloroform* – the guys were collapsing on the job and we had two or three guys die – young men, dying of heart attacks so I got on the job, it was in my department and brought a gas tack metre from [identity protected] the head of safety... well you break the tips off the tube, stick it in the barrel and then you draw air in through it in from the environment and there's chemicals, there's a re-agent and there's a different chemicals in there and if you're looking for *methyl chloroform*, you use a certain tube. So I went out there and I was checking all

around the area there because the fumes – the place was blue with chloroform – I couldn't get a reading – what the heck, you know? So I stuck it right into the plume, like it was just a solid mass of fume coming up; I stuck it right in there and it didn't register a thing. So I knew well, there's something wrong here. So I went back out to the front office with this gas tack metre... and I said [identity protected] this so and so thing is not working. 'Oh yes there is, there's nothing wrong with it'. The Minister of Labour inspector had just walked in, he was sitting there in a chair and he said, 'What's wrong, John?' and I said I just stuck this right into a plume of what I suspect is *methyl chloroform*, I said, it never even budged. 'Oh, I just got a brand new one', he says, try this one. And [identity protected] he changed about three shades of red so I went out there and even before the first draw, like you had to pull it, recharge and pull it again to get your full sample – just seconds into the first draw it went right off scale so I just told the guy, I said 'you better shut it down, this is deadly, no wonder your guys are having heart troubles.' Well we went back out and showed him, I said this is what I got off of half or less than half draw. 'Oh god, we better shut that down'. I says, 'Already done' (Ibid).

In addition to cancer and chemical related deaths, Ball asserts that the hazards ranged “from noise to chemicals to physical injuries.” He remembers:

You walk into that place in the morning, you don't know if you're going to go home with all of your limbs. You don't know when you're going to go home alive, it's like going into a battlefield. And, you know, it's a dangerous place to work... And we had people die, we had people severely injured. I don't know how many amputations, etc. and so on and I'm telling people, 'We can't work like this – we gotta get this stuff under control'. Well the company's idea was: that we'll look after it when we get the job out the door. And it came about that if they didn't listen back then, we would pull a snake walk down and start walking through the plant (Ibid).

When asked how many people he had seen die, Ball responds, “Hundreds and it's probably an underestimate because I have, in one of my books, I have around four or five hundred names of cancer patients and a lot of them died” (Ibid). Another participant claims, “most of them didn't make it to retirement” (2014).

Intake clinic: Evolution of the Ontario model and its application to the Peterborough case

Intake clinics are designed to determine potential workplace exposure data by a collaborative team of physicians and worker representatives. In 1985, the first intake clinic was launched under the direction of Stan Gray, OHS and labour activist and professor. The move came after a controversial workers' compensation case against the company Westinghouse,

where Stan Gray was the shop steward and OHS representative. Author Richard Fidler discusses the Westinghouse compensation process, where workers were injured when a drum exploded which contained volatile chemicals. Toluene specifically was dealt with in a shocking manner by the Ministry and demonstrated the Ministry's failure to enforce OHS provisions (2005, 331). Fidler references Stan Gray's statement that "under the banner of internal responsibility... the employers and the government are quietly rewriting the safety laws of Ontario. They are robbing us on the shop floor of legislative protections gained by a decade of struggle by labour and its political allies" (Ibid, 352). In an attempt to restore the triumphs of the struggle, Gray left the shop floor and set up the Ontario Workers Health Centre, with the help of USW local 1005. The centre assisted with independent medical assessments for injuries and diseases and fought for plant clean-ups of certain workplaces (Gray, 2009, 19). It was extremely progressive in terms of the worker-centric philosophy and inclusion of important issues which were otherwise ignored in the larger OHS approach, such as women's issues (e.g. reproductive hazards) and MSDs, which are interrelated issues themselves. Some of its biggest successes were the campaign to remove asbestos in schools and the treatment of the DeHavilland and McDonnell Douglas chemical exposure issues which made huge waves for the recognition of workers' OHS rights and union activism (Ibid, 19-20). Of course, this threatened big industry and government and soon enough the centre was under attack. In an article by Gray entitled, "Stan Gray: The Greatest Canadian Shit Disturber," he notes:

The business-government-labour steamroller destroyed the rank-and-file health-and-safety movement in Ontario. Our Centre came under a lot of hostile pressure, as powerful interests worked to isolate us. We were seen as an obstacle to the stable and controlled relations that top union and employer officials wanted to maintain with each other — often in opposition to their own locals (Ibid, 20).

The shut-down of the centre demonstrates the overwhelming influence of big industry and government in OHS considerations, as was discussed earlier particularly in relation to mechanisms of establishing causation.

The centre was succeeded by the Ontario Health Clinic of Ontario Workers (OHCOW) in 1989. A formally independent body funded by the prevention office of the Ministry of Labour, OHCOW was an instrumental player in the General Electric compensation claim process. Along with the CAW, OHCOW set up an intake clinic to assess approximately the workers for occupational diseases, namely cancer. The intake clinic drew in 700 workers over the span of

two days under the direction of Dr. Noel Kerin and four other physicians, making it the largest intake clinic in the province to date (Simmons, 2005, 14).

OHCOW in Peterborough

As mentioned, the concerns about the occupational diseases came to a head during the intake clinic in 2004. According to Sari Sarainen, CAW's current Director of Health, Safety the Environment, once the files were completed, the individuals would then decide if they wanted to pursue their claims (2014). If they chose to pursue the claim, Sarainen states:

Well the local is the one that carries the workload in terms of workers' compensation files. They would be considered their representatives if the injured worker chooses to and the local then files claims to do with the compensation board, WSIB. And if there are any further assistance that's needed, then they would assist them with either getting more medical evidence if it's available and that's working very closely with the OHCOW clinic. And then they would assist them with appeals as needed (Ibid).

Brenda Parsons, former Interim Executive Director of the OHCOW clinic, similarly notes that OHCOW's role was primarily to focus on prevention initiatives. They did not have a role in assisting workers with health claims (2014). Parsons states:

That role was to do the forensic medical, occupational, hygiene investigation that could link the workers' exposure to their symptoms or disease. Beyond that, the claim for compensation was in the hands of the worker and/or their advocate. OHCOW did not get directly involved in the submission of claims or the arguing of the validity of claims. They produced their findings in a report for the worker/advocate (Ibid).

Financial secretary and paralegal of CAW Local 707, Nadia Anton-Collins, states that as there was an inconclusive health report produced in 2001, the workers advocated for more effective action (2014). While OHCOW tried to assist the workers in a health survey, Anton-Collins asserts the response was not large enough to draw any firm conclusions around the health issues (Ibid). Therefore, CAW pursued an occupational disease intake clinic that focused primarily on the retiree group.

Parsons recalls that OHCOW met with a number of employees and retirees as well as their local union representative who all agreed to set up and operate a worker intake clinic (2014). After Parsons created the intake clinic protocol, she claims the former CAW national health and safety representative, Nick DeCarlo, was brought in to establish how the claims would

be handled and that all claims advocacy, to her knowledge, was handled by them. (Ibid). Parsons states that OHCOW's teams met with the representatives and workers to design the intake questionnaire, make the arrangements for the venue and staff (including volunteers "needed to handle such a massive project"), design a visual mapping process for exposures including a hazard and medical charting (i.e. body mapping), initiate a focus group with the workers and their families, oversee registration, and interview over 700 people (Ibid). Parsons adds that a stress management professional was also brought in to deal with the "overwhelming grief that came of such an event" (Ibid).

Aileen Hughes asserts she was one of the workers who helped initiate such actions, soon after her husband passed away of mesothelioma (2014). While Hughes was swiftly compensated, she claims she felt it was her moral duty to make the union aware of these issues in order to ensure others were assisted (Ibid). Aileen Hughes' husband, Morris Hughes, was still alive when he voiced his concerns to the local union representative, Keith Riel and attended union meetings (Ibid). According to Hughes:

Morris said to Keith, 'When I'm gone, you're still on the union, make this an issue for the rest of the workers, do something. Get in there, get something going' ...So when Keith opened the meeting that day he said, 'Well, this is a Morris deal, I promised Morris I'd do something about this and I'm doing it.' And you know what, next year he never got voted in on the union, somebody seen he got out (Ibid).

Hughes had a suspicion that the WSIB was not happy with her decision to involve the union (Ibid). Prior to her involvement, she asserts, "I hate to think it but I think at this point, they were trying to pacify us so that we would be quiet, not say anything" (Ibid). After her WSIB caseworker retired, Aileen had an honest conversation with them about why Hughes instigated the clinic:

[The case worker] said I was a little disturbed when the union got involved at the start but she said, you know, you done the right thing. I said, well the way I looked at it was, there was other people, I wasn't the only one and I couldn't have managed without the help and I thought, how did these women when their husbands passed away years before this, how did they manage to look after them and do – maybe that's why a lot of them didn't last as long because they didn't have the care. And that was, that's my feelings on it, you know (Ibid).

Nick DeCarlo recalls being contacted by Keith Riel of the local who had helped organize the clinic (2014). DeCarlo notes that he did in fact develop the strategy and contacts for the

compensation board but that it had been pretty well set up already (Ibid). Weeks later, DeCarlo states that when Riel was defeated in the election which changed the dynamic and made him largely responsible for developing the compensation work.

DeCarlo had experience organizing intake clinics as he helped organize one during an occupational disease investigation at McDonald Douglas/DeHavilland in Toronto and Homes Foundry in Sarnia, an investigation to understand and assess the problems in the workplace. DeCarlo was also familiar with the changing nature of the clinic system from the Stan Gray Centre to OHCOW. He provides an overview of the DeHavilland intake process:

The Ontario Workers Health Clinic, and it was organized through Stan Gray, who was very left wing, very political kind of person...so we started doing the assessments of people that would come after work for an assessment. As we started building up information, we discovered there were carcinogens in the workplace, meanwhile the company didn't recognize them so I was locked out of the plant but things were going on. So, we started building up a number of cases of people who had problems – we had evidence, we discovered carcinogens in the workplace, we started publicizing that... we finally resolved things – a number of very significant improvements. At the same time while this was happening, the law in Ontario was changed as a result of this, they brought in the occupational health clinic for Ontario Workers. That was designed to eliminate the Stan Gray clinic basically. It was a reaction to try and institute a more formal structure within the – it was co-opted so it would prevent the political organizing which was very effectively done in combination other things that happened, quite effectively done (Ibid).

DeCarlo believes that the political climate during these compensation cases was more favourable than the climate during the Peterborough claims (Ibid). For the Peterborough claims, he outlined how the patient forms would be passed along to the nurse at the head of the OHCOW clinic who would then assess which were most urgent and then forward them on to a doctor who would review their history and medical state. The doctor would then determine whether or not the injury was compensable (Ibid). DeCarlo notes that an important part of the process was body mapping which revealed overall patterns of diseases. Sandy LeBeau remembers the process being particularly eye-opening:

If you'd had yourself cancer or you'd had a spouse or a parent that had worked at GE that had cancer they put pegs on the building at GE and they put pegs on the body, you know, big poster of a body of where the cancer was and that was mind boggling, that was really mind boggling. So I think there was around 600 people who showed up to that and the most of the cancer was out of armature – it showed a lot of cancer related stuff with the

people who worked in armature... But it was quite something that you kind of remember. Like 'Holy crap' (2014).

Scientific considerations: 'Peanut butter in the classroom'

The adjudication of compensation claims put forth to the WSIB largely rests on relevant scientific and medical studies, often pertaining to the specific file. In the Peterborough case, the compensation claim largely rests on a health report conducted by a GE company scientist initiated in 1986, completed in 2002 and updated in 2003. Dr. Roland Hosein is currently the Vice President of the Environment, Health and Safety of GE Canada with a background in epidemiology from the University of Western Ontario ("Biography" 2014). Since there was no response to an interview request from General Electric, Dr. Hosein's perspective was not available.

As I outlined in Chapter 2, there is a need to question scientific reports that deal with occupational disease. We need to be aware, for example, of who funds and solicited such studies, who peer-reviewed them, where they are published, when the study took place and what scientific developments have occurred in the field since the study was conducted. These are questions asked of the GE study by former workers, their families and other individuals and groups involved in the GE occupational disease story.

CAW's Nadia Anton-Collins claims the study was initiated as a result of consistent pressure from the GE workers that led to a company study in the 1990s which showed an excess of lung cancers in the first stage (2014). However, as mentioned above, she posits that when the study was completed in 2001, it was inconclusive (Ibid). Biophysicist, Dr. Carver, who is the Associate Dean of Basic Science at University of Toronto and Co-Founder and President and CEO of the International Consortium on Anti-Virals, was approached by John Ball to look over Dr. Hosein's report and provide his scientific perspective. While Dr. Carver notes he is not an epidemiologist, he claims his experience as a biophysicist and cancer researcher was enough to recognize that the study was "basically a piece of junk" (2014). Dr. Carver provides his perspective on various contentious elements of the report such as the lack of sufficient peer reviewing, poor representation of the plant's lay-out, its negative impact on exposure mapping, the outdated science given the year it was produced, its methodological flaws, and a disregard of widely recognized cancer research findings (Ibid). According to Dr. Carver, one valid argument

against the report lay in the fact that the report is dated (Ibid). Cindy Crossley, the daughter of a deceased former worker notes:

They're still using the old the old health report. That makes me sick. Because not only did that gentleman [who conducted the report] work for the company but that it's old now. We all know best practice – you can't use old information. That really, the union should've never agreed to that (2014).

Dr. Carver argued that the outdated nature of the report also impacts the ethical guidelines that scientific researchers have to follow today, where bias must be declared. He states:

I mean the university these days would be very sensitive to that... the guidelines have evolved over time and I think they're much, much more rigorous now. So, I don't know if you've looked but certainly in the journals I read these days, it's a requirement at the end of the paper to make a statement about whether you have 'x' interest in any of the [findings], whatever you're reporting in the paper, there has to be a disclaimer. You know, if you've filed a patent based on your research and that patent has been licensed to the company and you're receiving royalties, you have to declare that in the paper. And if he had ever tried to publish his report as a paper, he would've had to, well nowadays he would have to declare he was paid by GE to do the study. But then he'd continue to be an employee. So, I don't think he'd get away with it today but retroactively, you know, who's interested in rocking the boat? The most, to me, the solution to the problem is simply to say, science has evolved, it's time for a new study, right? (2014).

Dr. Carver explains that while scientific guidelines have become more rigorous to ensure independence and accountability, the issue of corporate-led science is not just specific to GE but is indicative of a larger epidemic. Other participants such as O&EHC-P members Kathy Dracup-Harris and John Ball also mention the potential bias implicit in soliciting a report by a company employee.

The current health and safety representative at CAW, Sari Sarainen was not working on the file at the time and had not read the report. However, with experience in other compensation claims, Sarainen also notes that “you always have to view employer studies just with that caveat that it is an employer study” (2014). Moreover, Anton-Collins notes, “Science is left up to interpretation as the decisions are made on opinions of people who read *some* of the reports, not all” (2014). When asked what the potential issues are with company-led reports, Anton-Collins adds, “The reports do not represent a true justice and merits of the work place, dead people do not talk, and the ones alive are afraid of losing their jobs. The cause of death of injured workers

is not always provided or linked to the work place illness” (Ibid).

Nancy Clark, Health and Safety Coordinator at CAW Local 555, asserts that depending on when the reports were done, Joint Health and Safety Committee (JSHC) members may not have been involved in any of the testing and so there would have been no one to ensure the tests were taken when the contaminant levels were “normal” (2014). When asked if it is typical that an employee conduct such a study, Sarainen responds: “Sometimes it is. Employers I would not say are not interested in what's happening in the workplace. But I think the proof in the pudding is that once you've done your study and what do you do afterwards. If you are able to uncover or you highlight certain areas that need to be changed, will you change that?” (2014).

These discussions provide support for the literature review discussion of vested interests in corporate-led science and how this affects the application of the science. Dr. Carver speaks specifically to this issue:

In medicine, a lot of physicians would get paid by a drug company to do a clinical trial, or to do certain research in support of a drug that's going through trials. And that was always not considered real research. And back in the days I was involved, it is more so than now but there's still some horror stories where physicians who were running trials who saw really bad side effects, spoke up, you know, said, 'I'm not doing this anymore because I found this,' then got sued by the drug company because they're not supposed to speak in public about the results. And so that's been a big kind of chill effect on people going public on what they're finding in these industry-sponsored studies. I'm not saying that Hosein deliberately you know, jiggled the data to get the answer he did. He may just have been incompetent (Ibid).

In addition to highlighting potential problematic issues with corporate-led science, Dr. Carver particularly takes issue with Dr. Hosein's methodological approach. He asserts that if you have a significant number of workers developing cancer and you want to determine the cause, you need to have a large sample size to detect differences (Ibid). By doing so, he posits that one could look at incidences of cancer and correlations to carcinogens which would produce “good numbers” (Ibid). However, Dr. Carver states:

He didn't do that. He divided up into individual types of cancer, so the numbers started to get smaller. And then, he compared those small numbers with. So, his control group, which were GE employees who hadn't died of cancer but because these groups got so small, the error on the test of significance goes way up as you get smaller. I mean, just intuitively, you could imagine that would be true there because it's not black and white – not everyone who was exposed to a certain carcinogen gets cancer which is why we

[cancer researchers] think there's a big genetic component. And, some were exposed multiply to carcinogens. So, he just kept dividing up the groups into smaller and smaller groups so that basically, his finding at the end was that there was no statistically significant correlation between the cancer and the exposure. That has been used to say: therefore, the exposures didn't cause cancer but that is totally wrong. Because, the other explanation is that you wouldn't have seen a correlation, I mean, that there is a correlation, but he didn't see it because his numbers are so small that he didn't have statistical significance. And that's what, that's *bad* science, right?.. What he should've said was that he couldn't see statistically significant correlations and that could be saying, either there isn't a correlation or there is but his sample size wasn't big enough. Now, if he'd said that, then everyone would've realized that it was useless (laughs) that the report was useless – so, he didn't say that because he wanted to collect his fees, I'm sure (Ibid).

Nick DeCarlo also makes note of these methodological flaws, saying this is a typical problem with conducting studies. He posits, “It didn't really account for it; it dealt with things in clumps to hide the numbers instead of looking more specifically in certain areas. So there were criticisms of the actual report itself...”

Dr. Carver speaks directly to how Hosein's methodology influenced the treatment of occupational disease in the plant. He states that Hosein analyzed correlations between mesothelioma and lung cancer and asbestos exposure and found no correlation. However, he observes that Hosein found a correlation with smoking (2014). Dr. Carver asserts:

To play to that whole approach that in the early days the worker submitted a claim but had a history of smoking, was immediately thrown out. So, that tells you right there that there's methodology that's flawed. Because everyone else now, accepts exposure to asbestos as being a cause of lung cancer and particularly, mesothelioma. And so, the why no one else has complained about this is just all too comfortable I guess. They've got a formula that seems to work and no one's really challenged it...The other thing that really I found horrendous about the methods they use is that it's very non-scientific to be honest - they've got all these science advisers that they supposedly use but the kinds of rules that they use like, you must have so many years of exposure to such and such for us to accept your claim that your illness is generated from the workplace. And we know from cancer biology that that's nonsense (Ibid).

Dracup-Harris observes similar fundamental flaws:

The health study is flawed in a number of different ways...first of all, for GE to do the study, draw the conclusions and that is further compounded by the fact that WSIB use that health study to determine exposures, level of exposures and hence adjudicate and determine whether claims can be compensated or not. Another issue is there's a long latency period between exposure and illness in this kind of occupational disease – that complicates it (2014).

Based on all the identified issues, Dr. Carver questions how the report was peer-reviewed:

I personally can't believe that the Hosein report was peer reviewed, you know, because I mean, there are simple typographical errors there and numbers that have numbers that have been entered into tables incorrectly. I mean it's just simple stuff that any decent review would've picked up – you know, factual stuff, not even methodological....And in the study report, he refers to the fact that he has consulted his former supervisor about the methodology and that sort of thing...Well, that's about as peer reviewed as I think it ever got, would've been sending it to his former supervisor... And by virtue of his report being accepted by everybody, he's sort of had this status ever since (2014).

Another main issue that Dr. Carver, the O&EHC-P and former employees note is the misrepresentation of the plant's layout and how that influenced the understanding of the impact of exposures to asbestos as well as chemicals. John Ball and former worker, Roger Fowler, mention this aspect as they argue the layout of the plant was skewed in Hosein's report so that buildings were labelled as separate when in fact, they posit they were sometimes only separated by a chain-link fence, which would not stop chemicals from penetrating through (2014).

Looking at the map, Roger Fowler points out:

That's all building 10, same as building 8, right there. Building 8 and 10 and there's openings there, there's openings everywhere, all the way through here, there's no and the main aisle comes here. There's two doors but they were never closed, this was always wide open. From one end of the building, you could see from one end to the other building, all the way through the whole plant; that drawing is a misnomer. It is not real...Well they said, nothing was happening and right here (pointing to map of GE used in Hosein study, (**Fig. 8**), they say this main aisle, it looks like it stops here; this main aisle come right out to here, it didn't stop here and have walls there and it wasn't this wide. You could drive a truck through, you could bring an ambulance there, it was not that wide (Ibid).

Dracup-Harris asserts Fowler is one of the many compensation claimants who is deeply affected by this misrepresentation and that if the map was representative of the plant's layout Fowler would have the 15 years of asbestos exposure that is required in order for him to be considered eligible for cancer-related compensation (2014) While not speaking directly to Fowler's case, Anton-Collins states, "Employers use causation as being based on the amount of chemical exposure of 20 years plus, however most of the times nobody looks at the amount of time that a worker spends in the work place as hours in the work place. Working long hours, continuous overtime it adds up to much more exposure time than arbitrarily choosing a specific target"

(2014). Following this ideal, Ball claims that the premise of Hosein's research was “you work here, you're not affected by the work the guy beside you is doing” (2014). Dracup-Harris notes that this representation and approach made it was easier to deny claimants as their exposure was reported in an isolated manner according to each “building.” She states:

What was so brilliant is that [Hosein] picked and chose asbestos exposures so when you talk to workers and you look at these files, you're going to have workers say, well there was asbestos here. And I can show you a WSIAT denial that says, ‘The worker said that but we had reason: the company told us that there was asbestos here, they were very forthcoming about that. Why would they tell us there was asbestos here but deny it over there?’ Well come on, people. Because you're limiting your exposures, because you're minimizing the true extent of what exposure workers have and that happened...So, the company bit the bullet and said, yes there was asbestos here, yes the workers had exposure but not everybody had high exposure because we didn't have high asbestos use in the whole plant, only in certain sections, certain “buildings”...So, that health study, while you can't interpret it scientifically, politically it's absolutely brilliant on the part of GE because the other thing they did was they withheld access to the health study so John and people who had full knowledge of the factory weren't allowed to see it. So, they were adjudicated based on the study without people who could refute it early in the process having seen the information. So, brilliant on GE's part, absolutely brilliant (2014).

However, John Ball notes:

There was asbestos in every building to some degree. The Wire and Cable; in there, you could almost pick handfuls of dust out of the air, it was like a snow storm. If the sunlight was shining down through the building rooftop windows, it was just like a pillar, shaft coming down through the asbestos fibres, that's why you say it here, you hone in on the asbestos and I told them in the very beginning, my own group, GE is going to bite the bullet on the asbestos...But this is the standard way they do it and you know, it fits a pattern so neat and it's so damaging to anyone like myself or the group trying to get some common sense out of it. You run into this game you play; well we'll allow this much but we'll fight for the death on anything else and we'll make the judge out of it in this case, the tribunal feel ‘well GE is being honest, we'll admit to all of this over here’. Yeah, well you killed 200 people there, but you killed 1000 here over the years (2014).

Following in the same vein, widow Sandy LeBeau states, “You have to understand, this is a big open air building. Well, my thinking, and I mean maybe it's right or wrong: We can't have peanut butter in schools. You know, one peanut butter sandwich can do damage to somebody six classes down the hall, you know, because it being on your hands or whatever” (2014).

Dr. Carver notes that the most upsetting part was how the research was employed in the

compensation cases. He asserts:

It was really sad to see how it's been used. Not sad, I mean, it's criminal... if you're not getting the right information on the exposures of a worker, you can't possibly draw conclusions about the connection and of course, as you'd expect, the exposure mapping that Hosein did, did not include a lot of the exposures that the workers knew all about but basically, the company denied. So, you know, building 'X' would be said to be the only place where there was asbestos and then the workers would say, 'No, there was asbestos everywhere in the plant' and different degrees (2014).

John Ball and Roger Fowler state that exposures were exacerbated by a “reverse air pressure” Heating, Ventilation and Air Conditioning (HVAC) system which they say was intended to push the fumes and chemicals out of the plant but instead, pushed them back in as well. Fowler claims:

...Plus, there was tubes they put in the GE to draw the air out from these buildings that were totally contaminated. Well then there's a letter that came out... it shows and it states in this letter, they started to realize that instead of taking the air out, it was bringing the chemicals in and exposing us all to everything (2014).

Dr. Carver provides scientific credibility to John Ball and Roger Fowler's description of the ventilation system:

The issue we now understand that low levels of different, of a mixture of carcinogens, is actually a much more efficient way of inducing cancer, than being exposed to a single agent and none of that's been incorporated into the science, the scientific analysis of these claims (2014).

Dr. Carver raises an important issue of causation issues in the Hosein report as the chemicals were not largely considered as a cause for concern. He notes that the hesitance to accept chemicals as potential carcinogens is historical as “so much money rides on the decisions” and compares it to the “smoking game” he refers to earlier (Ibid). Dr. Carver notes that such a stance runs counter to the development of cancer research, where the understanding of what environmental factors and their impact on cancer is growing all the time. However, he states:

But then, what the major argument that the companies use is, yes you can show a correlation, but that doesn't prove cause and effect. Just because somebody, you know, the more people that worked with compound 'X' got tumour 'Y', doesn't mean that tumour Y is caused by the exposure to 'X' - there may be other so called “confounding factors” sort of makes it out that everyone who you know, worked with compound X also drove

Fords, or something and the plastic in the seating of Fords, you know. So, until someone actually, and you can show even animal experiments where you show animals that compound X causes tumour Y, there's no proof. And so, it takes a long time to establish, for cause and effect to be established and accepted by people who don't want it accept it, or if it's going to cost them money to accept it. So, the science is, can be very sound but the actual epidemiology process is really hard to establish (2014).

Dracup-Harris also refers to the complexity of chemical considerations:

The science has not caught up with the illness. I mean, it takes a lot of research to understand the implications of one chemical, such as asbestos, but when you combine asbestos with toluene and then benzene and lead and all those other ones, you don't have a hope of making nice, direct connections, it's very difficult (2014).

In discussing chemical causation, Clark writes: "In theory all claims are decided on the merits and justice. Science is used to strengthen the arguments linking the injury or illness to the workplace exposures. Unfortunately, there is far too little research on multiple exposures and resulting illnesses and so, many claims are denied due to a lack of scientific evidence" (2014).

More specifically, Dr. Carver discusses the struggle for benzene to be recognized as a potentially harmful substance:

It's about getting cause and effect to be established, to be accepted. When people don't want to, they can always find an excuse. And so that's happening now with Benzene, which is one of the issues that Dr. Noel Kerin is trying to get WSIB to accept. There's a strong correlation to the exposures of Benzene to prostate cancer. GE claimed, for the longest time, that there was no Benzene used in the plant. However, Benzene is added to other organic solvents to stabilize them...But they always say, no Benzene. So actually you know, you break down the walls, the defensive walls but it takes a long time and I think that [OHCOW's] Noel [Kerin]'s very hopeful that WSIB is going to accept Benzene exposure, the way they have asbestos exposure. But you know, it's being done sort of one agent at a time (2014).

Clark expands on the legislative elements of exposure ratings, providing the example of Benzene as well. She states:

Legislated exposure limits are set for the knowledge at the time of enactment of the legislation. What was acceptable 10 to 50 years ago is not acceptable (benzene as an example) now, so workers may be denied because not enough exposure but research and studies of populations exposed may determine in the future that illness may have been caused by lower exposures. Unfortunately humans are guinea pigs in the compensation system and until enough are made ill or die, claims may be denied (2014).

Case Studies:

In the case studies to follow, three main groups will be discussed: the families, the uncompensated and the compensated. In the first group, “the families,” two compensation claim cases will be discussed through the eyes of two widows and one of their daughters. This discussion will provide the perspective of what the families have experienced, how they would characterize their husband and fathers’ cases and who they feel has provided the least and most assistance out of the key players involved.

In the second group, “the uncompensated,” one worker's file will be examined to reveal their compensation process, including the decisions they have received from WSIB and WSIAT and their interpretation of their rejection. As with “the families” group, their response to the process will be examined to show the effect it has had on their quality of life. Their testimonial will illustrate their exposures and work history as they interpret them as well as the compensation board's adjudication of their denial.

The third group, “the compensated,” will examine one worker’s file who was compensated, as told by his widow since he is now deceased. This file will provide a juxtaposition to the other uncompensated files and provide insight into what is required to prove causation. It will also look at the similarities and differences in their response towards the key players' involvement.

Overall, the goal of discussing these case studies is to highlight who the participants have the most faith in, who they've lost the most faith in, why they feel visible or invisible, how their work exposures and histories were interpreted by the compensation board and how such interpretations have affected their individual lives.

The families³

Work History and Exposures

¹Crossley, Cindy. Personal Interview (in person). 4 May 2014.

Condon, Sandra. Personal Interview (in person). 4 May 2014.

Ed Condon started working for GE in 1965 at the age of 16 when he was hired to work in the punch press department. When Condon turned 17, he was designated as “a set-up man” who was responsible for operating the oven.

Before he passed away, with the help of his daughter, Cindy Crossley, and wife, Sandra Condon, Ed Condon wrote a document detailing his various exposures. When he was a “set up man,” the document notes, he was responsible for an oven which was used to insulate steel punching such as water wheel generators that would be coated with varnish and baked. “He said all of the blue smoke was just coming right up, recalled his daughter, Cindy Crossley, “He tried to make his own apparatus to try and protect his breathing but it penetrated everything. The guy next to him was to grind and run the punches through dust machine so the environment was really dusty. No masks were used back then.”

During his time there, Ed Condon reported a number of people died who were working in the Formex and wire and cable department. According to his report, one of his coworkers, who was in his 40s, was running wire through the annealer oven and collapsed and died the next day of a massive heart attack. His daughter states that Ed spoke about many fellow workers who died or were sick: “He would come home and say, ‘Oh, this person has this and this person has that’ and yeah, it was always really terrifying for him to hear another colleague that had fallen ill.

Not always the same – all different types of cancer – but nonetheless, it seemed like a very high incidence of cancer.

In 1970, Ed was transferred to the Formex department located in building 24. In his notes, Ed writes that this was “probably one of the most poisonous places in GE” as “safety regulations were non-existent.” He states there were frequent fires where the smoke and fumes of the varnish drippings off the sheaves would be inhaled. Ed writes that if there was a break out on the test pod on the machine, mercury could easily land in your mouth. The document lists five main carcinogens Ed identified: vinyl chloride, polycyclic hydrocarbon (“blue smoke”), lead, ionizing radiation and benzene.

In the 2008 consultation report by Dr. Kerin (see **Fig. 9**), Kerin wrote that Ed Condon worked in the wire and cable department for 16 years and was one of the last three remaining employees to close out the department in 1980. In addition to the carcinogens listed above, Kerin states, “there was prolonged high dose exposure to asbestos fibre dust on an ongoing basis until 1981.” Moreover, according to Dr. Kerin, Personal Protective Equipment (PPE) was not

utilized until within 3-5 years of his retirement.

The diagnosis and chemical exposure

The end of the document written by Cindy Crossley and Ed Condon reads: “Dad is pleading for this case to be resolved while he is still living so he will have peace of mind for this case to be resolved while he is still living so that his death will not be in vain and that justice will be served while he is still alive to feel comfort from it.” Ed Condon passed away two years ago, five months after being diagnosed with an inoperable brain tumour (glioblastoma multiforme). His wife, Sandra Condon, recalls that they had just come back from Florida when he had his first seizure, a day before his birthday. Condon explains:

He had just came home from this big walk and he was downstairs and he looked – like I looked over at him and he looked kind of funny, like he was getting confused. And he was on the computer and I thought, maybe there's something on the computer that upset him, you know. So I said, are you okay?... and then he passed out. And that was when he really didn't ever come home from the hospital.

Once he went to the hospital, he was diagnosed and given three to nine months to live. Crossley and Condon explain that the diagnosis was particularly shocking to them as Ed was very health conscious and walked two miles a day as he knew the chemicals he worked with were dangerous. Condon asserts, “He never smoked, he never drank, he exercised all the time. He rode his bicycle twice a day and he never took his car – never, ever took his car. In the wintertime he walked, in the summer he biked. Walked on his lunches. He knew there was chemicals in his body – he knew that.”

As mentioned earlier in the chapter, Ed Condon suspected the chemicals were dangerous from the beginning of his career since his sense of smell changed, where he always had a “burning odor” and was hypersensitive to smells. Sandra Condon states he also had breathing problems in previous years: “His breathing hadn't been good for years. In the morning, he'd cough like he had smoked for 20 years. Like you know, in the bathroom, like you shouldn't be coughing like that. He'd say, 'I know it's the chemicals.’” Condon describes the dirt on his clothes:

And you've probably heard this with a lot of people who worked there but when he worked in the Wire and Cable and he'd come home from work- like, say he rides his

bicycle home from work in the summer time – his clothes were never allowed in the house. We had like a little back porch where we lived at that time – he had to hang his clothes back there. His boots were full of, of, blue and whatever else was on that. His boots and everything stayed out there. His clothes stayed out there. They had to air out at least a day, or whatever, before I'd even wash them. But he did that – like I didn't have to say to him, oh, leave your clothes out there – he knew that. He said, it's terrible. That's what they worked in!

Despite his efforts to get rid of the chemicals outside, they both say he mentioned that he always had a “varnish all over his body” and that you could smell the chemicals on his skin even if he had showered or bathed.

The compensation process: Assessment of important players

Immediately after he was diagnosed, Crossley claims Condon insisted on going to the union office to launch a claim because he already had one concerning his lungs and breathing issues so he wanted to add to it. Crossley explains:

So he went in and he looked really fantastic and the woman there, the secretary, lovely woman, she said this will be years and years, this won't be an easy battle. He said, that's okay, I'll fight it. And she felt that he had years and years by looking at him. So, dad walked in and was talking to some friends and I said, ‘he doesn't have years and years. He has a very short time to live and we need to get moving on this.’

The union then passed Ed Condon on to Dr. Kerin to take care of the medical aspect of the exposure report. Crossley states that Dr. Kerin got the necessary paperwork and assessments moving quickly, referring to him as a “driving force.” The premise of Dr. Kerin's medical and legal argument is that regarding Ed's exposure to the five carcinogens discussed:

When one compares Mr Condon's prolonged daily exposures to a highly chemicalized environment, including incomplete products of combustion, other known neurotoxic and probably brain carcinogenic agents, it is reasonable to compare Mr. Condon's exposures to those of a firefighter. In the case of firefighters, brain cancer is considered to be an occupational disease when certain minimum exposure criteria are met. In comparison to firefighters, Mr. Condon would have met or exceeded all of the minimum requirements; therefore from an occupational medicine point of view, it is not unreasonable to compare his chemical exposures to those workers (firefighters) who are covered under presumptive legislation with respect to the occupational origin of brain tumours in firefighters.

This statement was included in an addendum report filed on May 7th, 2012 (see **Fig. 10**). Sandra Condon takes up this argument and argues:

If you're a firefighter, you're covered, if you're a factory worker, you're less of a citizen. There's two levels. My husband was not stupid... If you're a factory worker you're not [treated] the *same*. Even though you work with the same chemicals that a firefighter works with. But because you're a factory worker, you're a second class citizen. *No*, he's not a second class citizen!

Condon breaks down crying and states, “His life seems to be valued less than if he were a firefighter.” When asked about the response from the union on this issue, Condon claims that their relationship has been “nonexistent” since the compensation process started. She suggests:

I think they're afraid of losing jobs, you know, the bottom line. If they stand up and say 'yes, GE did this or GE is responsible,' I think they're just so afraid that GE will come into Peterborough and say 'hey, I'm closing these doors.' So, I think they have them running scared. I really do... Because they don't want to talk. And any other union, such as for the firefighters – I mean, they're behind firefighters fighting for them.

Following her statement, Cindy Crossley asserts:

Private industry, eh? Because they know firefighters will have a job and continue to have fires and they'll need to have them. For private industry, they're afraid they're just going to pull out and go to Mexico, go to, you know. And they've already moved the part with the asbestos and they're saying that there's new and improved asbestos – there's no such thing! It's just that no one is going to fight for them – it kind of makes me feel like, are we in a country that really fights for us too, though? Like, I guess it depends: are you considered a professional or a non-professional because that seems to be how they rate the importance.

When asked about their relationship with WSIB, they claim that their case worker has changed three to four times in the past two years which they refer to as frustrating. They also note that the Minister of Labour has changed two times since they launched their claim which has been a point of frustration for them as well. Condon notes that they're “[facing] walls all the time.” In the meantime, Sandra Condon notes that her daughter has spent a great deal of time trying to organize paperwork and push for more action on her father's case – a task that Sandra states is difficult as Cindy Crossley has three kids and a full-time job.

One example she provides is a letter Cindy Crossley wrote to the Minister of Labour where she makes a case for presumptive legislation for her father and explains his health-conscious lifestyle and occupational exposures. Towards the end, she writes:

My dad was the most health conscious individual I had ever met. He exercised daily, ate well, and was a non-smoker, non-drinker. He enjoyed his life to the fullest and had a true appreciation of nature. Every day he woke up and said 'I love life' and although he accepted his fate he did not go down without a fight...My father watched many of his friends and coworkers die due to cancers that all knew were related to their job exposures. To know you would die young due to the occupation that you have chosen is just wrong and completely unacceptable...We are passionate about justice and fairness to all. We recognize that the current system has deficits and wish to promote repair through legislation and other recommended means so that other workers and their families can be supported instead of feeling like they are fighting the system or that the system has failed them.

When asked who specifically their anger is directed towards, Cindy Crossley responds:

I think it's shared, eh (turning to her mother)? Between GE and disappointed that we have to fight so hard for what is right with our government. So, yeah, it feels really sad that big business rules our world and I guess because we weren't exposed to it before, it's an eye-opener. And that, it seems like the industry is not paying the dues that they're supposed to be paying. So, in turn, the workers aren't being paid out the way they should be because this shouldn't have happened. There should be safe guards in place and then say, okay, there were safeguards? Then, in fact, they should be making it as right as they can and making sure that still, workers aren't continuing to be affected because I still hear of men in their thirties working on the high lift truck, higher in the rafters – they're dying, and this is *wrong*. It is so *wrong*. It's frustrating that they're waiting for us to wear down. That's what it is. So you give all your information, you fight all you can and then they switch your WSIB worker again and then you go to see the minister of labour and you feel like okay, you know what? I'm making a difference. And then they switch the minister of labour. And then you're starting at ground zero again. And they're waiting for all of these workers to die.

While Condon and Crossley express disillusionment with most of the players, they note the O&EHC-P and Jeff Leal, their local Liberal MPP, have been very helpful. They also mention they are now working with the Office of the Worker Advisor who they are hopeful will bring about some change yet also state they are understaffed. When asked who they have the most faith in, they both respond the coalition members are “the only ones really fighting” and that “they're doing it on their own time” and “for all the right reason.”

Condon questions whether or not going the compensation route was the right decision and states if she were to do it again, she would want to take a legal route. However, Condon notes that she followed her husband's wishes to go through the union and compensation system. Looking back she states, “This is not the way to go, it's just too frustrating.” Condon suggests that her preference would be to be able to sue the company directly as opposed to going through the compensation system as it stands, despite wanting to have faith in the system.

Both Condon and Crossley are not convinced that Ed Condon's case will be compensated as Crossley believes his case “will be a game changer because the outcome of his will change a lot of peoples in the past who have been declined. So that's where I have no doubt in my mind they'll decline dad's case because that would be far too costly for them.” Regardless, they note they will continue to work with the OWA, O&EHC-P and their local MPP to try to fight for compensation for their husband and father.

Art Carl⁴

Work History and Diagnoses

Diane Carl was a secretary in the plant's Induction Motor department and for the manager of Quality Control and foreman of the inspectors. At 16, she admits that she was not health and safety conscious:

I was 16 years old, I wasn't even concerned with safe. I know I used to go out in the shop with sandals on my feet which was not allowed but no one ever said anything. I never put safety goggles on but I had glasses I guess. I wasn't concerned with health and safety at that age, nothing happens to you. So, no that was not something I was thinking about. My husband was concerned about health and safety in the shop, you know, later years.

Diane Carl worked for GE for seven years but her husband, Art Carl, worked at General Electric for 40 years. In 2001, five years after he retired, Art was diagnosed with colon cancer. Over the nine years after being diagnosed, the cancer slowly spread throughout his body from his bowels, to his liver, lungs and eventually his brain. Diane Carl explains, “I'm just trying to keep track – you know, it's difficult because sometimes there's so much that goes on that you just get kind of numb.” From her summary of the nine years, the following health incidents were mentioned:

2001: Colon cancer surgery

2001-2002: Chemotherapy

2004: Discovered liver cancer

2005: Removed 65 per cent of his liver

2006: Another round of chemotherapy

2007: Experimental chemotherapy treatment

⁴Carl, Diane. Personal interview (in person). 31 May 2014.

2007-2009: Study drug

2009: Bladder stones removed

She continues:

By October of 2009 there were no new studies being done, there was nothing we could do. By November of 2009, he was having headaches. There was a cat scan done on his neck and head and they found that it had gone to his brain. And he lasted until January, 25th, 2010. So, that was the way it went. A busy nine years.

Despite the nine long years of health issues, Diane states that Art was relatively active until the last month before he died:

The doctors were just amazed because in the December of 2009, the ligaments let go in his shoulder – we didn't know – and they said that was a side effect of some of the chemo, some of the drugs and so they x-rayed him and the doctor told me then, he said, 'I don't know how he's living because he has no lungs left... like, I don't know how he breathed. I watched him one day, he was laying out in the recliner, and you could see his stomach going up and down; he was sleeping...So, he was really only down a month and that was really something, really something

When asked if Art thought his illnesses were related to the workplace, Diane responds:

Oh yes. He always said, like right from when they had that intake, he said. Because you know when he talked to them at the WSIB they say well, there wasn't any asbestos in this building or that building and Art said, it was all open, like it doesn't matter. And he said about they'd put a fan in the roof because like I said, there was no air-conditioning, at all, to draw out some of the hot air. And they had a big fan in the wall to bring fresh air in but in the roof was here and the intake was right over here so the air went out here and went right back in again. It never was in any parts of the building – it was all over the place. Everybody knew that.

Exposure history

According to a document (see **Fig. 11**) written on March 5, 2005 by OHCOW's Occupational Health Consultant Dr. Pravesh Jugnundan, Art Carl worked in the punch press department as an operator as well as structural steel, cleaning, grinding and punch press as a “set up.” The document also lists certain exposures during such work including noise in the punch press, chemicals (labelled as unknown), lack of gloves, welding fumes, grinding steel dust and “tollywall” (most likely “toluol”) as well as asbestos “being in the air” and used for insulation, blankets and gloves to pick up hot objects. The doctor determined the diagnosis as carcinoma

colon, “most likely due to asbestos exposure” and “noise hearing induced loss.” In greater detail, the report reads under a “discussion and opinion” heading:

You have had a prolonged high dose of exposure to asbestos dust over a 30 year period. Many of your coworkers in the same time frame as you developed Schedule IV asbestos related diseases. This would mean that they had all been exposed to prolonged heavy asbestos dust exposures. Based on the balance of probability, your lung cancer was materially contributed to or caused by the above described asbestos exposure.

In regards to other exposures, Diane states:

And they never even touched on the chemicals. Like because he washed parts and that because they built those great big motors. And before they went on inspection and they washed parts – he bought the cheapest watchbands because his watchbands would disintegrate, like, the leather bands would just disintegrate. And it was the chemicals and they didn't use any gloves or anything. Like, I know there were a lot of PCBs there, you know.

When asked if she ever saw any chemicals on his clothing, Diane responds:

Yup. His clothes were awful (laughing). Yeah, I washed his work clothes, like, did I do them every week or two weeks, save them up because they had to be washed in hot water, with more detergent just to get the grease and junk out. And he work an apron, like at work, he wore an apron. But yeah, all that stuff's absorbed in your skin – you're breathing it, but, that's the way it goes.

Diane explains that she never even considered the chemicals as cause for his cancer until it was brought up at one of the union retirees meetings by a doctor, who was most likely Dr. Kerin. Even with the asbestos exposure, Carl notes his claim was denied by the compensation board on April 16th, 2007 on the basis that he did not have “enough years” of asbestos exposure. She claims they required him to have 15 years of uninterrupted exposure to asbestos.

The WSIB summary and recommendation of the case, signed by the Claims Adjudicator for the Occupational Disease Survivor and Benefits Plan is as follows:

- You worked at GE for 44 years
- You had the potential for very low levels of asbestos exposure for 5 years and 3 months from December 1964 until March 1970
- From 1970 until 1982, you would occasionally use asbestos gloves
- There would be minimal exposure to asbestos in the gloves because they are intact compared to airborne asbestos fibres. The ball bearings are round and not sharp edges

which would result in less asbestos fibres in the air. The gloves got worn out because they got saturated with oil and not because they got holes in them.

- From 1952 until 1978, you would have about 0.54 years or 6 month of indirect asbestos exposure while walking through Wire and Cable.
- From 1970 to 1982, it is assumed that there would be minimal exposure to asbestos from working approximately 50 feet away from the Die Cast job where asbestos gloves is likely to result in low fibre release.
- The employer states that asbestos was not used in building 16

The Policy provides that entitlement can be granted if there is evidence that you had 15 years of clear and adequate occupational exposure to asbestos dust. Unfortunately, the evidence collected does not support the notion that you had the potential for significant asbestos exposure. The claim does not meet our policy requirements.

I have concluded that your work was not a significant contributing factor in the development of your disease. Therefore I am unable to allow this claim.

Diane read part of her response to the decision:

How can anyone say that five year's exposure, would not cause cancer in one person when someone else might be exposed for 10 to 15 years and never show signs? Everyone is different. When you look at the high percentage of all the GE workers who have died or are dying of cancer, it's apparent there must have been underlying causes in the buildings because pretty near every GE retiree in the paper, its donations to the cancer society. I mean, you can read one after another after another - maybe they all didn't die with cancer but usually if that's what takes a person, that's what you ask for donations to, you know. Was there any consideration made to the fact that the main thorough-fare through the plant started in the wire and cable department and when the big doors in the west end in the wire department were open in all but the winter, with the prevailing winds from west to east, the asbestos and other chemicals used there were blown throughout the plant? With negative pressure in buildings 18 and 16A south, this sucked in all the particles in the air from the wire and cable department. It used to be my belief that workman's comp was in place to protect the workers and act for them in cases of illness or injury caused by working conditions. This has proved to be untrue with the treatment of the older workers and the families have received.

She specifically questions the amount of time deemed necessary to prove causation between cancer and asbestos. She states:

Like, I knew a man who worked at Raybestos and ... made breaklinings and all this and he was a friend of ours and he said, the asbestos was so bad in there it was just white stuff flying around - he never had an asbestos related cancer. Yet, he said, there was some of the men in there that had been working in there for two years died...And he

said that's assinine that they could say that one person can be affected and somebody else won't be affected...But those were my reasons because I feel like you can't say - everybody's body is different, you know - maybe you couldn't take penicillin, you'd be allergic to it, but I could.

In her dealings with WSIB, Diane notes she was also frustrated by the representation of the plant's layout as she was familiar with it from when she was working there. She describes an interaction her husband had with one representative:

And [the WSIB representative] said there's a wall between – I think it was switchgear – and Art said, that's not a wall, that's a chain-linked fence. [She said] 'Well, if I can determine that there was never a wall there then I'm going to recommend that they accept this claim.' Well, there was never a wall there. And you know, then they said something about well, there's nobody working in there now that could say that the wall wasn't there. And he said, well, like there's my foreman is retired, you know. Well, yeah, but he doesn't work there now. Well, like, the whole place there has changed now from what it was in 1996...he said to her one time, 'have you ever been to that building?' and she said, 'no.' He said well, like, why don't you come to Peterborough and go in that building; you would understand how open it is. 'Well, we have the layout.' Well, like, that's not the same.

However, she notes that neither she nor her husband were initially hopeful the case would be compensated. “Everybody knows WSIB turns everybody down because a lot of time people give up, you know. It's like going for disability with anything – you usually have to apply more than once.”

Compensation claim process: Relationship with union

Art Carl appealed the decision. Diane Carl states:

The union told me, don't worry about it because we're appealing all of them because there were only, I think at that time they said there was only 6 or 8 people out of 700 people that they had accepted a claim for. And, but I came to found out the union didn't appeal it...Well, eventually I guess they did send in the stuff but um, they said that they dropped the ball and the stuff didn't get sent in.

When asked who specifically “dropped the ball,” Diane responds, “someone from the union office here.”

In my heart I don't think the union is terribly interested. Let's face it, a lot of these workers have died. Most of the people involved are now retired so they're no longer paying union dues. I just, I have a feeling they traded them off for something else when

they've been negotiating and I have no real basis for that but that's my feeling, you know; 'Well, they're gone anyways, so, why...' But that, to me, that isn't fair to – you know, when you work, what was it, 44 years, and pay your union dues, I don't think they should be just sloshed off without at least trying, you know. And I think all those 9 years should be worth something to them, it doesn't do him any good now but I really think that Art felt that the union just weren't pushing, you know. In the beginning he did, he took any papers down and gave them copies or whatever but later on I think he thought, I mean, they don't care.

Diane believes Art's appeal was eventually launched by the union when they realized they had forgotten to file it.

Overall compensation process and system

When asked if she thought compensation would ever come through, Diane responds:

Not really, not really. I just hope that maybe if they cause enough problems for whoever dropped the ball, that it won't happen to somebody else. Because I really feel that the union did not push it. And you know, when you're dealing with this kind of stuff, you just don't have enough left to be trying to fight government or whatever, WSIB – that isn't the most important thing in your life at that point, you know. So, they had said, we're going to do this, so you just say thank you very much and you just leave it in their hands but they didn't. They dropped it. And I don't think that was fair to the people who paid union dues all those years, I don't think that was fair.

Her husband's brother also died of cancer and worked as a welder in GE for many years. Despite the lack of air respirators, Diane Carl states that Art's brother was not compensated for his non-Hodgkin's lymphatic cancer. She notes that the Board deemed that because he had his own welding business on the side and left GE at various points, he would not qualify for any compensation.

Although she expresses her frustration with the WSIB system in regards to what she sees as occupational cancer for both her husband and his brother, Diane does note that her husband was swiftly compensated by the Board for his industrial hearing damage as a result of the noise and lack of protection in earlier years in the punch press department. While she states that Peterborough has an issue with high incidences of cancer, she regards the community as mute on the issue, aside from the coalition.

You never heard anything from anybody. Until this coalition I thought, it's just a dead deal. I thought, I guess they're just going to let it die and it's just (tsk). When they called

me, I was very happy to give them anything I had. Like, I don't expect that I'll see anything from this, really. I'm certainly not thinking, 'Oh, I'm going to get any kind of a pension' or anything but hopefully it will put whoever didn't do what they should do on notice and they'll smarten up and make sure this doesn't happen to another group of people.

Referring to all the different players, Diane states, “It just seems like, it's almost like well, we'll just wait you out and you'll die off and then we don't have to do it. It amazes me with the union because I thought the union would fight this, I really did, I thought they'd fight it. Like I said, I have a feeling that maybe they just sold them out to get something else.” When asked who she thinks that somebody might be she responds:

I don't know. But you know when they're negotiating with the company and whatever, because I mean, I know that you never get what you go after, which is a good thing because it puts all the workers out of jobs, likely. But, it's much easier to say, okay, we'll drop this fight if you give us something over here. And how bad does the company want them to get off their backs?

When asked about how she felt towards GE, Diane responds that it was a good place to work despite the health effects:

Well, GE was a good place - well, I'm going to say it was a good place to work - and even my husband didn't feel that bad against the company. In the beginning, he felt just as I did. In the beginning, I don't think any company realized what asbestos was doing to people. But, they weren't very fast to do something about it when they did find it. And look, Canada's still selling countries asbestos that they *know* isn't using it proper. But, I mean, GE was very good to us over the years. You know, he worked very hard for his income but he had very good income, good pension, he had benefits, um, but I think once they realized there was something wrong, I mean, let's face it, the company is going to protect their bottom line – that's business. Because that's what you have a union for. But anyways, for all the years he worked there for, I felt that it wasn't, it wasn't the most healthy place to work in, I guess, but we didn't know that until much later on, you know.

She continues, “Ohhh, (sighing) at some points, I think, I'll just let it go. But then I think, damn-it, he suffered too long. And I don't think that's fair, that's not fair... You know, like, he should've had a lot longer than he had but that's not the way the cards dealt so you know, you deal with it.” Speaking to how she deals with it, Diane Carl states:

Well, it's been now about four and a half years. It's difficult, it's difficult. But, it's kind of a mission now (laughs). Like, it's kind of, I'd like to see somebody – I want to say paid, and I don't mean money – for causing this, you know. And for the anguish that – and

again, like I don't know – was the union responsible? Did they drop the ball totally? And if not, was it WSIB? Because that's a lot of anguish to put people through. And you know, people dealing with the chemos and that. Like, sometimes that is god awful stuff, eh? I'd like to see somebody come to terms with that and understand, sick people, it's not right to do this to them.

Roger Fowler⁵

Work and Health History

Roger Fowler began working for GE in 1969 and left in 1993 as he was diagnosed with colorectal cancer. Fowler claims that, “within three weeks I was on the operating table.” Fowler states, “When I left for that surgery, they said I’d be back having more surgeries in 9 months, and it’s never stopped.” Fowler notes that he has had 8-9 major surgeries and 20-30 smaller surgeries since then. He states, “...and I’m having issues again with my urinary problems - I’ve got to see a specialist again because I have nerve damage from, I’ve had to have my colostomy moved oh, five times. That’s like cut from here to there (pointing down length of torso) and every couple of years I gotta go in and have hernias all fixed and I’m full of mesh and I have to re jig it all the time, yeah, every couple of years.”

Fowler also states he has headaches 24 hours of the day along with breathing issues. However, Fowler, now 68, states he feels, “Great to be alive, because I keep going to everyone else's funerals.” The funerals Fowler refers to are all of his past coworkers, many of which he states did not make it to retirement, were younger than him and died of cancer.

Exposure History

According to his entitlement review (see **Fig. 12**) that was denied in 2006, Roger worked as a fitter and assembler in the tack and weld department (Building 8), the switch gear department (Building 16), small and large motors department (Building 9), the machine and bench department and transportation equipment. The entitlement review broke down the amount of asbestos exposure by department, which the Occupational Disease and Survivor Benefits Program deemed as totalling 10 years - “8 years and 9 months of minimal potential exposure and

⁵Fowler, Roger. Personal interview (in person). 11 April 2014.

Anton-Collins, Nadia. Online Survey (email). 26 August 2014.

Dracup-Harris, Kathy. Personal interview (in person). 21 March 2014.

16 months of asbestos exposure at high levels.” The denial states that in Building 9, “The majority of asbestos had been removed by 1975. However, some gloves and blankets were used until 1982. Exposure to these products is very low as compared with an active process using asbestos. He would have to have had 5 years and 5 months minimal potential for asbestosexposure.” The claim notes that gastro-intestinal cancer in asbestos workers is accepted as an occupational disease under sections 2(1) and 15 of the Workplace Safety and Insurance Act, including esophagus, stomach, small bowel, colon and rectum cancer. Moreover, it states that claims are “favourably considered” if there is a “clear and adequate history of occupational exposure to asbestos dust” of “a continuous and repetitive nature.”

Based on the fact that the policy dictates 15 years of asbestos exposure and Fowler “only had 10 years and one month of asbestos exposure” and that “the exposure to gloves and blankets does not support he was exposed to adequate levels of friable asbestos,” the claim was denied. Fowler describes receiving the decision: “They were supposed to have the answer to that in four months. Guess when I got the answer? Two weeks before Christmas, eight months later, denied. I couldn’t even tell my wife, I was in shock. It took probably two months before I even said, oh I got turned down; I couldn’t go there! But it was two weeks before Christmas, I get this registered letter in the mail: DENIED. That’s a real slap in the face, isn’t it? When asked about his exposure to asbestos, Fowler responds:

Well, I worked in high exposure areas, asbestos areas. I walked through areas where people were high exposures. Asbestos was in the air; a day like today, that sunlight, if you had that window and the sun coming in there, you would see these fine cuttings in the air, like the asbestos was everywhere. You were breathing it all the time. When you walked in and you walked out...they first said I was supposed to have 20 years of exposure. Then they turned around and said, if you can come up with 15 years exposure, we’ll accept that and I come up with about 10 and a half but they didn’t include all the buildings I worked in because they said there was no asbestos here, or there. And yet every building I worked with and worked in, there was [asbestos] and I’ve got plenty of people who would testify as witnesses and say that the asbestos was there regardless of Hosein’s letter because he was working for GE, got paid by GE to say basically it wasn’t there. But, during my tribunal, I had a photograph of a job I was working on and there was asbestos – I’m working with asbestos in 1986 – this is a certified photograph from the GE they gave me that shows asbestos even, and I’m working with it. And they’re trying to say there wasn’t any in the building, yeah.

Fowler claims that in the transportation equipment department he was exposed to asbestos eight hours a day. However, he notes that this was one area the board did recognize as

having high exposure. The Occupational Health Consultant to OHCOW supported Fowler's claim in his report on March 1st, 2005 (see **Fig. 13**). Doctor Pravesh Jugnundan writes:

You have had prolonged high dose exposure to asbestos dust over a 20 (originally typed as 30 but corrected) year period. Many of your coworkers, working in the same time frame as you developed Schedule IV asbestos related diseases. This would mean that you all had prolonged exposure to heavy asbestos dust level. It is reasonable therefore to claim, based on the balance of probability, that it is more likely than not, the above described asbestos exposure materially contributed to or caused your colorectal cancer (3).

In his WSIAT denial letter, dated November 27th, 2008, the panel states it “does not find Dr. Jugnundan's conclusions to be persuasive. Dr. Jugnundan's opinion is premised upon a ‘prolonged high dose exposure to asbestos dust over a 30-year period. As noted above, the Panel finds that the worker had a high dose exposure to asbestos dust for 16 months” (sec. 69, 11).

Representation of the Plant

Kathy Dracup-Harris, a steering member of the O&EHC-P, claims that there was also work in building 10 that was not accounted for in his WSIAT consideration and that the asbestos levels were based on a study conducted by Dr. Hosein, a GE employee. She states that if Fowler's entire work experience was accounted for, he would easily have the 15 years of asbestos exposure required. She adds: “And so, for a person whose illness is linked to asbestos but just didn't have enough time – I mean he only had ten years of exposure, not 15, and how much exposure does it really take, right? You could get one fibre and it could start cancer, right?”

While not speaking to his individual claim, Nadia Anton-Collins notes:

What a high level of exposure may mean for an employer is completely irrelevant for a worker that is dead or dying, it takes only one fibre of asbestos to cause asbestos related illnesses. Same rationale applies to other chemicals in the work place. High exposure to chemicals in the work place may take different forms, it could be years, or continuous amount of hours in a week. The true fact of the matter is that today in 21 century workers are suffering from work related illnesses much more than before.

Like the other participants, Fowler also makes reference to the air system. He claims, “Oh, plus! Plus, there was tubes they put in the GE to draw the air out from these buildings that were totally contaminated... they started to realize that instead of taking the air out, it was bringing the chemicals in and exposing us all to everything. In reference to the map created by Dr. Hosein, Roger posits, “From one end of the building, you could see from one end to the other building, all the way through the whole plant; that drawing is a misnomer. It is not real.” However, in its denial of Fowler’s claim, the WSIAT panel notes: “The hearing panel does not ascribe any value to the alleged exposure to 'windborne' asbestos carried by the gales from the Wire and Cable department. The Hearing Panel notes that if any concentrations of significance of asbestos dust had been dispersed by wind through the plant, the Health Study would have identified a plant-wide increased likelihood of cancer-risk (2008, sec. 62, 10).” With regard to Fowler’s compensation case, steering member of the coalition, Kathy Dracup-Harris, a member of the Coalition Steering Committee, stated:

What you’ll find and what the other families you’ll interview will tell you is they were denied because they didn’t have enough exposures, similar to Roger. And the plant picture shows a solid wall between where this worker worked and the building next door and so hence, if there’s a solid wall, chemicals, according to the WSIB, can’t go through. In reality, what was there was a chain linked fence.

Fowler states that he also was exposed to chemicals in the plant and explains a particular incident:

They knocked a small building down here we were working in there (pointing at map) but that, when they knocked it down, somebody didn’t check the pipes that were in that building, they were full of gas or something, I was in the dead line, I was out cold, I woke up in the hospital. You know, somebody rushed me to the hospital and they kept me breathing again but you never know if that’s part of that problem.

When asked what kind of chemicals, Fowler replies “there wasn't a day you didn't have chemicals or you weren't cleaning something” with toluene, lead and other chemicals he could not identify. Fowler notes there were no gloves or masks used when handling the chemicals.

He claims:

After I had my cancer, I'm highly allergic to adhesive. I had a sliver removed there yesterday (pointing to bandage on his forearm) and this growth removed out of here yesterday but these tapes have to keep coming off. If they stay on, my skin comes off with the tape, literally comes off with the tape and leaves holes. I had that problem once with a stoma and the wafer that goes onto your (pointing to stomach). Well, I started getting sorer and sorer and sorer and the next thing you know, I had holes in me – it was literally eating inside me. So they had to remove my stoma, to get it away from that area – so they moved it over here, let that heal, so it's over here. And then the doctor, it took a skin specialist 8 months to get me healed.

Fowler describes the interaction he had with glue and why he thinks the incidents are related:

There were tubes of glue that come out of a freezer, then they had to go into boiling water and you only had six to eight minutes or something like that to work with that whole tube of glue, get it in, get it done with. So, there's gotta be some weird chemicals in that glue that you know, but that's what we were working with – and we didn't have special gloves, we didn't have, you didn't wear a mask, we didn't know what we were working with, it was just a glue in a tube.

Interaction with key players

When asked how his interactions were with the union Fowler replied that “there would never be a union if I had my way. Not the way they treated the workers and the way they treat them now.” Fowler then tells a story about trying to attend a union meeting after he was in the hospital for his first cancer-related surgery:

Well, I go to get in and [union member] comes out and I'll never forget this, he says, 'You can't come in, Rog'. What do you mean I can't come in? 'You can't come in.' It was a directive, came right down from Buzz Hargrove's office and probably from Buzz Hargrove. 'You haven't paid your union dues in seven weeks, he can't go to the meeting and ask questions; he hasn't paid his union dues.' I was in the hospital fighting for my fucking life and *they didn't care!* I've never forgot that.

Fowler states once his initial claim was sent from OHCOW to CAW “it just sat in the union hall, it didn't go anywhere; sat in the bottom drawer.” Fowler proceeded to hire his own paralegal to seize the documents from the union hall. Later that night, Fowler continued, he received a call from the WSIB that his case was closed because he removed his file. He asserts:

They shut me down! The union had called them and asked and they got workmen's compensation to say your case is closed, it's done. So then, I phoned the paralegal...Two hours later, the phone rang again: 'Oh, we apologize, the person that's on your case has been taken off your case. You have now a new person and your file is reopened. And that was through the union, tried to get me shut down, because I took my file out of there. And if I hadn't have taken my file out of there, a lot of these people now wouldn't get recognition because they're still sitting in a freaking drawer, in that union hall.

While Fowler does not have faith in the union, he asserts that the coalition is helping him through a fair review which, according to Dracup-Harris, is where the coalition reviews the workers' files and ensures that the work history is accurate and complete. She notes that "Roger's file for the coalition was a ground-breaking file because for the very first time we actually got to see a file that had been denied right through to the end of the WSIAT process and when we actually looked at Roger's file, similar to files we looked at after, his exposure history is underreported."

Daily Life

Fowler states that in order to deal with his emotions about the case, he became a cancer advocate as the Kawartha President of the Oncology Association. He also explains he is a lacrosse coach and woodworker which both help him deal with his anger and pain. In reference to lacrosse, Fowler states:

I got back at it to take my mind other places – when I'm in there, I'm in that other world, I'm not sick – I am sick but I'm not sick. Even with the headaches, I don't know them, I can deal with it, yeah. But when I get talking about certain things like that, I can't go there. I start to cry. I just can't go there; it's too difficult. But you have to go there? You have to deal with it. Because it's real. Because if you keep it in here, that's like being angry at everybody else but not telling somebody. That's worse.

When asked what Fowler hopes the outcome will be, he responds:

I actually hope I can win this or help part of this will help other people get what's coming to them. Because I'm still alive. A lot of these other people, that I worked with aren't and their families are working for them but they can't say where I worked here or what I worked, you know.

Morris Hughes

Work and Health History

Morris Hughes began working for GE in 1948 when he was in grade 11. Hughes worked in the Wire and Cable department when he first started at the plant and later became the manager at maintenance and construction. After 43 years working at GE, he retired in 1990. Twelve years later, Morris Hughes was out cutting the grass when his wife states that he came into the house and he couldn't breathe. Aileen Hughes took her husband to the doctor, where they began running tests. She explains, "They got him an x-ray and the doctor come out and he said, Aileen, does Morris smoke? I said good god he's never smoked a cigarette in his life. And he said, well there's something going on." They originally diagnosed Morris with pneumonia but the doctors decided to perform an MRI just to be sure.

The next diagnosis Aileen heard was, "I'm sorry Mrs. Hughes, he said, Morris has got three months.' 'I said, I beg your pardon?' 'He says, he's got three months, he says, his lungs is full of cancer.' My god you got to be kidding, you know." Hughes recalls the doctor came in and performed a surgery where the blood is drained out of the lungs several times. In the process, the doctor said that he received consent from her husband to take a sample of the cancer. She states:

So he called me the next morning and he said, 'Mrs. Hughes, he said, Morris has mesothelioma cancer and he said the only cancer that is caused from that is asbestos.' He said, where did he work?' So I told him GE. So he said, 'Okay, he said, you've got Dr. [identity protected],' and I said yeah we do, we went to him for years. He said well, he's the company doctor. I thought oh, well this is going to be great. So anyways he said I'm going to talk to Dr. Neville.

Aileen Hughes then received a call from the company doctor. She describes the conversation:

"[the doctor] went back into GE and went over to the personnel office, pulled Morris' files of every place he had worked and he called me and he said, 'You know, I am the company doctor but I'm also Morris' doctor. Now, he said, I have to make up my mind – do I hold more loyalty to GE or to Morris?' I said, well, we've gone to you enough years, I sure hope you make the

right decision.”

Interaction with key players

Hughes states the next correspondence she received was a letter from workmen's compensation that his illness had been reported by the company doctor and that they would be sending a representative from WSIB. A caseworker and a nurse were sent to care for Morris and Aileen Hughes. Hughes claims that they were really “good to her” and “they seen that I had everything that I could possibly need to work with. They sent morphine from Toronto every day in the syringes and I gave him morphine every 4 hours.” While she appreciated their support she claims she had suspicions that the board had other motives: “I hate to think it but I think at this point, they were trying to pacify us so that we would be quiet, not say anything. So needless to say I thought well, I got to have some help, I can't handle all this alone, you know.”

While the doctor had originally given Morris Hughes three months to live, she explains “he really defied them by lasting 15 months.” By the end, Hughes notes, “Well then the cancer spread and went into his spine and he had lost the use of his arms – it was in the bowel, it was in his kidneys, it just, it just went like fire. You know, there'd be big lumps of it just everywhere on his whole body.” She shows a picture of her husband in a family picture a month before he passed away and points out the visible lumps in his stomach – “that's the cancer.” Her mother also passed away of cancer and had worked in the plant for over 20 years, which Hughes suspects is a result of her work environment at GE.

Exposure to asbestos

As mentioned earlier, after her husband passed away Aileen Hughes did the opposite of keeping quiet, and, instead, helped instigate the intake clinic with the help of the union as she began worrying about the fate of other workers exposed to asbestos. She describes his exposure

to asbestos:

He went into the wire department and that's where they had what they called the braiders, and these braiders put this – it was like a cloth coating on the kettle and the ironing cords and all of that stuff. Well this machine it fluffed up the asbestos and wound it on the wire and then this other one pulled the coating over it. Well, he did not directly work on that machine but when that machine broke down, he had to fix it so he said you had to go in and take a little broom and clean all this asbestos fluff off of it before you could get in to work on it. So I guess in the process of doing this, it brought the fibres up which they breathe in and it takes asbestos 30 years to break through. So, he was there for 42 years, 43 years so I mean – then he was out 12 year but like Morris never smoked, he never drank or you know, so he was a healthy, healthy man...He was everywhere see because he was on maintenance repair and machinery and there was 65 acres there under their roof and he worked repairing machines and then he worked in the machine and large generator for a while where they used to drill the big covers for the generators and those covers were asbestos so it made them strong like for the covers and they used to drill them to put the bolts through and that stuff used to fly up.

“I do swear that the company knew it was happening,” she continued, “but never done anything about it.” When asked why she had this suspicion, she responds that all of a sudden the company closed down the Wire department and she suspects it is because of all of the men who were dying who worked in there. She notes the diagnosis they were given was usually either that they died of a heart attack or pneumonia just like her husband. It was then her husband's responsibility to help close down the building where asbestos was rampant. She claims, “It was up to him to go in and take all the machinery out and clean out this building. “Even up on the rafters,” he said. “Solid asbestos that deep.”

As mentioned earlier, Hughes claims that she knows workers whose job it was to clean out such areas and collect asbestos, where the company would then sell it to the workers. Hughes now suffers from COPD, bronchitis and asthma and has to inject infusions in her stomach every other day to keep up her immune system. She now suspects that it could be a result of secondary asbestos exposure that her husband brought home. She asserts:

Well, see, we were never told anything! We were never told look out for asbestos. He'd come home from work, his clothes would be hanging with chunks of this darn stuff and of course at this time, there was no automatic washing machine – you had those old round tubs with the ringer and you done the laundry and you put it through the ringers

then you put it into a rinse tub and brought it back through the ringer and hung it out and like I never thought anything of it.

Hughes has been going to the same doctor for 25 years, the same doctor who diagnosed Morris with mesothelioma. She recalls that in a recent visit “I said to him ... do you suppose my lung problem would be part of doing laundry and inhaling the junk you know? And he just kind of looked at me and smiled and put his head down – I think they have made him refuse to say anything more, I really do, I really do. I said to him, thanks for the answer and he just looked at me and laughed – he's such a nice man. But he has been good to me.” When asked if there are any tests she can take, she responds: “They won't do it. You know what, they won't even do an autopsy for people in Peterborough that die. Anybody that's suspected of mesothelioma.”

Hughes follows up her statement with a story of one woman whose husband died after working in GE and was diagnosed with bronchitis. When he died, Hughes told her to get an autopsy and she was told they were not allowed to do one. However, she thinks Dr. Kerin is the one who made arrangements for his body to be picked up and taken to Toronto where they discovered he had mesothelioma. Hughes asserts she is not aware of whether or not she was compensated but knows at least one woman who was compensated as her husband had mesothelioma as well. When asked how she would feel if she was not compensated, Hughes responds, “I'd be mad. I figure he gave all those years there; he worked hard, he never complained he never missed a day's work...I figure we sacrificed – in the middle of the night the phone would ring and he would have to go. I figure we earned anything that I was given.”

As her husband was paid well, Hughes claims the compensation was rated at 100% and that she receives \$2500 a month from workmen's compensation as part of his pension. Originally, she was given two options: to take her husband's pension or to pursue the board's litigation against the company. She notes, “They're supposed to have some kind of litigation going with these asbestos companies like Johns-Mansville and these different places. But like, I don't know where they think they're going to sue anybody because everybody's gone bankrupt.” Following the advice of her WSIB caseworker, she decided to choose the pension option.

Hughes explains that she puts the money from pension aside. “And I take the \$2500 – I could live without it – but if I see somebody in need, that's what I do with it. Somebody's got a sick baby or somebody's got somebody sick, that's what I use that money for – I figure it was

given to me when I needed it and could really use it so now, pass it on.”

Conclusion

The above case studies reveal the alarming extent of the workers’ exposures to asbestos and other various chemicals through the examination of their work history and relevant reports by WSIB, OHCOW and WSIAT. While the outcome of the compensation process was not the same for all of the workers studied, their stories reveal overall patterns of overwhelming asbestos exposure, constant interaction with chemicals, a lack of personal protective equipment and a lack of awareness about the potentially devastating effect of all of these factors. All of these factors would ideally be addressed or thwarted by the company and management although as the testimonials assert, they largely shirked responsibility for the health of the workforce. Although the participants largely agreed upon a certain negligence on behalf of the company, there were varied reactions to how their case was dealt with, which is symptomatic of a case by case adjudication basis to a certain extent. The reaction by the workers towards the key players differed based on the factors such as: the extent of their asbestos exposure, the precedent set by past cases and medical reports, the burden of proof available, the treatment of their exposure data by the board, the involvement and burden of proof provided by physicians, who the physicians worked for (i.e. OHCOW, GE or own practice) – all of which combine to determine the outcome of their case. The next chapter seeks to reconcile the tension between the key players in order to move on to Chapter 6 which analyzes the above factors in relation to potential external ones, in an effort to identify recommendations.

Chapter 5: Key Players and the Community

*The doctor says both lungs are gone
There ain't no way to shake it
But I can't live without the job
Somehow I've got to take it*

I'm going to go to work on Monday one more time.

-Si Kahn

The purpose of Chapter 5 is to unpack some of the conflict and tension expressed between the various players and to consider the workers' testimonials within these discussions. Prior to this however, one of the most important players – the community – is discussed in relation to air, water and soil pollution, the manufacturing industry, and the high incidence of cancer in the city. More importantly, the relative silence of the community on such matters is considered, employing insight from former workers and the community coalition. OHCOW, CAW and the O&EHC-P are each discussed exclusively using testimonials by all three key players. This discussion is intended to clarify, justify and identify some of the issues mentioned by workers in Chapter 4.

Environmental hazards: 'Another Love Canal'

In addition to personal concerns, all of the workers expressed concern about potential environmental hazards in Peterborough, for example how GE disposed of the chemicals used in the plant. Furthermore, their testimonials revealed a large concern about the high incidence of cancer in the city, which is highlighted by their statements as well as community studies.

Air, Water and Soil Pollution

Aileen Hughes is one of the workers who voices concern over the company's effect on the environment. She states that once her husband was diagnosed with mesothelioma, she told him to document all of the potential hazards there could be for other workers and the community at large. Hughes describes one hazard her husband observed:

They used to have a great big booring mill there and it was like a place where they put the machines down into to run the test. Well then they quit testing so they took that big – well, it would be a monstrous hole, probably bigger around than this house and they had

that hole down in there – well at that time they were getting in trouble for PCBs, they filled barrels with PCBS, put them down there and pour cement over them (2014).

According to Hughes, her husband quickly reported this practice to the local union representative, Keith Riel, and the matter was addressed within a week's time. She explains that she found out from her younger son who worked in the Punch Press department and Motor Generator: "He phoned me one day from work and he said 'Mum, what kind of crap have you stirred up today?' And I said 'Why Bill?' He said 'Well I'm over in number 10 building and they're in there with masks and suits and boots and they look like people from Mars' and he said, 'They're drilling all the floor' and I said 'Oh, I guess they're looking for all the barrels of PCBS.'" (Ibid). Hughes also notes that her husband's investigation revealed large health concerns for the public as well. She states:

Then these big, these great big brown insulators on the electrical post you see, and they were full of PCBS. Well, when they'd start to leak, they'd take them out the other side of Peterborough by what we call shoe city, I don't know what it is out there now and there's a big old swamp out there. And they sent these leaking insulators out in that place in the swamp. Well all that crap drained right into the swamps so it contaminated the water everywhere. Hughes states that her husband was tentative to come forward at first but then...he said you know, maybe I shouldn't do this because he said it was my life and he said they were good to me but, he said, it's *killing* the people (Ibid).

According to Hughes, when you look at the 65 acres of the plant, any trees or wildlife around the property have died. She adds, "So I mean what did it do to the people that was breathing this stuff in?" (Ibid).

Other participants also report the practice of dumping PCBs into the local lakes. For example, one anonymous former worker claims that there used to be an old slaughterhouse close to the plant and that "...when they'd slaughter, the river used to run red with blood; gone right down past the cemetery with all the slaughter of the stuff. The fish were big in there in those days, muskies and all that but the other problem is the fish had sores all on them. And the other days when it wasn't running red with blood, there was oil on top of the water and they were dropping PBCs [from GE]. And there's a pipe that come out and they were running it all out to the lake" (2014). The participant states they also saw a night foreman take a barrel that looked like nitric acid and dumped it into the parking lot and rinsed it into the drains. He adds:

Did you ever hear about the love canal? Well, Peterborough is another love canal. It's got so many dump sites and stuff around that are so contaminated with PCBs and

chemicals and stuff like that. There used to be a dump site right here at Monaghan across from the centre down here. And there's St. Peter's Cemetery, at the corner of Monaghan, there's a dump site right there, leeching all down through the town. But they dump PCBs down here into the water (Ibid).

In a 2011 article Zach Ruiter and Liat Mandel reference “one of the many environmental scandals” of GE:

GE tried selling land adjacent to their site for use as a hockey arena but it was found so contaminated by PCBs, GE paved it over. GE actively drained PCBs into Little Lake and the Otonabee River from the 1930s to the 1970s. GE regularly mixed the PCBs with solvents and oils and poured them into the sewer. PCB-laden solvents were also sprayed on the dirt parking lot around the facility (2011).

Sera Weafer-Schiarizza wrote a thesis at Trent University in Peterborough called the “Review of Occupational and Environmental Health Studies in Peterborough.” Weafer-Schiarizza's study was designed to examine the relationship between Peterborough's higher incidences of breast cancer and respiratory disease (compared to other Ontario cities) and the presence of environmental contaminants (e.g. PCBs, PAHs, heavy metals and pesticides). The author notes, “Little Lake is a central feature of Peterborough, and in addition to its economic and recreational advantages, it has been used as a waste disposal for many industries in the past” (2009, 1). Such contamination was investigated by Trent University studies and the Environment Ministry which found an increased level of metals and contaminants (e.g. copper, lead and PCBs) in the Peterborough section of the Otonabee River (Ibid). The levels were higher downstream, suggesting Peterborough as its source (Ibid). Moreover, the studies found the potential primary active source is the overflow from Rink Street and Park Street sewer systems where the contamination of sediments by PCBs can be traced as far as 80 kilometres downstream to Rice Lake (Ibid, 2). Looking at the Hiawatha First Nations communities, Sera Weafer-Schiarizza concludes that their increased reliance and use of the water puts them at greater risk and that “the contaminants present in their bodies and environment can be traced back to Peterborough sources with greater certainty” (Ibid, 25). As a result, she asserts further water, soil and air analyses need to be intensified. One anonymous participant refers to the First Nations community as well, stating that their cancer rates are undeniably linked to large industry pollution, such as that from GE.

In addition to concern about water pollution, some participants also raise the issue of air

pollution from the chemicals used in the plant. For example, John Ball describes one incident in particular:

Hundreds of people die out of GE in Peterborough. How many more out of the general population are affected by what we did there? We might never know. I'll give you an example. A ball game was going down on the south end, kids; and a mother had her 8 year old boy there and all of a sudden he start coughing up blood, choking. And she said that god awful smell coming over - it was GE, in the armature, they had taken a big baffle that goes down into this tank that had blown up - like a half moon shaped baffle, they put it in there so they didn't have to fill the tank... and it had sprung a leak and the epoxy had drained in there so they tried to get rid of it, the dump wouldn't take it: gotta get that stuff out of there, it's contaminated. So some bright guy, engineer says, well put it in the oven and that will solidify it and then we can break it up and get rid of the steel. Anyways, they put it in the oven and of course the damn thing overheated and great big fumes - they had to call the fire department again because the smoke was coming out of the building and drifted down into the south end and this little boy started choking. She tried to sue the GE for damages, she got nowhere. An individual trying to sue GE? Forget it. But that was a glaring example of what our activities might have and probably were doing in Peterborough.

In an article by John T. Ryan called, "The Smells of Peterborough," the author writes:

This sounds like an awful topic, but I guarantee that if you ask people who were around in the 50s and 60s, they would agree that there were smells that were unique to Peterborough. Nine out of 10 would first mention the sweet scent emanating from the Quaker Oats Company. If they were in a foul mood, they'd mention the pungent stench coming from Canada Packers on George Street. My father and many of my friends' fathers, worked at the Canadian General Electric Plant and they all had the same oily, metallic odour (2000).

As a former real estate agent and GE worker, Diane Carl states that the proximity of houses to the plant would depreciate their value due to their smell and appearance: "Certainly, the same house in another area would be worth a lot more money. Now, I don't know if there's smells from it now that there used to be - I doubt it because it's been cleaned up and all of that too because there was, years ago, there was stuff in the air. You know, the houses always looked dingy" (2014).

Impact on Community

In general, the participants voiced a concern about the relationship between the historical presence of manufacturing and the subsequent air, soil and water pollution and the exponential

cancer rates present in Peterborough. Their concern about the cancer rate alone is supported by a study conducted by The Peterborough County-Clinic Health Unit (PCCHU) revealing the city has more cases of lung cancer and melanoma than the rest of the province (Riva, 2012). The report, “Summary of Selected Cancers in Peterborough County-City” was written by epidemiologist Andrew R. Kurc and was based on records from the Ontario Cancer Registry and the Canadian Community Health Survey. This report built upon another study conducted in 2010 by the PCCHU called the “Community Assessment Report” which also spoke to the alarming cancer rate in the city compared to other cities of its size in Ontario. The 2012 report documented certain key findings such as: relative to Ontario, Peterborough males had significantly higher incidence rates of lung cancer (6.5%) and melanoma (24.4%), compared to the province, Peterborough women experienced significantly higher rates of lung cancer (21.9%), melanoma (21.5%), and uterine cancers (14.7%), incidence rates of all cancers combined has been increasing since 1986 in Peterborough in both males and females and lung cancer mortality rates were significantly in Peterborough men (6.6%) and women (14.9%) relative to Ontario (PCCHU, 5). However, the report did not address environmental factors specific to the manufacturing industry which could contribute to such high incidence rates. Instead, they only looked at environmental tobacco smoke as well as other individual factors such as tobacco use, sun exposure, alcohol nutrition and physical activity (Ibid, 61).

Some of the participants also reference the high cost of cleaning up the property. According to Dr. Carver, “If you talk to other people, they would say there's no way that GE could ever close down the plant because the site is so contaminated, it would cost them a fortune. With today's regulations, they would have to put up a huge amount of money to clean up the site” (2014). Aileen Hughes echoes the same sentiment regarding the financial cost: “It'll never close, it will never close because it's in their agreement contract thing, they've got to put the land back to the original and they could afford never do that. You know, there's so much contamination they could never afford to put it back and that's 65 acres under their roof I mean,

that's a big plant. And it was the mother plant of all GE plants” (2014). Moreover, Hughes mentions the devastating effect a shut-down would have on the community’s economy.

‘Don’t Rock the Boat’

Despite the potential effect on the community, many of the participants note that the community is fairly mute on issues related to GE because of its economic relevancy. Sandra Condon states, “You don’t get a whole lot of support, I don’t think. It’s kind of like, it’s not their fight, you know, they have very busy lives and it’s, no, it’s not their fight” (2014). Her daughter, Cindy Crossley, believes the lack of response is “fear-based” and that, “GE still has a lot of workers out there too and that they still have a husband who works there or they have a son that works there, or a daughter that works there. Or they know of someone who desperately needs that job” (2014).

The community coalition (O&EHC-P) also observes a lack of response from the community and also makes reference to the economic significance of the plant in the city.

Kathy Dracup-Harris states that “There is a denial on the community’s part to accept that workers are getting sick and not being taken care of by their employer or by their union. I think people, to a large degree, are burying their heads or, you know, GE is a huge contributor to this community financially so I think that results in people who have more power being less likely to take a position” (2014). Heather Brooks-Hill reinforces her sentiment and states:

It’s a catch 22 for people who live here because historically GE owned this city and was the biggest employer and it used to be 5000 and now it’s 1500 or something. But the historical, like the generational loyalty to GE regardless of personal loss is really high and it’s around job loss because if GE left, the city would have collapsed, if GE left now, lots of other businesses would, like there’s a lot of people still (Ibid).

Her husband, Dr. Carver also explains that from the conversation he has had with his neighbours in the community, GE was quite good at supporting families in providing jobs which he asserts is “part of this benevolent employer image that they cultivate” (2014). He states, “There was also this whole attitude about ‘don’t rock the boat because I mean, it’s not just you that’s going to

suffer.’ You know, I’m the guy that works beside you and I’m willing to put up with this nonsense because I need to feed my family, so you keep quiet. Because this terrible feeling that GE would just close down the plant” (2014). As Carver mentions, many of the participants who formerly worked there say they do not hope the plant shuts down as it would be devastating for the community. Instead, most of them say that they want it “cleaned-up.”

In a recent article in *The Peterborough Examiner*, it is reported that approximately 10 per cent of the buildings, mostly peripheral ones, will be demolished this summer and replaced with green space and additional parking (Kovach, 2014). Aileen Hughes gives credence to this report as she describes the razing of a building last week where they put plastic along the fence and were tearing down a building and throwing down bags (2014). She claims nearby residents on Albert Street called the fire department because of the debris, some of which she would speculate is asbestos, so the job was quickly shut down (Ibid).

Culpability

As the case studies reveal, the compensation system is very complex, especially in terms of the roles of each player in the process. In the Peterborough case, there appears to be tension between certain players around the intention, application and breadth associated with their roles as well as the role of science, law and medicine in their processes. The main players that are discussed are CAW, OHCOW and the O&EHC-P as they were available for an interview and were often mentioned by the participants as being central to the process.

OHCOW’s intended and applied role

The main issues that were brought up when discussing OHCOW’s participation was the intake clinic process, the physician’s assessments of occupational disease (most notably, Dr. Noel Kerin), the Sonya Lal report conducted by OHCOW, and the role of medicine and law in the consideration of each claim.

Brenda Parsons, former OHCOW representative on the Peterborough file, states that Dr. Kerin’s role was to handle any medical questions at the intake clinic itself and then to head the subsequent research and investigation. She notes, “As a medical professional, he takes an

objective role and advocacy was not handled by the clinic or by Dr. Kerin” (2014). Building on that process, CAW’s Sari Sarainen states that as with any compensation file, the union worked in collaboration with the OHCOW clinic to see the potential range of exposures and to build a profile of the worker’s exposure to each particular hazard. CAW’s Nadia Anton-Collins and Nancy Clark argued that “[a]s a result of the medical expertise and knowledge in work related chemical exposure injuries, OHCOW was instrumental in the process of establishing claims, recognizing the cluster of illnesses” and that their reports provided strong evidence to make causal links between illnesses and the workplace (2014).

Heather Brooks-Hill stated that Dr. Kerin's “alarming” presentation for the PCCHU about the cancer rate at GE was what pushed her to get involved in the coalition. She notes, “He felt an obligation to let the health unit know and I believe he did it of his own [volition]. Nobody asked him to do it. He felt a responsibility to share with the public health department and there are many people there” (2014). As a former palliative care professional, Brooks-Hill notes that “Without being a scientist, I’m not a doctor, but just the numbers of people sick and deaths that he reported, like the data he reported, it was obvious to me that this would be a city in deep bereavement” (Ibid).

Overall, like the coalition, the former workers and their families expressed positive sentiments towards the work of Dr. Kerin in advancing their claims, as revealed in the case studies. In response, Parsons states:

I’m happy to hear that the workers found OHCOW to be a key player. I know that when we first met, there was a great deal of distrust with the union, the employer and the WSIB. No one wanted to take on this huge undertaking. Everyone knew it was a real issue, but getting things off the ground was almost impossible. I am glad to have been a key catalyst that got things rolling and got them heard (2014).

Nick DeCarlo, former CAW representative, who helped form the coalition asserts that while Dr. Kerin was a huge advocate for the workers, he believes he blurred the lines between his political and scientific role. DeCarlo asserts that Dr. Kerin made the compensation claims “a huge political issue on his own and that he made some very strong statements without providing the medical evidence [to back up his claims].” DeCarlo states that this was an issue as it put the union in an awkward position to defend them politically since they did not have the evidence from Dr. Kerin to back up their claims to the board, despite their validity in many cases. However, he concedes that the cases were being adjudicated at a time when the clinical system

was under financial pressure and that, consequently, they had to monitor their actions which could have influenced the scope of Dr. Kerin's research.

While he was not completely content with Dr. Kerin's approach, DeCarlo notes that OHCOW's Sonya Lal produced a very admirable report in 2004 in an attempt to reflect exposure ratings. Sonya Lal is a clinical occupational hygienist and health and safety specialist with OHCOW in Toronto, with a background in occupational health ("Our Instructors," 2014). Unfortunately, Sonya Lal's report did not hold substantial weight in the compensation hearings according to both the workers and DeCarlo and Dr. Carver due to its qualitative nature.

DeCarlo notes:

I feel badly for her, she really was devoted to that. The thing that you have to do to establish a claim is you can't just describe what happened, you actually have to do some estimates of the degree of exposure and she wasn't willing to do that. But that's really what a hygienist has to provide, is a core for a claim. So you have to say, you know, this worker was likely to have been exposed to this level of exposure because then you can say, this amount of level of exposure is more likely than not to have caused it. But if you just say, they worked this much with asbestos, they did this with that, but you don't do that next step? So what she did is she put a huge amount of work into describing the amount of detail that the people were doing but she didn't take the next step. And because she didn't take the next step, we didn't have evidence we could use in a claim... I'm sure she's totally frustrated and you know, she put a lot of work into it but she is an example of someone who has a technical view of the hygiene and the best doctors and hygienists understand politics. And though they don't misrepresent science; they interpret science. Also, no science is a neutral thing. So, it depends on how you choose to interpret it. And what you need in the support of the claims is you need somebody who will take the interpretation and use certain principles to do that. If you have somebody that's more about the technical things then you don't get very far. So that's what I think happened to her report - it got buried because we couldn't use it, for both reasons (2014).

DeCarlo also touches on the balance between the role of medicine and the legal process:

Well, the first issue is what the role of medicine is in the process. And in the compensation system, decisions similar to tort law, decisions and cases are made based on requirements of law and not the requirements of medicine. So, medicine is one discipline and medicine is part of the evaluation but the legal arguments go beyond medicine. So, for example, in a criminal case you have to have certainty, or relative certainty – where in a legal and a compensation case, you just have to establish that more likely than not, this contributed to as opposed to caused. So there's a whole issue around causation and there's a whole issue around degree of exposure, degree of cause, that, the degree of, I'm trying to think of the words, the significance of the cause to contribute, the contribution to the cause – so it's not a medical definition, it's a legal definition (Ibid).

New health report: The politics of science

Despite these potential shortcomings, like DeCarlo, Dr. Carver asserts the Sonya Lal report was a “good beginning for trying to do a proper mandate.” Given all the testimonials about the inadequacies of the available health reports, both DeCarlo and Dr. Carver were asked what a proper report would look like and how it might be initiated. Dr. Carver suggests that what is needed is a “proper mapping of exposures and that has to be done before all these people die because the plant is not the same as the plant 20 years ago, or 40 years ago” (2014). He quantifies what he means by a proper mapping by suggesting the acceptable methodology is undertaking a dual mapping approach where you assess body mapping (e.g. what kind of cancer you have, where the tumours are, what kind they are) as well as a workplace exposure mapping (e.g. how long did you work in which building and what materials were you using). Dr. Carver advocates for a case-by-case exposure report as opposed to a general workplace approach. (Ibid) Dr. Carver estimates this project could cost a minimum of \$25 000, especially if undertaken by PhD students who could receive further grants. He estimates it would take approximately 5 years if you had to collect the data. As for who would produce this money otherwise, Dr. Carver states:

What one would like to see is of course the unions being far more proactive in you know, commissioning these studies, actually giving grants to scientists to do these studies, to counteract the inertia of the WSIB. There's no incentive it seems because WSIB's funded through the companies. There doesn't seem to be any incentive for WSIB to become proactive around finding additional reasons to give out compensation. So, how do you counter that when you have to ask [there] to be, somebody on behalf of the workers, actually pushing the envelope on the science and insisting that they update their criteria for granting compensation (Ibid).

Nick DeCarlo suggests one of the central issues is who is going to pay for the studies as it raises many questions: “If you're going to pay for the reports, somebody has to pay - who's paying? What conditions will they pay? What would the terms of the report be? So, that's your dilemma, that's the problem. That's why workers are oppressed because they don't have the power. So, you have to actually develop your own systems of power” (2014). DeCarlo suggests the issue should

become more political than scientific as science can be misinterpreted and misrepresented. He notes:

It's not a report that has to happen. It's the workers have to taken on the issue. Because science can always be manipulated. So, if you don't have a scientist that supports what you're trying to do, you can't rely on a scientist. And there's a film where Jim Brophy, he says, you gotta trust your gut instincts, you gotta know if something is wrong, you gotta fight it. So what happens is the workers say, sorry, there's something wrong here, it's gotta change – the science comes along later, right? But if you rely on the science, you'll never get anywhere because there's always a way of asking the next question. 'This wasn't done properly, bring in somebody else. Well, that wasn't done properly'. So they say, well you still haven't examined this, there's this possibility and 20 or 30 years later you're still talking about the science of it. So that's the problem with trying to rely on science, quote on quote. You need scientists to help you but they have to be scientists who are trying to understand what your situation is (Ibid).

A positive initiative, according to DeCarlo, was developed in Hamilton by John Oudyk who, DeCarlo notes, is “an example of a hygienist who understands what's really going on” as he has developed computer program software to conduct surveys based on an international scientific standard which he asserts “gives you some ammunition” (Ibid). DeCarlo notes that such a project could be undertaken by the workers themselves as a “barefoot doctor kind of idea” to educate the workers on what's happening to them and to use the findings to organize. “You organize among the families,” DeCarlo stated. “You organize among the workers, you know, and that's how you really build a fight. The science will come along later” (Ibid).

CAW/Unifor's intended and applied role

In addition to OHCOW's role, DeCarlo notes that there is “a whole history of problems in this process.” Some of the problems, he outlined, were specific to the individual compensation file and some were overall systemic issues with the compensation system. He states, “But the thing about this particular project was that there were a number of problems, both at the local level and in the OHCOW's clinic itself and in the community that were very complicated, and which being in Toronto was not the easiest thing to deal with. So there's probably a lot of bitterness over those issues” (2014).

As DeCarlo suggests, there appears to be a lot of bitterness coming from the workers as well as the community coalition assisting the workers. The issues seem to revolve around the

responsibility of the local representative, the claims and appeals process and the amount of power the union has to dictate decisions given limited science and causation evidence to support the workers' claims.

The community coalition, most notably Kathy Dracup-Harris, John Ball, Heather Brooks-Hill and Marion Burton are outspoken about their disappointment with the union's role in the compensation claims. The members assert they have heard similar testimonials regarding workers' discontentment with the union. Summarizing the workers' responses, Kathy Dracup-Harris notes:

I think the best way to describe the workers is that they feel abandoned and abused by the very systems that were put in place to support them. I think they feel even more abandoned and abused by the union than they do some of the bigger systems because they had expectations of the union, they paid union dues, they knew those people, right? There was a personal relationship, it wasn't just a big system. And so, abandoned and abused and they're sick. And when you're sick it's very difficult to navigate at the best of times, never mind, I mean if you look at these workers, they're CAW, there's OWA, there's WSIB, WSIAT, they don't even know what those acronyms stand for and then never mind how to advocate. Until we started to do the fair review process [where the coalition overlooks their legal file and discusses its impartiality], most of them had never seen their WSIB file before (2014).

She summarizes the important questions raised by the coalition:

If there was exposures and if people worked there and if they had people in the union that were supposed to help that, why wasn't it happening? And so, was it because there was fear – if we do this we're going to lose jobs, right? Jobs will go. Is it because indirectly GE through back door put pressure on the union to not work to move these claims forward? Was it lack of knowledge? Lack of ability? (Ibid).

According to John Ball, he was particularly not impressed by the way the files were managed:

The agreement was that when we got the files, the questionnaire was filled out by over 700 people at the intake clinic and that file, that whole document was to go into the triage and then directly go to OHCOW in Toronto who would copy them and send a copy back to the union because the union was the legal representative, bargaining representative. It didn't happen that way. Somehow they managed to seize all the documents at the clinic, I didn't know this, I mean they probably had me in the clinic because I'd just start picking up and beating them. This is not what we had agreed to, those files were to go directly to OHCOW to be checked out. The union took them back...I knew what was going to happen and it has. They lost files, one guy had mesothelioma, his file disappeared for two years. He's dead now. Like, you know (2014)?

Regarding this process, Marion Burton, President of the Peterborough Labour Council, states:

OHCOW is an arm under the ministry of labour and they do the medical evaluation of the document on any file that comes in and build up a medical piece. Then CAW, they took control of all the files that came out of that intake clinic and their workplace of course and so there would be reports from OHCOW back to CAW, because they had legal representation responsibilities for each worker. You know, then the file would go to WSIB and if there was a denial, it was CAW's responsibility to prepare the appeal... they didn't, it's like they sat on files and it just gets really confusing (2014).

According to the coalition members, they tried to collaborate with the union by organizing a summit in 2012 for all the different players to meet. She states, "We tried that collaborative process and we get stopped a lot of times by the union. I think the union feels great shame. I think that legally, they have failed to represent workers but the collaborative effort, because we're a coalition and not a government agency, they don't give us the same credibility and it's important, you know this, we've been told, you're not legal advocates" (Ibid). However, in addition to potentially protecting jobs, Kathy Dracup-Harris does concede that the inability of the union may be constrained due to other limiting factors: "I believe that separate from deliberately sabotaging workers' efforts to have a fair review, fair compensation, I think that the ability of the union to represent these workers in the complexity of illness and exposures is unrealistic to even expect" (Ibid).

O&EHC-P

As discussed earlier, the former workers and their families express a positive feelings and thoughts with regard to the coalition. Their positive response to the coalition was specifically related to their "fair claims" process initiative which involves reviewing claimants' files and highlighting unfair decisions. Moreover, the participants stressed the genuine nature of their interactions with the coalition, especially compared to other key players.

While the coalition has been well received by the workers, the other key players expressed a degree of concern regarding the intention of their role. CAW's Sarainen asserts that she is not clear on their intended role, specifically in regards to reviewing the former workers' cases (2014). Sarainen refers to the "Breaking the Log Jam Summit" initiated by the coalition to bring all the key players to discuss the issue and states:

We had a discussion on where the issues were. I didn't quite know what the goal of the community coalition was and so that gave me some clarity of the role of the coalition was and it became apparent that the coalition felt left out on the progress of the claim files

which I'm not quite sure what their role is in that, but they felt they needed to have detailed information on the progress of claims file (Ibid).

She notes that after the summit it was decided there would be value in having smaller working group meetings to keep the lines of communication open. When asked why the coalition would believe there is a “conspiracy of silence” on behalf of the union, Sarainen responds:

I'm not quite sure what their frustration on the conspiracy of silence is. Files are, I don't know the content of all the files because that's [confidential] information. So, we've shared with them when files have gone through, some are still outstanding but these are the files - that's privileged and private information. As for how extensively they're looking at being involved the files, we did offer to them, if they were concerned with specific individuals that they take over being their advocates, their workers' comp advocates. And they refused (Ibid).

Aside from confusion about their legal role, Sarainen notes that CAW recognizes the symbolic value the coalition brings to the community. Nancy Clark had a similar response and asserts that while the coalition has not assisted with the claim files, they have offered moral support to the workers.

CAW and OHCOW's Recommendations

In order to alleviate tension between the players and within the system, some of the various players offer recommendations for a process which operates in a comprehensive, swift and fair manner. The main recommendations involve systemic changes to the compensation process, increased education, enhanced legislation and the development of stronger causation data.

Systemic recommendations

CAW's Nadia Anton-Collins identifies the nature of the system as well as the role of doctors in compensation claims as fundamental issues. She asserts:

First and foremost it should be a Workers' Compensation System not an Insurance system. Workers gave up the right to sue their employer for injuries arising out of the course of employment. If changes are to take place then obstacles and barriers must be taken down. The medical profession should understand events that take place in the workplace, doctors need to treat their patients, not their egos (2014).

Clark adds that if there are preventative health and safety measures employed properly in the workplaces, the rate of WSIB claims could be reduced. Regarding employer accountability, she notes, “Employers have a legal and moral responsibility towards their employees. The profits earned off the lives of workers should to some extent cover the cost of injuries or in the prevention of injuries” (Ibid). However, she notes the main issue is scare mongering over the unfunded liability which has reduced the number of claims filed and allowed. To alleviate this issue, Nadia Clark, Nadia Anton-Collins and Scott McIlmoyle advocate for universal coverage, where all employers in the province fund the system, without any exceptions (2014).

Similar to their assessments, OHCOW’s Brenda Parsons suggests, “From my perspective and in my opinion only, occupational disease claims need to be handled in a better manner. WSIB is an insurance based process and I believe they understand the huge monetary cost of allowing all claims. Perhaps an independent body should oversee occupational disease claims” (2014).

Examining the system as well, CAW’s Sari Sarainen argues that legislation, education and research development are the primary ways to improve and change the system:

Well, I think the system just needs to have a lot more recognition and society at large about more of a recognition on the roads that work takes peoples’ lives. And there's still canaries in the coal mine in the workplaces, too much emphasis is put on lifestyle issues instead of looking at what is the workplace exposures and the way work keeps evolving. And there's more and more chemicals that are being introduced in our workplaces, work processes looking at shift work or you're looking at any of the effects of shift work on the human body...So, it's the precautionary principle that's really not looked at, it's mainly that it has to be evidence based, fact based. And so, for exposures to any type of chemicals before becomes part of literature and research is conducted on this, or there is clusters or pools of individuals that have been affected, internationally, not just in North American or Canada - it takes some time for that evidence to come forward. So, to meet that evidence, unfortunately, we need other people to become exposed to these hazards in the workplace and then somebody needs to study them (2014).

DeCarlo also speaks to the systemic inefficiencies and what an ideal system would look like:

The first thing is what the philosophy of compensation is and the basic underlying philosophy should be - it got close to being at some one point or other - workers are injured through no fault of their own. They should be made whole. Employers should pay for it because the workers are making a profit for the employers. Therefore the compensation system should make workers whole in one form or another when they're

injured at work. A worker shouldn't suffer because they're injured at work. So, if you're injured or permanently injured, not only should you get vocational rehabilitation and the possibility of other employment, you should get full-time pensions; you should never suffer again because you've been injured at work. That's the way it should work. There should be a system - and the original content was that you have a system of adjudication that is based on an active adjudication on behalf of the worker. In other words, it's not meant as a kind of a neutral system, it's meant to be actively investigating and trying to solve what the problems are for the workers and if they're suffering, to solve that. It's supposed to be outside kind of the court system that's accessible, easy to defend and easy for workers to fuel their own case; simple, clear, not enshrouded with legalities. And there should be full vocational rehabilitation. So, for example, if you have a permanent injury you can be retrained where you would like to be retrained, you have, in terms of your quality of life, not just you're able to do a job now. They should find you employment. If you're going to be retrained and you want to become a scientist, you can learn to be a scientist and they're going to find a place for you to work. Or, if you want to be a, you know, if you were disabled and you want to be, whatever, it's more than just rehabilitation, it's also the ability to find work. And permanent healthcare to protect the workers of injury and pensions so you don't have to worry about your income; you've got something to fall back on. As soon as you lose your job because of whatever reason, the pension kicks back in, there's a supplement and you're covered, right? So that's what it should be (2014).

Extensive process and causation consideration

When asked about the lengthy process, Anton-Collins states that the question should be posed to the decision makers at the WSIB and the employer. Anton-Collins suggests hiring competent claims managers, providing training and complying with legislation. Moreover, Nancy Clark states that it is “imperative to have adjudicators make informed decisions with all the information, not snap judgements when they do not have all or the correct information” (2014). When asked about the amount of time, Sarainen states:

Sometimes it takes a number of years because the admissible evidence is not there for their claim. And of course the employer as well is actively pursuing their interest and with assisting the worker and stating that yes, these were the work conditions. Getting evidence to support medical submission takes some time as well. Also the system at WSIB doesn't mean that you launch an appeal that you have a hearing date the next day (2014).

According to Nadia Anton-Collins, the main barrier is the “employer's denial of the root cause of the illnesses as result of chemicals used in the workplace.” DeCarlo speaks to the issue of

chemical exposures, and, instead of recommending individual prevention measures, identified an alternative process to overhaul the long-standing unhealthy ones:

In workplaces, the first problem is chemicals are introduced all the time and they're introduced without care of whether they're affecting workers or not. After the bodies pile up then sometimes they put in legislation that protect workers. You shouldn't introduce a chemical into the workplace until it's proven it's safe, until you know the method you use it is safe. You should also transform the workplace so that chemicals aren't relied on as much because of what they do to the environment and workers and you should redesign production systems so that they aren't harmful. So then what the compensation system should be doing - when they start when people are reporting problems - they should go in and investigate not just whether the claim is valid but what's happening in the workplace that causes the problem, what has to be changed in the workplace so that future problems aren't caused. Not give this worker the claim then the next worker that comes along give him the claim - you need to change the workplace. And so there has to be a link between health and safety and compensation; there has to be an active engagement in the work process, etc. So that's what I think has to change. And then of course the law has to be applied where - it exists in tort law now - it's probably a pretty decent standard but it has to be applied, and it isn't. So if there's evidence that more likely than not something causes an injury it's a no fault system so the worker doesn't have to prove what the fault is, that kind of thing (2014).

Conclusion

As DeCarlo states, the legislative approach to OHS issues are largely reactive as opposed to preventative, where bodies pile up before action is taken. While the government and companies should ideally be the ones to implement such change, the reality is that the transformation will only occur with pressure from the key players mentioned in the Chapter. Therefore, there must be a more concerted effort where the key players find a common ground and push for higher financial, political and symbolic accountability on behalf of the company and government. In revealing the tensions between the workers, the purpose of this chapter is to provide an opportunity for honesty about the perceived faults of each player. This exercise is not intended to serve a punitive purpose but rather, one which highlights potential misgivings so that all of the players can move forward in a more open, honest manner. This way, as opposed to turning against one another, there will be a unified advocacy force solely concerned with representing the workers. In the next chapter, I provide my own personal assessment of these

contentious issues, taking into consideration various external forces, in order to suggest recommendations for a swift and just compensation process.

Chapter 6: Assessment and Recommendations

*They tell me I can't work at all
There ain't no need of trying
But living like some used up thing*

Is just this short of dying

I'm going to go to work on Monday one more time.

-Si Kahn

Unplugging the 'Electric City': The socioeconomic relevance of GE in Peterborough

The section “Unplugging the electric city” discusses the socio-economic relevance of the plant against the backdrop of a city currently plagued with employment issues and fleeting market demands.

As revealed in the interviews, GE was a major employer in Peterborough and provided up to 6000 jobs. Since many of the workers began when they were 16 and in need of employment, there seems to be a certainly loyalty to GE as referenced by some of the workers and other participants. This degree of protection is a very important element to consider as it appears to weave throughout some of the workers' testimonials, particularly when discussing who is responsible. This dynamic is especially important given the waning job market in Peterborough and GE in particular and the worry of continued job loss. Moreover, many of the workers have children or grandchildren working in the plant. As the participants note, the threat of the company leaving is not a new reality but I imagine is more probable now due to recent lay-offs.

'Plucking the Goose': Asbestos exposure

Based on the workers' testimonials, the asbestos was rampant throughout the buildings until the 1980s. Given the suppression of knowledge on asbestos, the workers were not aware of its fatal effects. Considering the ubiquitous presence of asbestos reported in the plant, it seems hard to imagine that exposures could be easily isolated, or, that they could be isolated at all.

Moreover, even if the fibres were not in the air, the use of asbestos gloves and blankets should have been of major concern. Another serious exposure concern is the activities that were tackled during the shut down period, where heavy exposure to various chemicals and dangerous situations were reported. This practice has a socioeconomic element as the workers were most often newly employed or in need of extra income, essentially creating a poverty draft for workers

in need. Even more contentious is the allegation that GE sold asbestos to its workers despite a public denial by the company. Based on the workers' testimonials and the fact that they were interviewed separately and have no relationship to one another, it seems glaringly clear that GE is in fact culpable for selling asbestos to its employees. One question which is difficult to answer is whether or not GE did in fact arrange a clean-up of certain houses and have the owners sign a confidentiality form as not all the workers testified to this interaction. The story was corroborated by more than one employee which adds credence to the possibility. From the testimonials, it seems as though the use of asbestos halted beginning in 1986, around when the first health report was initiated.

Chemical Exposure: 'Chemical soup' and 'Beryllium sandwiches'

Similar to asbestos, it seems as though there was a high degree of chemicals used on a daily basis for various, if not all jobs, mentioned by the workers. While some workers revealed a certain suspicion about the effects of the chemicals, it appears that most of the workers did not know their debilitating capabilities. Some of the participants mentioned that their knowledge increased during the 1970s and 1980s when it was legislated that WSIAT reports had to be revealed to the workers. However, prior to those decades, based on John Ball's testimonial, he was educated on OHS issues and was pushing for the development of awareness and action for decades before. Yet, as John Ball mentions, there appears to be a typical culture where employees were labelled trouble makers or rabble-rousers if they were to raise OHS concerns with the company and according to some workers, even with the union. Given the lack of education that was available on the effects of these chemicals and the all too familiar pressure for profit over protection, such behaviour is not atypical in such a setting, both in those decades and continuing into current times. The manifestation of this culture is demonstrated by the high death toll reported by the workers.

The Intake Clinic

The breadth of the intake clinic is quite impressive, given it was the largest one to date in Ontario. However, along with other issues, it seems as though its vastness added a very complex

process to an already complex system. While the union received a lot of criticism from the workers in general, it seems as though this operation was well organized with the help of the local representative, Keith Riel and the national representative, Nick DeCarlo. The efforts of Aileen Hughes should also be recognized and commended as it was she who approached the union about the potential carcinogens in the workplace despite her husband being compensated swiftly for mesothelioma. Hughes could have easily stayed quiet as she suspects they were hoping for but instead, she spoke up about what happened to her husband out of moral concern for the other workers and their families. It was also interesting to hear from Hughes that the WSIB was initially anxious about her decision to involve the union as it seems to suggest a fear and dread of more impending claims. I felt as though there was a general lack of recognition by the non-worker participants of the role and impact organizing and mobilizing could have, for example the efforts of Hughes. Also, I recognize the difficulty of dealing with the overwhelming nature of the issue by those who assisted in the intake process, as recognized by OHCOW's Brenda Parsons. As will be discussed in the next section which reflects on the role of the scientific community and other players, the deficiency of causation research is a root problem in compensation cases.

'Peanut Butter in the Classroom': Scientific and medical considerations

As revealed in the lengthy section on science and medical evidence, there are a lot of explicit issues with the health reports in the Peterborough case as well as implicit issues with causation and cancer research. I found this section to be very challenging but also very enlightening because it highlighted certain inherent issues in the system which have contributed to the overall complexity of the case. More specifically, many of the players who expressed blame towards each other brought up similar issues, revealing a common ground that could ease some tension between the players. Dr. Carver's testimonial was also extremely illuminating as he provided wisdom and authority on medical and scientific considerations as well as social and economic complexities which influence the former considerations.

One fundamental issue that was expressed was the outdated nature of the study and the need for one which reflects the science available today. Of course, as raised by many, this study should be conducted by an independent body as there are many issues with the use of a

company-led study, both in this case and in compensation cases in general, as discussed in the literature review. Aside from inherent conflicts of interests with company-led research, if GE had instigated the report as opposed to the workers pressuring the company to initiate it, the intention of the report may have inspired more trust. However, given the economic incentive of the company and the fact that they did not investigate the deaths of many workers, the legitimacy and intention of the report is undeniably questionable. Moreover, this study was also used by the WSIB and was the basis for the denial of many workers' claims.

In addition to a fundamental conflict of interest, the scientific credibility of the study is questioned by not only Dr. Carver but also Nick DeCarlo and Kathy Dracup-Harris. From a scientific perspective, Dr. Carver says that the methodology is flawed in terms of the small sample size the findings are based on and the disregard for cancer research regarding genetic components and discoveries. Dr. Carver's claim that the "bad science" is apparent to those without a scientific background is supported by DeCarlo and Dracup Harris' assessment of the methodological flaws. Based on these assessments and by scanning the study, despite my non-scientific background, the assumptions regarding its scientific shortcomings seem clear.

Coupled with the issue of the conflict of interest with a company-led study, the fate of workers in their battle for compensation should not rest on such unsteady grounds.

The potential for the report to affect workers in their claims is demonstrated by the ambiguities around the representation of the plant's layout and the reverse air pressure system. As Dracup-Harris mentions, many workers might have been compensated if the report represented the full degree of their exposures. While a simple concept, the statement by LeBeau characterized the central issue when she compared the pervasive nature of chemicals and asbestos in a workplace to peanut butter in a school. The fact that the report completely bypassed chemical considerations is also a fundamental flaw. As Nadia Anton-Collins notes, the benchmark of 20 years, often used for chemical exposure, is an arbitrary target which does not necessarily reflect the workers' time at work. Another poignant point that Anton-Collins makes about the inherent flaws of such studies is that 'dead people can't talk and the ones that are living are scared of job loss.'

Taking all these testimonials into account, I believe that the report should be considered invalid due to its conflict of interest and methodological shortcomings. There was also a lack of consideration of chemicals, of current research on causation and cancer and a general disregard

for the plight of the workers in their compensation claims. While there are arguments put forward about who should take responsibility, I believe it should be a concerted effort by the worker advocates to appeal to the company, the WSIB and most importantly, the Ministry of Labour or another government body which should have a more active role in screening these processes.

Case Studies: The families, the compensated and the uncompensated

Similar to the sections on asbestos and chemical exposure, the case studies revealed the expansive nature of their exposures. However, the case studies went a step further to examine how the exposures were treated in the compensation claim adjudication, both from the WSIB and WSIAT as well as how the process affected the workers and their families emotionally and financially.

The family case studies of Ed Condon and Art Carl expressed the emotional struggle that the family members have experienced in dealing with the compensation claims, compounded by the loss of their husband or father. Given the compounded bereavement of losing a loved one as well as being denied compensation, I found these interviews particularly filled with emotion.

Moreover, the convincing exposure evidence created a feeling of indignity to the lives of loved ones who dedicated their entire working lives to the company. The range of emotions included anger, frustration, sadness, grief and pain. However, both were still determined to keep fighting despite the fact that they were resigned to the fact that they would probably not receive compensation. In other words, they are both dedicated to trying to change the nature of the compensation system not just for the pursuit of their compensation claims, but for other families and workers as well. For example, the presumptive legislation argument brought up by Cindy Crossley and Sandra Condon comparing the unequal treatment of the lives of firefighters and factory workers is compelling. Diane Carl also brought up important issues of causation which were very helpful given her insight on the plant's layout, as a former employee.

The uncompensated case was also very emotional as Roger Fowler has suffered for many years after experiencing multiple surgeries for stomach cancer. As Kathy Dracup-Harris noted, his case is particularly illustrative of the process as you can trace his denials from the WSIB to WSIAT to the OWA. His case provides a very strong platform to argue against the causation

standards of requiring 15 years of exposure in terms of its arbitrary, unscientific and poorly calculated nature. Fowler's case also reveals the use of the above mentioned study to his disadvantage in the WSIAT denial.

The compensated case provided a very different and interesting perspective from Aileen Hughes as Morris Hughes was swiftly compensated. The timing of the compensation claim seems very important as it occurred prior to the intake clinic which it largely precipitated, according to Aileen. This is significant as the WSIB was not overwhelmed with claims from the workers and did not have to consider the comparison of claims regarding exposure rates.

Moreover, the causation was harder to deny because her husband had mesothelioma which is undeniably caused by asbestos exposure. This is a very important element to distinguish between this case and the remaining workers, as the causation component was undeniable, whereas the other workers have various cancers which can be linked to occupational disease but the research is limited and discouraged. While I cannot be certain, it appears from the testimonials of the workers that those who were diagnosed with mesothelioma were more likely to be compensated. Yet, as Aileen Hughes' interview reveals, testing for mesothelioma is not standard or an encouraged practice in Peterborough and the only reason she discovered the linkage is because her doctor initiated the investigation. Moreover, the support by the company doctor in submitting the claim and “choosing her over the company” also seems to have contributed to Hughes' immediate compensation. The potential malpractice implicit in that statement is important to note, as well as the role of physicians and company doctors in compensation claims.

In general, the patterns that emerged throughout the case studies were issues with causation standards, the misrepresentation of the plant's layout, the reverse air pressure system and the company report – all of which influenced exposure rating and subsequent compensation adjudications. The families and individuals who remained uncompensated expressed gratitude to the O&EHC-P and OHCOW, and more specifically Dr. Kerin who they felt played a dual medical and advocacy role. There was seldom mention of the government's responsibility aside from some discussion by Sandra Condon and Cindy Crossley about the Ministry of Labour and their complacency. Overall, the uncompensated workers expressed deep distrust and anger towards the union as they felt they were not being represented either because of malice, disinterest or incompetence. Yet, they also expressed the potential vested interest the union may

have in preserving jobs. However, what I found interesting was that while there was a slight negativity towards GE for their practices, GE seemed to escape strong criticism based on the belief that they were unaware of the health effects. One reason could be that the workers put less faith in GE to support them than the union or that there is a deep sense of loyalty to the company.

What I found very interesting is that Aileen Hughes, while her case was different in terms of timing and burden of proof, seemed to direct more blame towards GE and spoke very positively towards the union as they helped her organize the intake clinic and took action when her husband reported GE for hazardous practices. However, her compensation claim was mainly dealt with by the doctors as it was a very direct case. All of these possible justifications will be discussed when looking at the interaction between the different players.

Environmental Hazards

Although the dumping practices are surely in the past, the lasting effects of large industry's waste is a very grave issue which must be addressed. As well as the workers, the community and other surrounding areas have a right to a healthy community and therefore intensive water and soil pollution testing. Some of the workers mentioned concern for those living close to the plant as their soil and gardens may be contaminated. The expansive effect of water pollution is also a very pressing concern as it can potentially increase cancer rates in Peterborough and surrounding communities and ecosystem. For example, water pollution could raise the cancer rate amongst the Hiawatha First Nations as well as threaten their surrounding ecosystem which is very significant to Indigenous populations both spiritually and physically.

The Peterborough County-Clinic Health Unit has been a very proactive force when it comes to representing and reporting the cancer rate in the city. However, scientific considerations (e.g. cancer research) should also be linked to social and economic ones, such as indicating a link between large industry and the air, soil and water pollution. The community must also play more of an active role by putting pressure on the council and other public health bodies to investigate the surrounding areas. The question is how to break the community mentality of valuing jobs over health which will be a very hard task given the history of GE in Peterborough.

OHCOW

Overall, OHCOW received very high support from both the workers and from the union, specifically in terms of helping run the intake clinic. However, the crux of the issue seems to centre around their applied and intended role. While the clinic is designed to be an independent medical body, many of the participants and key players claim that their role evolved into more of an advocacy role which Brenda Parsons made clear is not their mandate. To the coalition, many of the participants and DeCarlo, OHCOW's role, or more specifically, Dr. Kerin's role, was interpreted as an advocacy one. For example, he was described as being an active force to increase community awareness on the issue while presenting his findings about high cancer incidences. As I have not examined other compensation files with similar characteristics, I am not sure of the boundaries around medical proof in terms of what blurs the line between medical and legal advice. Yet, this phenomenon interests me as I question what defines an advocacy role. For it seems as though if the evidence is on the workers' side, this is interpreted as being an advocacy role as opposed to merely being an observation which favours the workers. Given the one-sided nature of the compensation system, where the workers' fault is presumed, it makes sense that if a doctor takes an active interest in the files they are seen as being an advocate as opposed to merely viewing these cases as blatant occupational diseases. This is reminiscent of the discussion in the literature review by Ison who talks about the burden of scientific proof and the notion that family doctors or physicians who support the workers in their claims are often seen as not objective. Of course, the argument must be supported with an abundance of medical research as well as knowledge about the compensation system (one argument directed against Dr. Kerin). In my view, there is a need for increased engagement by physicians who encompass knowledge of both the medical, legal and scientific areas of occupational disease as this would provide expertise to address the complexity of the system.

CAW/Unifor

As mentioned in the methodology section, I found the reaction to the union particularly difficult to process as I come from a union background and do not want to feed anti-union sentiment. At the same time, I also appreciate that like any other organization, unions can have issues with how they operate. Although I am able to recognize this possibility, it is also

important to acknowledge the external factors which could influence the union's behaviour, such as their aim to protect jobs, funding constraints as well as their experience with compensation claims and subsequent knowledge of how claims will be treated.

It is also important to recognize what factors could influence the interpretation of the workers and other participants, such as any affinities they may have with GE as well as their close interactions with the union. In other words, the workers put more faith in the union to advocate for them as opposed to the GE despite its economic significance in their lives.

Admittedly, based on the testimonies by certain participants, it seems as though the ball was in fact dropped when it comes to certain cases, for example with Diane Carl's case where the appeal was not launched. However, this does not seem to be out of malice but rather, incompetence or a lack of knowledge about the compensation system. Even with the testimonial about the union representative who ran out the back door upon the claimant's arrival, that action seems to demonstrate a certain unwillingness or inability to pursue compensation claims. Moreover, such testimonies are largely directed towards certain individuals mainly at the local level which should not be interpreted as the intent by the union, especially as the members are elected. That being said, there is a positive response towards union individuals such as Keith Riel and Nick DeCarlo based on their assistance and how they helped organize the intake clinic and community coalition and the union should push for this standard of concern on behalf of all of the representatives.

In other words, like other organizations, there needs to be mechanisms of accountability for local union representatives as they handle the compensation claims. Given the fact that the intake clinic was the largest that has ever taken place in Ontario, it is understandable that the local may have been overwhelmed and the margin of human error can be taken into consideration. It is also possible that aside from the clear cut cases of mesothelioma, the local representatives had no faith that the system would compensate workers based on causation evidence available for other occupational cancers, although that should have been relayed to the workers if that was the case. Moreover, as DeCarlo suggested, perhaps there was not a budget available for OHCOW to fully develop their medical findings.

Whatever the case may be, it is important to ensure that such mistakes or misunderstandings do not happen in the future and I think that a recognition of certain mistakes the individuals in the union have made in the past would help the participants and the coalition

move forward so that there is more of a concerted effort. Infighting amongst those who are designed to advocate for the workers merely slows down the extremely complex compensation process which is set up to discourage and overwhelm workers and their representatives.

Increased funding by the government and employers would enhance the capabilities of the union as well as OHCOW to support the claims presented and ease the tension between the union, the workers and the coalition. I also believe that more needs to be done to organize and unite the workers and the community, similar to how DeCarlo and others created the community coalition.

O&EHC-P

Based on the interviews from the workers, the coalition is one of the only key players they have faith in to support them in their compensation claims. Although the coalition was formed under the guidance of DeCarlo, it has branched off into a separate independent body which is seeking to provide a fair review process for those they deem as unjustifiably denied compensation. The coalition is made up of members with very relevant experience in labour, public health, health and safety, palliative care and environmental activism. They receive no compensation so their involvement is not tied to any interests and their work is completely voluntary and out of concern for the workers. Given their admirable dedication to the cause and the amount of faith the workers have in them, it is hard to view their intentions as anything other than honourable. Moreover, their face-to-face interactions with the workers and their constant availability and concern may resonate with workers compared with going through a structured organization. Overall, they serve a symbolic and inspirational role within the community and they gain even more respect for actions like holding events to commemorate GE employees who passed away. However, their involvement also evolved into a more political one as they began to get involved with assessing compensation claims. While some union representatives are defensive in terms of the coalition's involvement with the files, from my perspective, the more people are advocating for the workers, the better.

As some of the union representatives argue, the coalition may not have the same degree of experience with compensation files, which is perhaps why they did not want to be their WSIB representative. Therefore, it seems to make the most sense for the local Unifor representative to

be assisted by the coalition to advance the workers' claims. Such an effort would create a common front as well as a common understanding of the complex and inherent barriers posed by the compensation system. Dr. Carver makes a very poignant point where he states that he does not think the union and community is involved in a “conspiracy of silence” but rather, the compensation system is set up intentionally so that all the different players are operating at arm's length. With this in mind, I think the coalition does need to recognize certain limitations that are implicit in the system that are beyond the union's control, such as causation and funding issues as well as the unfortunate lengthy nature of these processes in general. Of course, such processes and limitations should be challenged but only when there is a common front between both advocacy bodies. The coalition did mention trying to make this effort during the log jam summit in 2012 and my suggestion is that instead of each body questioning the role and contribution of the other bodies, they should look at other dimensions such as how to organize the workers or how to fight together for a new health report. As mentioned in the earlier discussion, I think it would be beneficial for the union to take ownership of past issues in order to move forward but the coalition also needs to try to redirect its attention from the union to the overarching issues of compensation claims.

Admittedly, I was introduced to the issue by the Labour Council President, Marion Burton, who has taken a lead role in the coalition and communicated with them many times about the issue as they keep closely in touch with many uncompensated and compensated workers. As my sympathies lie with the workers, I am very supportive and humbled by their efforts to support the workers in their compensation claims as they also provide a social and psychological support system. While this relationship may seem like a conflict of interest given their current distaste for the union, I approached many key players from OHCOW and CAW to make sure I was hearing all angles. Moreover, the use of the “snowball sampling” technique allowed for all participants to recommend more participants who would help me understand their perspective. Additionally, my affinity to unions in general could also be seen as a conflict of interest. Therefore I feel as though I collected views from all sides of the spectrum to substantiate certain contentious issues. I also tried to present overarching issues at force for all of the players in order to do justice to the challenges, pressures and restraints they may face.

Community

Given the referenced significance of the community, they are also considered a key player in the Peterborough case. The interviews conducted revealed a company-oriented community which is very hard for the workers to penetrate to create networks of support. This dynamic seems to arise from the fact that many workers started work at young ages and spent up to 30-40 years relying on their job to support themselves. Moreover, GE was one of the main job providers in the community and remains one of the only manufacturing centres in the city. For many of these workers, they entered the workforce from a lower socioeconomic class and by virtue of their wages at GE, entered the middle class bracket. This movement from lower to middle class seems to provide a sense of pride for the workers, especially given the unemployment rate in Peterborough. Such elevation appears to manifest a sense of loyalty to the company which is unparalleled compared to other players involved. While the claimants interviewed spoke to this silence within the community, their direction of blame seems to signal that the company still holds a certain level of immunity to criticism that other players do not behold. This dynamic makes sense given that GE is still a significant job provider in the community as well as the fact that some of the participants' children and grandchildren still work in the plant.

Conclusions

My personal assessment seeks to examine the compensation process from a more systemic standpoint. For, while I do not hesitate to recognize potential negligence by key players, it is my belief that the complex and capricious nature of the system is intentionally designed to overwhelm the workers and the key players designed to assist them. GE is a perfect example of the system's deficiency to provide justice for the workers and its ability to divert blame towards the company – a factor further complicated by the socioeconomic significance of the manufacturing industry to the community's livelihood. Therefore, in addition to enforcing mechanisms of accountability for the players involved, there needs to be an overhaul of the system where the burden of proof does not rest on the shoulders of injured workers. This considerable weight would be lifted with more systemic efforts mentioned in this chapter

including, enhanced education on OHS issues, particularly for physicians, more enforced participation by physicians in general, an increased and openly politically-charged role by OHCOW, increased government involvement such as with funding for causation studies related to chemicals, legislation which considers the lives of public and private workers as equal and, as suggested by certain participants, a move towards a universal coverage system, either province or country wide. As mentioned, the only way to push for such measures is if the workers, their advocates and the community mobilizes to put pressure on powerful forces (e.g. big industry and the government).

Chapter 7: Conclusion

*Sitting on my front porch swing
I'm like someone forgotten
Head all filled with angry thoughts
And lungs filled up with cotton*

I'm going to go to work on Monday one more time.

-Si Kahn

Unfortunately, many of the former GE workers are no longer able to 'go to work on Monday one more time,' as they have passed away from cancer or other acute illnesses. Moreover, as one participant notes, many of the workers did not reach retirement before they fell ill – which is the main sentiment of the poem by Si Khan (2014). Si Khan's lyrics were woven into the chapters as they seamlessly illuminate the fundamental issues implicit in asbestos-related compensation claims. From discussing the historical use of asbestos, to the complicit behaviour of the medical community and the government, to the socioeconomic pull of continuing to work in a fatal environment, the poem provides a simple illustration of a complex issue. As in the GE case, all of these lyrics combine to produce stories which express invisibility, desperation and frustration. For those who are incapacitated by illness, this further injury is exponentially devastating and must be addressed.

Some of the systemic issues experienced by the workers are the flawed nature of the compensation system, the subjugation of workers to corporate control, similar to community-based indentured labour and the community tensions between wanting a decent job for your family and tolerating unsafe conditions in a decent paying job. In terms of the interrelationship between the players, while they hold similar goals, some tension arises out of their diverse functions, role and level of influence. Looking at the union from a systemic approach, unions have played an extremely important role in health and safety issues but they are not perfect institutions, and there is a varying culture between the shop floor and head office which can influence the treatment of compensation claims. The scientific community also poses issues as there needs to be an increased role in their involvement in community and workers' interests and a full break from the interests of the company. Yet, overall, the burden of responsibility needs to lie with the employer and the key players need to work together to hold them accountable.

While past tensions may be justified, the community, the various players and the workers must make a concerted effort to push for an accountable, fair and accessible process and compensation system which holds the employer responsible– for this is just one of the many cases in Ontario and Canada where workers have experienced such unbearable barriers. As referenced in the recommendation section, there must be a collective effort for legislation reform (e.g. presumptive legislation for other classification of workers), increased education,

government involvement, worker mobilization, and heightened pressure for a systemic change of the compensation process. Recommendations for future studies include: the solicitation of environmental studies (either through the government or other organizations), the creation of political education programs in the community as well as in the workplace, analyses of how to mobilize the community and the psychological and sociological foundations of the community's reaction to GE. Increased advocacy and awareness of such OHS issues is essential and those responsible for providing these functions must be made accountable for their actions. The issue of enforcement is central to all OHS issues and can be fortified by the mobilization of the workers, the community, the government and general public.

Above all, it is crucial to recognize the strength of the workers and their families who are incapacitated by illness as a result of their need to make a living in a community dominated by a fluctuating manufacturing industry. The strength of the women interviewed is also worth noting, as many of them were left as sole earners raising a family alone, in addition to navigating a system stacked against them.

'That Big W'

Sandy LeBeau, who was introduced in the first chapter, is one of the many wives whose husband's compensation case remains open. LeBeau reflects on the fact that her daughter is now just two years younger than when her father (and LeBeau's husband) died 19 years ago and notes, "you can't relate to that" (2014). Describing the past 19 years, she explains:

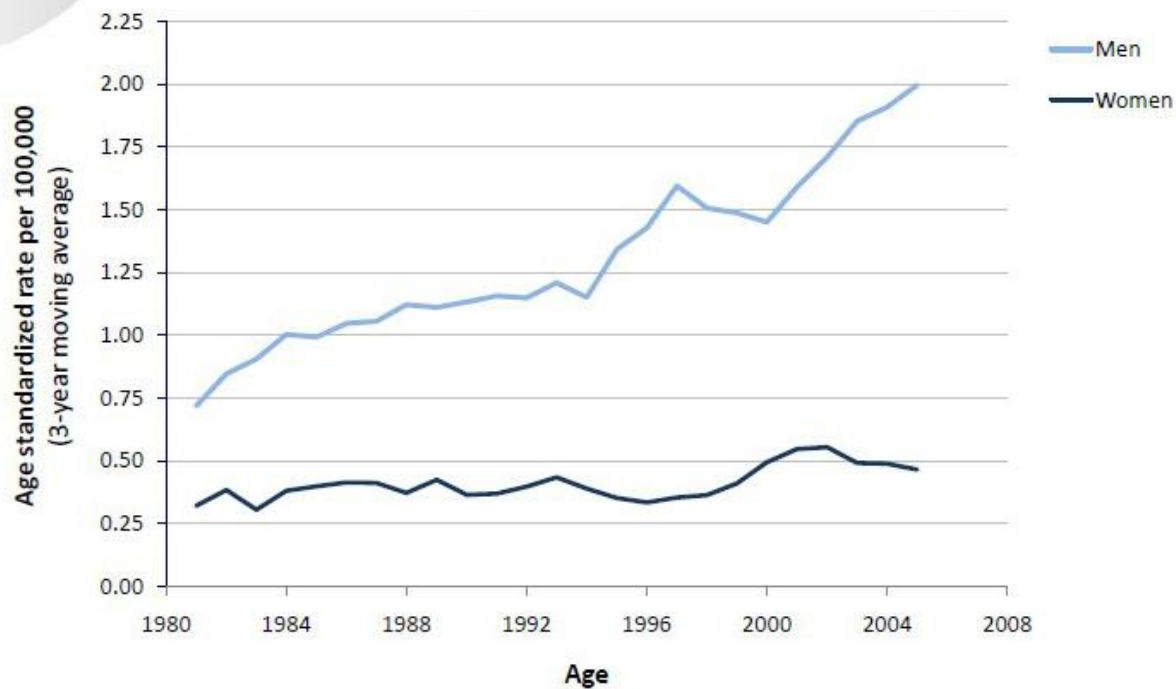
19 years (laughing). So, when I was asked if I would be interviewed, I went: Oh my god, what all do I remember from 19 years. Like, because it's not just been like 'boom, boom, boom', it's been this person's been in charge of it and that person's been in charge of it and then this person moves that part of the job and then moves onto something else and my case gets shifted to somebody else. Like, you know, this is the third person with the Office of the Worker Advisor, you know. With CAW, there's been a couple of head guys with health and safety and they say, 'Yes, this is definitely a case that needs to be worked on and you know, you should be compensated for it,' and the next thing you know, that guy's retired and a new person's coming in. It's just been, you know, a long struggle because as soon as you think you're going somewhere, under the rug you go (Ibid).

When asked what her next step is, LeBeau laughs and responds, "Wait; that big 'W', wait."

Appendix

Fig. 1: Rates of Mesothelioma in Ontario from 1980-2006 in Men and Women

Rates of Mesothelioma in Ontario, 1980 - 2006



Source: Ontario Cancer Care Research. “Rates of Mesothelioma in Ontario, 1980-2006.” 2009.

Table 2. Asbestos production by country, 2000.

Country	Tons
Russia	752,000
China	350,000
Canada	320,000
Brazil	209,000
Kazakhstan	179,000
Zimbabwe	152,000
Greece	32,000
South Africa	19,000
India	15,000
Swaziland	13,000
United States	5,000
Iran	2,000
Other countries	2,000
Total	2,050,000

Fig. 2: Asbestos Production by Country

Data from U.S. Geological Survey, 2000.

Source: U.S. Geological Survey. “Asbestos Production by Country, 2000.” 2000.

Fig. 3: Asbestos consumed by country

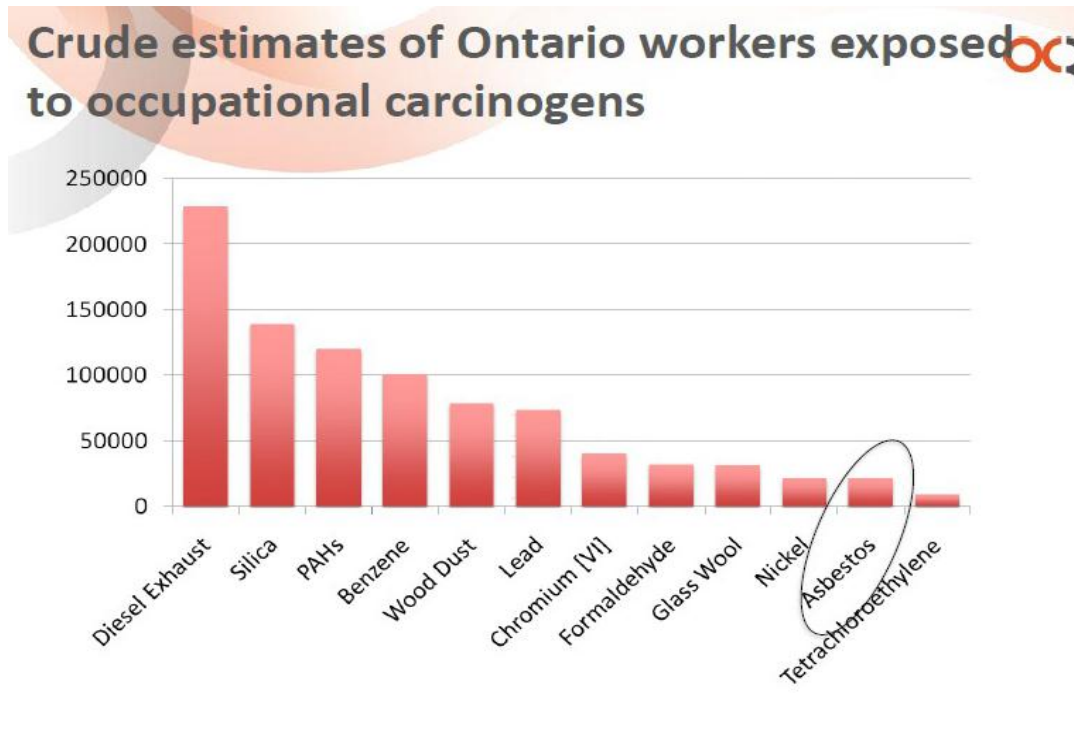
Table 3. Asbestos consumed by country, 2000.

Country	Tons	kg/capita/year
Russia	447,000	3.4
China	410,000	0.4
Brazil	182,000	1.3
India	125,000	0.2
Thailand	121,000	3.0
Japan	99,000	1.5
Indonesia	55,000	0.3
South Korea	29,000	1.9
Mexico	27,000	0.4
Belarus	25,000	
Turkey	19,000	0.5
Kyrgyzstan	17,000	
Spain	15,000	0.7
South Africa	13,000	0.5
Colombia	12,000	0.9
Zimbabwe	12,000	
Romania	10,000	0.5
Azerbaijan	8,000	
Canada	5,000	0.2
Portugal	5,000	
Taiwan	5,000	
Ecuador	4,000	
Kazakhstan	4,000	1.8
Pakistan	4,000	
Other countries	20,000	
Total	1,673,000	

Data from U.S. Geological Survey, 2000.

Source: U.S. Geological Survey. "Asbestos Consumed by Country, 2000." 2000.

Fig. 4: Estimates of Ontario workers exposed to occupational chemicals/carcinogens



Source: CAREX Canada. “Crude Estimates of Ontario Workers Exposed to Occupational Carcinogens.” 2008.

Fig. 5: McMaster University Research Ethics Board Approval March 2014

MREB Clearance Certificate

https://ethics.mcmaster.ca/mreb/print_approval_dorothy.cfm?1


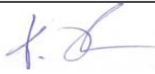
		<p align="center">McMaster University Research Ethics Board (MREB)</p> <p align="center">c/o Research Office for Administrative Development and Support, MREB Secretariat, GH-305, e-mail: ethicsoffice@mcmaster.ca</p>	
<p>CERTIFICATE OF ETHICS CLEARANCE TO INVOLVE HUMAN PARTICIPANTS IN RESEARCH</p>			
Application Status: New <input checked="" type="checkbox"/> Addendum <input type="checkbox"/> Project Number:		<input type="text" value="2014 005"/>	
TITLE OF RESEARCH PROJECT:			
A ten year review of the treatment of OHS risks within the GE Peterborough plant			
Faculty Investigator(s)/ Supervisor(s)	Dept./Address	Phone	E-Mail
R. Storey	Labour Studies	24693	storeyr@mcmaster.ca
Student Investigator(s)	Dept./Address	Phone	E-Mail
N. Luckhardt	Labour Studies	647-881-848	natasha_luckhardt@hotmail.com
The application in support of the above research project has been reviewed by the MREB to ensure compliance with the Tri-Council Policy Statement and the McMaster University Policies and Guidelines for Research Involving Human Participants. The following ethics certification is provided by the MREB:			
<input type="checkbox"/> The application protocol is cleared as presented without questions or requests for modification.			
<input checked="" type="checkbox"/> The application protocol is cleared as revised without questions or requests for modification.			
<input type="checkbox"/> The application protocol is cleared subject to clarification and/or modification as appended or identified below:			
<p>COMMENTS AND CONDITIONS: Ongoing clearance is contingent on completing the annual completed/status report. A "Change Request" or amendment must be made and cleared before any alterations are made to the research.</p>			
Reporting Frequency: Annual: <input type="text" value="Mar-12-2015"/> Other:			
Date: <input type="text" value="Mar-12-2014"/> Acting Chair, Dr. D. Pawluch 			

Fig. 6: Letter of Information



APPENDIX A

DATE: _____

LETTER OF INFORMATION / CONSENT

Title: The Issue of OHS risks within the GE Peterborough plant

Investigator: Natasha Luckhardt

Faculty Supervisor:

Dr. Robert Storey
Department of Labour Studies and Sociology
McMaster University
Hamilton, Ontario, Canada
(905) 525-9140 ext. 24693
E-mail: storeyr@mcmaster.ca

Student/Primary Investigator:

Name: Natasha Luckhardt
Department of Labour studies (Work and Society)
McMaster University
Hamilton, Ontario, Canada
(647) 881-8482
E-mail: luckhanj@mcmaster.ca

Purpose of the Study:

I am a Master's student conducting my thesis on the debate about health and safety risks associated with the General Electric-Hitachi Corporation of Canada (GE) in Peterborough. Over the past twenty years, there has been rising concern about the environmental effects of the use of hazardous chemicals in the General Electric-Hitachi Corporation of Canada (GE) plant in Peterborough. Such concern led workers to launch 230 asbestos-related claims against the company, 112 of which were accepted by the WSIB. Currently, 107 workers have been compensated from 2002-2011. I am interested in studying this issue from the perspectives of the various parties involved including former workers, key players in the claims that have been filed, plant representatives and interested parties in the community.

Procedures involved in the Research:

Participation in this study will involve in-person interviews which will take place at a mutually agreeable location in Peterborough. If you would prefer to do the interview by phone or e-mail, this too is an option. I will ask you basic questions about your age, education, position and your connection to the plant. I will ask you to talk about the place of the GE plant in the community and the impact it has had. I will ask you what you think about the health and safety claims and the role of some of the key players involved. If you are a former worker at the plant I will also ask about any health issues you may be experiencing that you think are linked to working at the plant.

All interviews will be approximately 60-90 minutes long. I would like to audio-tape the interview and to take notes, but will do so only with your permission. I would also like to be able to contact you in case there are any follow-up questions, but again, will only do so with your permission. If you are willing, the follow-up conversation can be in-person or by phone or e-mail.

Potential Harms, Risks or Discomforts:

Participating in this research may raise issues that you feel strongly about. You do not need to answer any question you would prefer to skip and are free to end the interview at any time. You may also worry about how others will react to what you say. The steps I am taking to protect your privacy are described in the "Confidentiality" section below.

Potential Benefits:

You are not likely to benefit directly from participation in this study, though you may appreciate the opportunity to express your point of view. My hope for this research is that it will provide a better understanding of the debate and the perspectives of those involved.

Confidentiality:

I will not be using any names in this study. However, for most participants, I would like to refer to you by your position (i.e. President of the Peterborough Labour Council, OHS Representative for GE workers in Peterborough, GE Representative etc.). This is likely to make you identifiable. If there are any comments you would like to make through the interview that you would like me to keep "off the record," please let me know and I will not attribute those comments to you.

For former workers, I will not use your name or any information that would allow you to be identified. I will refer to you simply as a former worker and as either a successful or unsuccessful claimant. However, we are often identifiable through the stories we tell, references we make and opinions we express. Please keep this in mind through the interview.

All of the data collected for this study will be stored on my password protected computer and/or a locked desk where only I will have access to it. Once the study is complete, I would like to keep the data for future research I hope to conduct on this topic, but will do so only with your permission. Otherwise, any data you have provided will be destroyed.

Participation and Withdrawal:

Your participation in this study is voluntary. You can stop the interview at any time, even after signing the consent form. You are also free to withdraw from the study anytime up until May 1st, 2014, at which point I will have started writing my thesis.

If you decide to withdraw, there will be no consequences to you. In cases of withdrawal, any data you have provided will be destroyed unless you indicate otherwise. If you do not want to answer some of the questions you do not have to, but you can still be in the study.

Information about the Study Results:

I expect to have this study completed by approximately May 31st, 2014. If you would like a brief summary of the results, please let me know how you would like it sent to you.

Questions about the Study:

If you have questions or need more information about the study itself, please contact me at: Natasha_luckhardt@hotmail.com, (647) 881-8482

This study has been reviewed by the McMaster University Research Ethics Board and received ethics clearance.

If you have concerns or questions about your rights as a participant or about the way the study is conducted, please contact:

McMaster Research Ethics Secretariat
Telephone: (905) 525-9140 ext. 23142
c/o Research Office for Administrative Development and Support
E-mail: ethicsoffice@mcmaster.ca

CONSENT

- I have read the information presented in the information letter about a study being conducted by Natasha Luckhardt of McMaster University.
- I have had the opportunity to ask questions about my involvement in this study and to receive additional details I requested.
- I understand that if I agree to participate in this study, I may withdraw from the study at any time until May 1st, 2014.
- I have been given a copy of this form.
- I agree to participate in the study.

Signature: _____

Name of Participant (Printed) _____

1. I agree that the interview can be audio recorded.

Yes

No

2. Yes, I would like to receive a summary of the study's results.

Please send them to this email address _____

Or to this mailing address: _____

No, I do not want to receive a summary of the study's results.

3. I agree to be contacted about a follow-up interview, and understand that I can always decline the request.

Yes - Please feel free to contact me at: _____

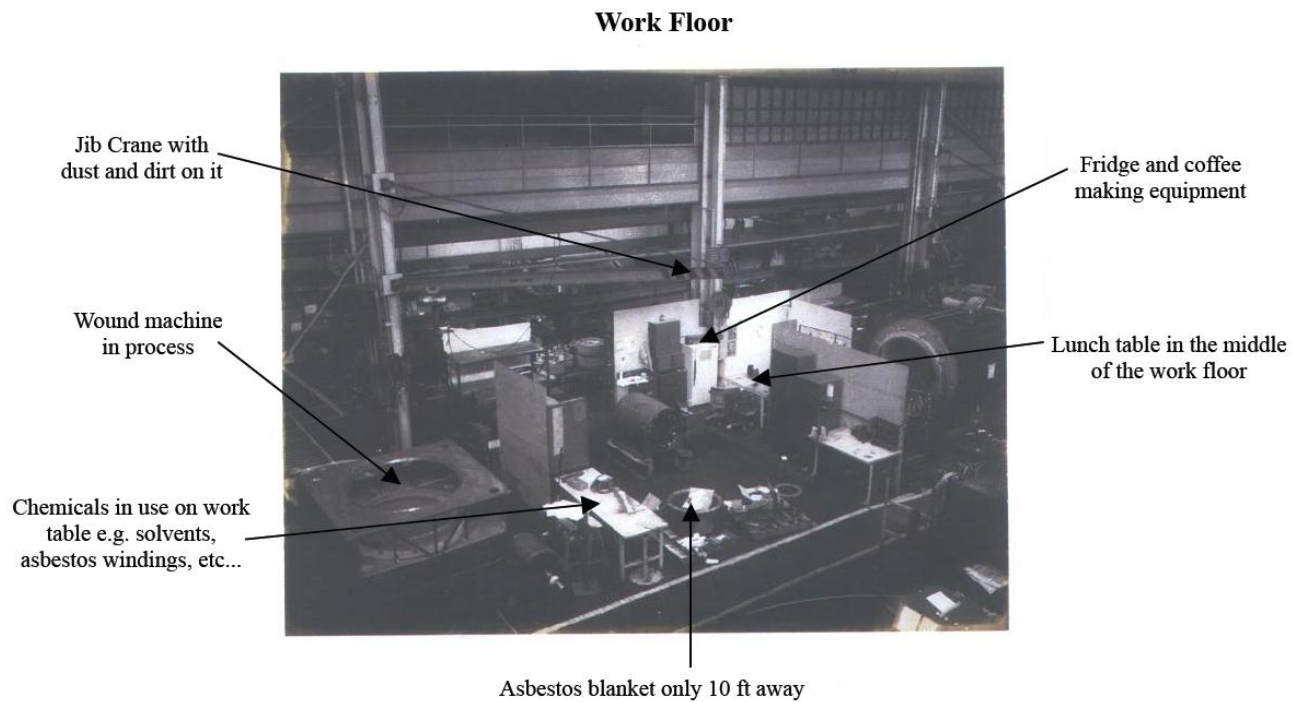
No

4. Do you give me permission to retain the data for future research?

Yes

No

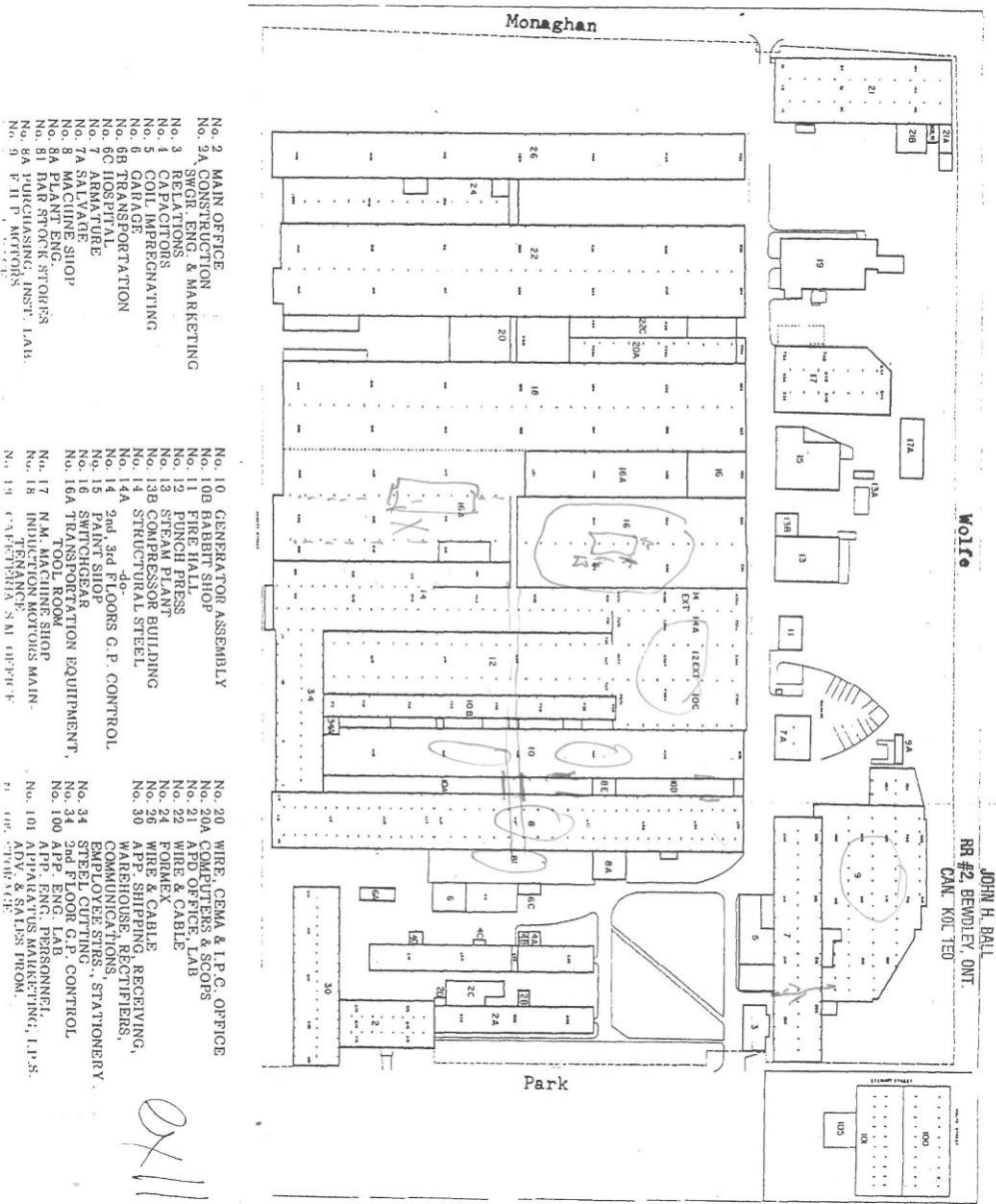
Fig. 7: 1997 Photo by GE Company Photographer Reveals Asbestos on Work Floor beside



Kitchen

Source: Padungpat, Patarapa. *A View through the Eyes of John Ball: Why Improved Occupational Health and Safety Policy Failed to Make a Difference in Small Town Ontario*. Thesis. Trent University, Studies in Canadian Social Policy, 2010. Peterborough: Occupational and Environmental Health Coalition.

Figure 8: GE Plant Floor Map



Source: Roger Fowler. Personal Interview. 11 April 2014.

Fig. 9: Edward Condon OHCOW Consultation Report, 2008



Occupational Health
Clinics for Ontario
Workers Inc. Centres de santé
des travailleurs (ses)
de l'Ontario Inc.

Toronto Clinic
970 Lawrence Ave. West, Suite #110
Toronto, ON M6A 3B6
Tel: 416-449-0009 or 1-888-596-3800
Fax: 416-449-7772
E-mail: toronto@ohcow.on.ca
www.ohcow.on.ca

RE: CONDON, Edward	Our File #4852
DOB: 17/MAR/1949	WSIB Claim #

November 28, 2008

CONSULTATION REPORT

Work History: Mr. Condon was born and raised in Peterborough, completing Grade X, and thereafter went to college to upgrade and got his certification as an armature winder.

Mr. Condon began work at General Electric, Peterborough in 1965, at the age of 16, in Punch Press for approximately one year, and thereafter began work in 1966 through 1981 in the Wire & Cable Department (16 years) and was actually one of the last three remaining employees who worked to close out the Wire & Cable Department in 1980. He worked in building #26, which was also called Wire & Cable, in all aspects of manufacturing processes there, also in buildings #24 and #22. There was prolonged high-dose exposure to asbestos fiber dust on an ongoing basis until 1981. Mr. Condon spent approximately 10 years in the Formax area of the Wire & Cable Department, and this area was involved in manufacturing and applying the various wire coatings. These particular chemical lists are appended to this report, except arsenic which was added to epoxies and this was not clear from the specs supplied. Mercury was also used in a bath where wire coating was checked for integrity of insulation. This often gave rise to spilled mercury, which was apparent on the floor of the formix area on a regular basis.

Mr. Condon was exposed to the various agents as described, including the products of incomplete combustion from the heating ovens. These ovens had a very strong smelling chemical odor which created a very unpleasant odor, requiring workers to deposit their clothing outside their homes in order to contain the smell. The Formax area processes were conducted in a sealed room for much of the wire coating operation until the late 1970s when it was opened up.

On closing the Wire & Cable Department, Mr. Condon went to work in the Armature area of the company until his retirement in 2007. Work there included much of the work that was conducted previously in the Formax area and involved use and handling of epoxies, resins, oven baking of the processes, and welding of various wires.

Personal protection equipment was not worn until within three or four years of Mr. Condon's retirement.

Consultation Report
Re: CONDON, Edward
November 28, 2008

Health History: Mr. Condon enjoyed outdoor activities and either walked or bicycled to work on a daily basis. He began to note shortness of breath on climbing hills, in particular when cycling, to the point where he was forced to dismount and walk the hills. This was accompanied by increasing fatigue to the point where it induced him retiring at 58-1/2 years old after 42 years of employment. He believes that one of the principal reasons he retired early was because of a very significant reduction in energy. More recently, Mr. Condon had been placed on Advair as treatment for the shortness of breath and this appears to have greatly assisted with nighttime shortness of breath and coughing.

Smoking History: Absolute nonsmoker. No previous history of respiratory conditions. No history of asthma, hay fever, or allergies in the distant past.

Social/Family History: Married, wife alive and well. One daughter, alive and well.

Physical Examination:

Mr. Condon presents as a 5' 8" male, weighing 200 pounds, with no symptoms of prostate problems. Recent complete checkup with family physician included a normal PSA.

Chest examination: Clear clinically with no adventitious sounds heard. Heart sounds regular, no murmurs heard.

Remainder of limited examination: Nothing abnormal demonstrated.

Impression: Occupationally induced asthma (welding fumes and other chemical exposures).

Discussion/Opinion: Mr. Condon, an absolute nonsmoker with no prior respiratory symptoms, began developing increasing shortness of breath within approximately four years of retiring. It became so pronounced that it forced Mr. Condon to dismount from his bicycle when climbing hills and, in consultation with his family doctor, he began treatment with Advair, which greatly improved his symptoms.

Mr. Condon denies cardiac symptoms such as central chest pain, any pains radiating into the shoulders, arms, neck, or jaws. Cardiac stress test five years ago by Dr. W.G. Hughes was normal.

Medications:

1. Fenofibrate 160 mg daily
2. Hydrochlorothiazide three times weekly
3. Micardis, od
4. Advair prn

Plan: Mr. Condon appears to have developed a reversible respiratory condition (shortness of breath with cough) and he benefits from Advair. This suggests that he developed a reversible airways obstruction as seen with occupational asthma. Unfortunately, these symptoms have persisted even after retirement one year ago.

Consultation Report
Re: **CONDON, Edward**
November 28, 2008

3

Therefore, we are recommending that he be referred for pulmonary function testing pre and post bronchodilator while off Advair for at least three days and to be followed by a methacholine challenge test. On completion of these tests, consideration would be given to submitting a Form 8 on his behalf to the WSIB. Decision on the Form 8 will await results of the PFT testing with methacholine challenge testing.

Mr. Condon has been advised that prolonged exposure to asbestos fiber dust can also affect one's larynx to intestinal tract, including stomach, esophagus, and large bowel. He is also aware that it may affect one's kidneys and possibly pancreas. As general advice, people who have had prolonged exposure to asbestos are recommended to receive their annual Influenza vaccine and consideration be given to administering a Pneumococcal vaccine once every three to five years. These decisions are made in consultation with family physicians.

I remain, yours truly,



Noel A. Kerin, MD, MSc, FCBOM, CIME
Occupational Health Consultant to OHCOW
NAK/kl

cc: CAW Local 524, 203 Park Street North, Peterborough, ON, K9J 3P7
Dr. Doug Turner, #103 - 380 Burnham Street, Peterborough, ON, K9H 1T6
Edward Condon, 2546 Marsdale Drive, Peterborough, ON, K9L 1R4

Disclaimer

All of the above analyses are based upon the available information at the time of this assessment, including the history given by the examinee, medical records/tests provided and the physical findings. If there are inaccuracies in the patient's history or more information becomes available at a later date, an additional report may be requested. Such information may or may not change the opinions rendered in this evaluation.

Source: Condon, Sandra. Personal Interview (in person). 4 May 2014.

Fig. 10: Edward Condon Addendum Report 2012



Occupational Health
Clinics for Ontario
Workers Inc. Centres de santé
des travailleurs (ses)
de l'Ontario Inc.

Toronto Clinic
970 Lawrence Ave. West, Suite #110
Toronto, ON M6A 3B6
Tel: 416-449-0009 or 1-888-596-3600
Fax: 416-449-7772
E-mail: toronto@ohcow.on.ca
www.ohcow.on.ca

RE: CONDON, Edward	Our File #4852
DOB: 17/MAR/1949	WSIB Claim #

May 7, 2012

ADDENDUM REPORT

OHCOW has been made aware of Mr. Condon's diagnosis of an inoperable brain tumour a Glioblastoma multiforme (GBM).

Glioblastoma multiforme (GBM), also called glioblastoma, is a fast growing glioma that develops from star-shaped glial cells (astrocytes) that support nerve cells. GBM is classified as a grade IV astrocytoma. These are the most invasive type of glial tumors, rapidly growing, and commonly spread to nearby brain tissue. They may be composed of several different kinds of cells (i.e., astrocytes, oligodendrocytes). Sometimes they evolve from a low-grade astrocytoma or an oligodendroglioma. In adults, GBM occurs most often in the cerebral hemispheres, especially in the frontal and temporal lobes of the brain.

Social & Family History:

In a report from Peterborough Regional Health Centre (PRHC) Diagnostic Imaging, dated March 27th 2012, under clinical history; "63 year old male with seizures of unknown origin, mother died young of brain tumour". Both Mr. Condon and his wife both disagree with that statement, in fact she died from emphysema with a brain aneurysm; therefore there is no family history of a brain tumour.

Final Diagnosis:

Brain cancer - grade IV astrocytoma or Glioblastoma multiforme (GBM).

Review of Exposures:

Mr. Condon's work exposures were reviewed. Of particular note was the intensity of exposures to various chemicals including asbestos and quartz silica in the Wire & Cable Department for approximately 16 years. Mr. Condon states that he was one of two workers involved in the close out of the Wire & Cable Department. He states his manager in that department was Mr. Eddie Rowe and Supervisor was Mr. Jack Watts.

Opinion:

Mr. Condon describes the working conditions in that area of G.E. as being "full of fumes". He worked as an Enamel Operator between 1965-1967 where he handled varnishing materials of various types, many of the names were unknown to him. Between 1967-1983 he was a Formex Operator where he was involved in the varnishing of wire. In 1983 through 1987 he worked in Fractional Motors in building motors and he worked in Armature between 1987 and 2009 as an Armature Winder Builder.

Causation of Malignant Tumours:

The worldwide incidence of primary malignant brain and central nervous system tumours is higher in the developed countries (males 5.9 per 100,000 person years). Glioblastomas (GBMs) are the second most frequently reported histology and the most common malignancy. They account for 16% of all primary brain tumors (Central Brain Tumor Registry of the United States 2004-8).

The levels of industrial dust/chemical exposure in Mr. Condon's case is typical in that there was no industrial hygiene data available on chemical exposures during much of his employment time at G.E. Peterborough. Review of the literature with respect to causation of brain cancers suggests that there are several toxins capable of increasing the risk of developing malignant changes such as GBM, e.g.:

- Lead
- Vinyl chloride
- PAHs
- Ionizing radiation
- Solvents/Benzene
- Arsenic

Lead

Edwin van Wijngaarden and Mustafa Dosemeci. *Int. J. Cancer*: 119, 1136-1144 (2006), evaluated the association between potential occupational lead exposure and the risk of brain cancer mortality in the National Longitudinal Mortality Study (NLMS), which is a prospective census-based cohort study of mortality among the noninstitutionalized United States population (1979-1989). The present study was limited to individuals for whom occupation and industry were available (317,968). Estimates of probability and intensity of lead exposure were assigned using a job-exposure matrix (JEM). Risk estimates for the impact of lead on brain cancer mortality were computed using standardized mortality ratio (SMR) and proportional hazards and Poisson regression techniques, adjusting for the effects of age, gender and several other covariates. Brain cancer mortality rates were greater among individuals in jobs potentially involving lead exposure as compared to those unexposed (age- and gender-adjusted hazard ratio (HR) 5 1.5; 95% confidence interval (CI) 5 0.9-2.3) with indications of an exposure-

response trend (probability: low HR 5 0.7 (95% CI 5 0.2–2.2), medium HR 5 1.4 (95% CI 5 0.8–2.5), high HR 5 2.2 (95% CI 5 1.2–4.0); intensity: low HR 5 1.2 (95% CI 5 0.7–2.1), medium/high HR 5 1.9 (95% CI 5 1.0–3.4)). Brain cancer risk was greatest among individuals with the highest levels of probability and intensity (HR 5 2.3; 95% CI 5 1.3–4.2). These findings provide further support for an association between occupational lead exposure and brain cancer mortality, but need to be interpreted cautiously due to the consideration of brain cancer as one disease entity and the absence of biological measures of lead exposure.

Poly vinyl chloride (PVC)/vinyl chloride (VMC)

Vinyl chloride is the organochloride with the formula $H_2C:CHCl$. It is also called vinyl chloride monomer (VCM) or chloroethene. At room temperature vinyl chloride is a gas with a sickly sweet odor. It is highly toxic, flammable and carcinogenic. Classified as a human carcinogen by ACGIH, IARC, OSHA, EPA and European Union, polyvinyl chloride is a polymer of VMC and can off gas VMC when disturbed or heated.

USA Environmental Protection Association's (EPA) 2001 updated Toxicological Profile and Summary Health Assessment for VCM (EPA, Toxicological Review of Vinyl Chloride, Support of Information on the IRIS. May 2000) in its Integrated Risk Information System (IRIS) database concludes that "because of the consistent evidence for liver cancer (angiosarcoma) in all the studies...and the weaker association for other sites, it is concluded that the liver is the most sensitive site, and protection against liver cancer will protect against possible cancer induction in other tissues." The International Agency for Research on Cancer (IARC 1979, 1987) suggesting that vinyl chloride is a multisite carcinogen in humans and experimental animals.

Coating of electric wire manufacturing in the Formex area of the Wire and cable in GE was manufactured using PVC made extensive use of PVC covering. PVC itself is said to be 'safe', however, when heated its off-gassing/outgassing of contaminants/breakdown products or additives and breakdown products e.g. VMC, dioxins and phthalates or plastic softeners are considered to be the principle health risks in the heating of PVC. VCM is considered a likely carcinogenic agent in the development of brain cancer. As part of the wire coverings in the Wire & Cable Department, Mr. Condon would also have been exposed to polyvinyl chloride degradation as it was heated in ovens. He would have also been exposed to the off-gassing of vinyl chloride which is considered to be a risk factor in developing brain cancer.

Polycyclic Aromatic Hydrocarbons (PAHs)

GBM malignant changes trend is found in occupational exposure to solvents and petroleum products. It is unknown if Mr. Condon was exposed to ionizing radiation as industrial radiography practices were common in G.E. to x-ray for proper quality welding of joints. Ionizing radiation is known to be a risk factor for brain cancer. It is clear from coworker histories that x-rays were taken on the shop floor, at times without proper

. Personal Interview (in person). 4 May 2014.

Fig. 11: Art Carl OHCOW Assessment, 2005



March 5, 2005

Mr. Art Carl
392 Summerhill Drive

...2 / CARL, ART

Other Employment: House insulating 1959 - 1960
Mechanic 1960 - 1962

Exposures: Noise in the Punch Press department. Chemicals – unknown. In 1979, you recall washing parts that were on the assembly line, often gloves were not used. On rare occasion you stated you did use gloves - ?leather on the inside, cotton on the outside. You stated the gloves on hands often got wet. In the structural steel department you state you were exposed to welding fumes and grinding steel dust. Chemicals used in the assembly line were called "Tollywall". You recall asbestos "being in the air". Asbestos was also used for insulating and the blankets. You recall using asbestos gloves to pick up hot objects.

On Examination: Comfortable. Co-operative. Wt: 175 lbs. Ht: 5'6"
Cardiovascular System: BP: 110/80, heart sounds normal.
Chest Examination: Lungs: Equal air entry – clinically clear, no wheeze, no crackle.
Abdomen: Left scar. Soft, no masses.
General examination essentially normal.

Diagnosis: 1) Carcinoma colon. – most likely due to asbestos exposure.
2) Noise induced hearing loss.

Discussion/Opinion: You have had a prolonged high dose of exposure to asbestos dust over a 30 year period. Many of your co-workers in the same time frame as you developed Schedule IV asbestos related diseases. This would mean that they all had been exposed to prolonged heavy asbestos dust exposures. Based on the balance of probability, your lung cancer was materially contributed to or caused by the above described asbestos exposure.

Thank you for attending the OHCOW Peterborough Clinic. A Form 8 (Health Professionals Report) has been submitted to the WSIB and your union representative will be contacting you in the future.

Yours truly,

K. Langstaff for Dr. P. Jugrundan. Dictated but not read
Pravesh Jugrundan, MD, DOH, CCFP, CIME, MRO
Occupational Health Consultant to OHCOW

PJ/kl
Cc: Dr. R. Holmes, CAW Local 524

795 797-2165

Source: Carl, Diane. Personal interview (in person). 31 May 2014.

Fig. 12: Roger Fowler Entitlement Review, 2005

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GE PROJECT

CLAIM 23805700-0

FOWLER, ROGER

MEMO #12

TO: FILE

RE: ENTITLEMENT REVIEW – CLAIM DENIED FOR RECTUM-SIGMOID
CANCER

BACKGROUND

Mr. Fowler was born on April 13, 1946 and is now 59 years of age. He was diagnosed with colorectal cancer in 1992 and attended the OHCOW (Occupational Health Clinic for Ontario Workers) in Peterborough as he felt these conditions are a result of his employment at Canadian General Electric

EMPLOYMENT/EXPOSURE HISTORY

October 20, 1959 to March 27, 1992: Canadian General Electric for a total of 22.5 years

Oct/69 – Aug/70: Building 8 – Assembly - working as a fitter/assembler, Tack & Weld – **The records (including the Health Study) does not show asbestos in this buildin**

May/71 – Nov/71: Building 16 – Switch Gear department working as a fitter/assembler, Tack & Weld – **He had minimal potential for asbestos exposure in building 16. The total would be 6 months.**

Nov/71 – Mar/72: Building 9 - Small Motors – General Purpose Motors Final Assembly – assembler. **Minimal potential for asbestos exposure from blankets & gloves. GE has no knowledge of the use of end shield caps. In addition, he had to walk through building #7 (Armature) to get to building 9. The total would be 4 months.**

Jun/72 – Oct/72: Motor Magnet Frame Processing Miscellaneous production Machine & Bench. **No asbestos noted.**

Oct/72 – Apr/75: Building 9 - Small Motors - General Purpose Motors Final Assembly – assembler. **He would have had minimal potential for asbestos exposure for about 2 ½ years and not 3 ½ years as indicated previously.**

Apr/75 – Aug/76: Transportation Equipment – Control Machines & Assembly – assembler. **High asbestos exposure for 16 months.**

Aug/76 – Apr/84: Building 9 - Small Motors – General Purpose Motors Final Assembly repairman & Assembly. **The majority of asbestos had been removed by 1975. However, some gloves and blankets were used until 1982. Exposure to these products is very low as compared with an active process using asbestos. He would have had 5 years and 5 months minimal potential for asbestos exposure.**

Apr/84 – Mar/92: Building 8, Large Motors – Assembly - Fit, Assemble & Wire. **No known asbestos.**

This would give him:

- **8 years and 9 months of minimal potential asbestos exposure.**
- **16 months of asbestos exposure at high levels.**

In total he had 10 years and one month of asbestos exposure.

APPLICABLE POLICY

Policy 16-02-11, Gastro-intestinal Cancer – Asbestos Exposure

Gastro-intestinal cancer in asbestos workers is accepted as an occupational disease under sections 2(1) and 15 of the *Workplace Safety and Insurance Act* as peculiar to and characteristic of a process, trade or occupation involving exposure to asbestos.

All primary cancers associated with the esophagus, stomach, small bowel, colon and rectum are included in the classification of gastro-intestinal cancers.

Based on medical studies, claims are favorably considered if the following circumstances apply

- there is a clear and adequate history of occupational exposure to asbestos dust, and while such occupational exposure cannot be quantitatively described, it should be of a continuous and repetitive nature, and should represent or be a manifestation of the major component of the occupational activity,

AND

- there is a minimum interval of 20 years between the first exposure to asbestos and the diagnosis of gastro-intestinal cancer.

* Our Medical and Occupational Disease Policy Branch (MODP) has provided a guideline on the interpretation of "clear and adequate" and this is that we should be looking for about 15 years of continuous and repetitive asbestos exposure.

MEDICAL INFORMATION**ONSET:**

March 23, 1992 visit to family doctor, Dr. Richard because of diarrhea and bloody stool.

MEDICAL TREATMENT DATES:

March 23, 1992 – Note from FD about Mr. Fowler's problems with diarrhea and blood stool he was referred for a sigmoidoscopy April 10, 1992.

April 8, 1992 - Pathology confirming "in-situ & invasive moderately differentiated adenocarcinoma of the rectum". Rectal Biopsy.

April 10, 1992 – Sigmoidoscopy

April 13, 1992 – Pathology confirming "in-situ & invasive moderately differentiated adenocarcinoma of the colon. Sigmoid Biopsy.

April 21, 1992 - Surgery – Abdomino-erineal resection

April 21, 1992 – Pathology report confirming rectum cancer

June 8, 1992 – Consult from Dr. Lofters at KRCC/Kingston Regional Cancer Centre noting that Mr. Fowler had a Duke's B1 rectal cancer with an excellent chance of a cure with surgery alone.

Nov. 25, 1992 – Follow up at KRCC – no evidence of recurrence

April 15, 1993 – Dr. Ryan – Had dermatitis around his stomach for several months following his surgery. Patch testing was negative to rubber and adhesive.

May 5, 1996 – Colonoscopy – no lesions found.

Sept. 29, 1999 – Admission for parastomal hernia which is increasing in size. A laparotomy was done to re-site the colostomy and repair the ventral hernia.

April 4, 2004 – Admitted to PRHC for a follow up colostomy – nothing suspicious was found.

Sept. 27, 2004 – Dr. Benfayed/orthopaedic surgeon saw this man for his right hip pain and was sent for an MRI which is on file and the findings are "most consistent with avascular necrosis" worse on the right.

PERSONAL/FAMILY HISTORY

- He stopped smoking in 1974 after about 12 years of smoking 3 cigarettes a day.
- He is an occasional drinker.
- No family history of malignancy. No heart disease, hypertension or diabetes.

SUMMARY AND RECOMMENDATION

- Mr. Fowler worked at GE for 22.5 years.
- He had 8 years and 9 months of minimal potential asbestos exposure. There would be minimal exposure to asbestos in the gloves and blankets compared with an active process using the asbestos.
- He had 16 months of asbestos exposure at high levels.
- In total he had 10 years and one month of asbestos exposure.

The policy provides that entitlement can be granted if there is evidence that he had 15 years of clear and adequate occupational exposure to asbestos dust.

I have concluded that his work was not a significant contributing factor in the development of his disease.

Mr. Fowler only had 10 years and one month of asbestos exposure. Also, the exposure to gloves and blankets does not support he was exposed to adequate levels of friable asbestos. Therefore, I cannot allow this claim.

Mrs. C. Alves
Claims Adjudicator
Occupational Disease and Survivor Benefits Program

June 7, 2006

Source: Fowler, Roger. Personal interview (in person). 11 April 2014.

Fig. 13: Roger Fowler Entitlement Review, 2005

...2 / FOWLER, ROGER

In the intake sheet, you report exposures to aluminum, ammonia, asbestos, benzene, copper, nickel, PCB's, phenols, silica, solvents, toluene, varsol, welding fumes. You state this is not as exhaustive list, as you believe you were exposed to a whole lot of other unknown chemicals.

Other Medical Problems: 1) Rotator cuff tendonitis, due to MVC, right shoulder.

On LTD since 1992.

Allergies: Tetracycline, Aspirin and Glue

Family History: Mom is alive and well. Dad died at age of 86 of a stroke. Brothers and sisters are well. One brother died at age of 58 (non natural) 5 children all well.

Smoking History: Stopping in 1974. Smoked for about 12 years, probably about 5 cigarettes per day for an approximate 3 pack/year cigarette smoking history.

On Examination: Wt: 165 lbs. HT: 5'8". Conscious, co-operative, and not obviously depressed. BP was 120/82; pulse rate was 76- regular. Heart sounds were normal. Lungs had equal entry with bi-basal crackles. General examination was essentially normal, with a cholecystectomy scar and a colostomy on the left.

- Diagnosis:**
- 1) Ca Rectum – Sigmoid - surgery 1992. Colostomy
 - 2) Chronic headaches. Headaches more than 10 years, fully investigated. All investigations normal to date. Severity has increase in the last 3 years.
 - 3) Chronic cough – approximately 5 years. Slowly getting worse. You are functioning ok. Chest x-ray has been normal. Last chest x-ray about one year ago - reported as normal.
 - 4) Hip pain - you are awaiting hip replacement.
 - 5) ? Severe glue allergy. First diagnosed 1993. Describe allergy as being severe and skin peeling off. Fully investigated by Dr. Ryan, dermatologist.

Discussion / Opinion: You had significant exposure to welding fumes, the specifics of which you are uncertain. However, during the welding process, the gas given off can cause occupational lung diseases and other medical problems. Your chronic undiagnosed cough may be related to your asbestos, welding fumes or solvent exposure.

3... FOWLER, ROGER

...3 / FOWLER, ROGER

You have had prolonged high dose exposure to asbestos dust over a ²⁰30 year period. Many of your co-workers, working in the same time frame as you, developed Schedule IV asbestos related diseases. This would mean that you all had prolonged exposure to heavy asbestos dust levels. It is reasonable therefore to claim, based on the balance of probability, that it is more likely than not, the above described asbestos exposure materially contributed to or caused your colorectal cancer

You do believe that you were sensitized to glue by your use of glues/epoxy at work. Although the patch testing was negative you give a very convincing history of glue sensitivity / hyperactivity. Further testing is not likely to benefit at this time.

Thank you for attending the OHCOW Peterborough Clinic. A Form 8 (Health Professionals Report) has been submitted to the WSIB and your union representative will be contacting you in the future.

Yours truly,



Pravesh Jugnundan, MD, DOH, CCFP, CIME, MRO
Occupational Health Consultant to OHCOW

PJ/kl

Cc: Dr. T. Richard, CAW Local 524

Enc.

Source: Fowler, Roger. Personal Interview (in person). 11 April 2014.

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