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Assembling Victory Defense Industries Limited, Ajax, 1941-1945

Lisa Tubb

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[See table of contents](#)

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Article abstract

Located approximately forty kilometres outside of Toronto, Defense Industries Limited (DIL) established one of the largest wartime factories not only in Canada, but also the British Empire, in 1941. For 'bomb girl' Louise Johnson, a worker at DIL, her role and impact in the war machine was quite clear: "We knew our importance. If the boys didn't have shells, they couldn't win the war." This paper explores the experience of working in a munitions factory through a case study of Defense Industries Limited in Ajax, Ontario. This study will contribute to a wider understanding of home front service and sacrifice, by shedding light on local, micro-level histories, and on the individuals who contributed greatly to Canada's munitions production during the Second World War.

ASSEMBLING VICTORY

Defense Industries Limited, Ajax, 1941-1945

by Lisa Tubb

The grinding and groaning of trains shunting off from their stations awakened Louise Morris on a spring morning in Saskatoon, 1942. She and several dozen other women had spent the night aboard the passenger car on a Toronto-bound train was to embark on a multi-day, 3,000km trek between her hometown and Ontario's industrial heartland. More women who had been recruited by Defense Industries Limited (DIL), of Ajax, Ontario, would be picked up along the way. These women would soon be supplying their fellow countrymen and allied soldiers, sailors, and airmen with the necessary munitions to win the war. Thousands more would join the DIL family which would grow to be 9,000 strong.¹

The stories and experiences of workers at Defense Industries Limited in Ajax, Ontario—the largest munitions production factory in the British Empire—exemplify the grit, determination

and effort required of ordinary Canadians on the homefront to ensure Allied victory.

Abstract

Located approximately forty kilometres outside of Toronto, Defense Industries Limited (DIL) established one of the largest wartime factories not only in Canada, but also the British Empire, in 1941. For 'bomb girl' Louise Johnson, a worker at DIL, her role and impact in the war machine was quite clear: "We knew our importance. If the boys didn't have shells, they couldn't win the war." This paper explores the experience of working in a munitions factory through a case study of Defense Industries Limited in Ajax, Ontario. This study will contribute to a wider understanding of home front service and sacrifice, by shedding light on local, micro-level histories, and on the individuals who contributed greatly to Canada's munitions production during the Second World War.

Résumé: Situé à environ quarante kilomètres de Toronto, Defense Industries Limited (DIL) avait fondé en 1941 une des plus grandes usines de guerre non seulement du Canada, mais aussi de l'Empire britannique. Le rôle et l'impact des ouvrières à DIL, comme le constate Louise Johnson, était très clair « Nous étions conscientes de notre importance. Si nos gars n'avaient pas de munition, ils ne pourraient pas gagner la guerre. » Dans cet article, nous allons scruter l'expérience de travail dans une usine d'armement à l'aide d'une étude de cas de Defense Industries Limited à Ajax, en Ontario. Cette exploration va contribuer à une meilleure compréhension du service et sacrifice au front de guerre national, en élucidant des histoires locales et particulières des individus qui ont pris pleinement part dans la production d'armes canadiennes durant la Seconde Guerre mondiale.

¹ D'arcy Jenish, "The Bomb Girls of Ajax", *Legion: Canada's Military History Magazine*, 20 February 2016.

ry. Producing munitions was demanding, tedious and involved a massive commitment beyond physical labour. Individuals accepted this challenge with an adventurous spirit and moved across Canada to work in factories, putting their own lives and ambitions on hold. Additionally, women often had to answer to Canadian society for their new roles as part of the greater war machine. This study follows the memories of factory employee Louise Morris through her time at the plant and in the evolving town of Ajax.

Her experiences and stories of war time efforts at DIL prove that women and men on the Canadian homefront supported the Second World War through dangerous munitions work, however their efforts also impacted Canada on a domestic level. These workers challenged traditional gender roles and aided in the formation of Ajax. In summary, the war years for a munitions worker of Ajax were physically demanding, tradition-contesting, yet essential for Allied victory. The impact of the Defense Industries Ltd. munitions plant in Ajax truly reached across Allied fronts across the globe through its exports, but was also felt domestically as the nature of the work challenged traditional gender roles in the workplace. Finally, in a local sense, the Ajax plant too left a unique impression, forcing rapid growth and development in an agricultural community on the edge of Lake Ontario.

When reconstructing the reality of a munitions plant during the Second World War, it is critical to comprehend

the immense physical demand the occupation involves. Employment on the line in the munitions production industry involved courage as well as conviction about, and commitment to, Canada's war effort. The arduous shift work was not a matter of easy adjustment. Grinding out massive quantities of the required product also involved equal amounts of physical and mental fortitude. Also worth noting is the disputable nature of women working on the homefront. Although wartime measures shifted gender role expectations, the entrance of women into these war factories caused worries about social breakdown due to the new roles women were taking on, even temporarily. Balancing traditional and modern roles was a tough act for female munition workers, especially in the face of oversimplified and sexualized media portrayals of their contribution to the war effort. On a local-level, the DIL munitions factory immensely impacted the once rural community of Ajax. Johnson's narratives will lead a brief foray into the post-war years, especially concerning efforts to preserve and commemorate DIL's legacy on a local scale. Their wartime service and experiences at DIL ultimately shaped both the workers and the new town of Ajax. This research is original in the sense that DIL Ajax, and the testimonies of Johnson and her colleagues to date, have been used only in promotional activities for the Ajax Public Library (where most are located) and in educational outreach websites and material related to the Honour Ajax Bomb Girls Legacy Organization²

² *Ibid.*

On The Line

Despite the legacy that the DIL plant would create during the Second World War, the very idea of Canadian shores housing the largest munitions plant in the British Empire at the outbreak of war would have been an unimaginable concept. In 1939, Prime Minister Mackenzie King's resolve to keep Canada out of another global conflict crumbled in the wake of the British Expeditionary Force's evacuation from Dunkirk, and the hostile German takeover of the majority of Europe.³ This area was littered with abandoned equipment and material that would need immediate replacement. Newly created crown-corporation businesses like Victory Aircraft Limited and Defense Industries Limited were tasked with fulfilling these commitments.⁴ Additionally, just as the physical structures and facilities were being brought to life to build the required bullets and bombs, so too would the civilian population have to come together. The pressure was on, and the lives of ordinary Canadians were expeditiously altered to suit the needs of Canada's military effort.

Canadian factories were ideal for

providing Allied armies across the Atlantic Ocean with firepower to throw back at their adversaries. Far from the threat of the Blitzkrieg being waged on Britain, Canadian factories could produce the necessary stockpiles without threat of attack or interference.⁵

In fact, this particular plot of farmland in Pickering Township was considered to be so secure that only ten miles away, in present-day Whitby, the famous 'Camp X' was established and tasked with training Allied spies, some of whom were rumoured to have broken into the DIL Ajax plant to test security measures.⁶ The proposed plant location of 2,505 acres would be transformed into a 'city-esque' centre roughly ten miles square, and would be thoroughly supplied by fresh water as the facility bordered on Lake Ontario and would draw an electric power supply from Whitby.⁷ The site for DIL Ajax was also in close proximity to a main railway line for its shipping needs and could immediately draw from the sizeable amount of local labour in the surrounding communities.⁸ Still, more manpower would be required to meet DIL's ambitious production quotas, and thus a nation-wide recruit-

³ J.L. Granatstein, "Arming the Nation, Canada's Industrial War Effort 1939-1945", presented for the Canadian Council of Chief Executives Roundtable on Foreign Policy and Defense, at the Canadian War Museum, May 27, 2005: 1-2.

⁴ Robert Bothwell and William Kilbourn, *C.D. Howe, A Biography* (Toronto: McClelland and Stewart, 1980), 133.

⁵ "Ken Smith explains why Ajax was chosen for Defence Industries Limited," 1991/92, Defence Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada.

⁶ Brenda Criz, CMO, Ajax Public Library. "Ajax DIL Research Inquiry." E-mail message to author. 10 September 2017.

⁷ Ken Smith, *Ajax the War Years 1939/45* (Oshawa, ON: Alger Press Limited, 1989), 154.

⁸ *Ibid.*

ment campaign began.

To accommodate and satisfy the newest members of Ajax, DIL planners realized the need to keep residents entertained in the local area. In DIL's early stages, to see a simple movie, one would have a long trek to Highway 2, then a bus to Whitby or Scarborough.⁹ The Ajax Recreation Centre was added as a solution to the entertainment crisis. Former DIL employee Ken Smith recalled "[t]he workers immediately made it a part of their lifestyle, and it was referred to affectionately as the Rec Hall."¹⁰ Additionally, the camp featured several comforts within the wire, not limited to "...Cafeterias, a beauty shop, a barber shop, and a commissary provided some of the small luxuries for the dormitory residents."¹¹

Women were especially sought after for positions on the production line, as essentially all available and suitable male civilian workers were either in uniform or already engaged in war-related labor.¹² Wartime factories also sought out women due to their small hands, patience, and at-

tention to detail for repetitive work; these skills theoretically made them perfect for munitions production.¹³ Potential candidates and their suitability for working at DIL were classified in four categories: single women and young girls for full time, childless married women for full time, married women with home responsibility for part-time, and finally women with children for part-time.¹⁴ Despite this original stipulation, recruiters from DIL at the end of 1941 had gone through each of the four categories. As was the case nation-wide, they were then obliged to take married women with children at home in a desperate attempt to fill in the ranks.¹⁵ Males were also interviewed for positions at DIL by Cecil Robinson and Alex Russell, however there was no indication that their suitability for war work was classified based on marital status or children dependants.¹⁶ By January 1942, women outnumbered male production employees 2:1, based on figures provided by Ken Smith.¹⁷ Also notable is that at DIL, the majority of the workers were

⁹ *Ibid.*, 83.

¹⁰ *Ibid.*

¹¹ *Ajax the War Years 1939/45*, (Oshawa, ON: Alger Press Limited, 1989), 83.

¹² Ruth Roach Pierson, *Canadian Women and the Second World War*, Vol. 37. Historical Booklet (Ottawa: Canadian Historical Association, 1983), 8.

¹³ Louise Johnson, Councillor Colleen Jordan, 75th Anniversary Celebration of DIL, Town of Ajax, "The Story of Defence Industries Limited," 32:00.

¹⁴ Pierson, *Canadian Women and the Second World War*, 8.

¹⁵ Ruth Roach Pierson, "They're Still Women After All: The Second World War and Canadian Womanhood," (Toronto, ON: McClelland & Stewart, 1987), 130.

¹⁶ Cecil Robinson, interview and transcription by Ajax Public Library Student, Ajax Public Library Digital Archive, 1991/92. "Cecil Robinson interviews for Defence Industries Limited (audio only)", accessed 19 September 2017.

¹⁷ Smith, *Ajax the War Years 1939/45*, 151. Line One produced 40mm anti-aircraft explosive shell loaded with a cordite propellant, and was comprised of 742 female, 315 male employees. Line Two produced a twenty-five-pound shell and was staffed by 878 females and 562 males. Line Three produced a 3.7

from Anglo-Canadian, working-class backgrounds.¹⁸

When war broke out, eighteen-year-old Louise Johnson (nee Morris) was working at Saskatoon General Hospital, in eight-hour shifts, six days a week.¹⁹ Between paying for board and meals at the hospital out of her paycheck, Louise was able to save a few hundred dollars. As she reflected, "I had a very small bank account, and I was very frugal because I was raised in that manner. I think I had 180 dollars in the bank, and nowhere to go. That was at the end of the line there." Johnson registered with the National Selection Service, which was charged with registering and maintaining the long lists of potential labour pools, as well as organizing the radio and newspaper campaigns aimed at popularizing war work.²⁰ In September 1940 alone, the registry identified some twenty-thousand young, single women suitable and immediately available for war work from across British Columbia to the Maritimes.²¹

Johnson received a telephone call from Pickering Works, a precursor to DIL, which was performing recruitment drives across Canada.²² Train fare would be provided (as well as return fare if within three months of employment the employee needed or wished to return home), as well as affordable lodgings and meals on site for the workers.²³ She pressed the recruiter for the exact details of her job, commenting, "I don't really want to make the trip to scrub toilets... I was pleased to receive a uniform and not have to do housework, maintenance sort of thing."²⁴ Johnson soon boarded that Toronto-bound train and formally entered the Canadian war effort. Louise's commitment to the war effort was clear,

People were frightened... I think everyone felt the way I did, if we didn't win, we would be speaking German. It was important that we did support anything to do with the war. The young men signed up, and off they went... But with women, the same thing.²⁵

Before joining production, employ-

calibre larger anti-aircraft round and employed 679 females and 514 males. Line Four loaded and assembled three different-sized shells for anti-tank purposes, each weighing in at two, four and six pounds. This line required 381 females and 243 males. The remaining departments would specialize in the production of various munitions components. The sizeable caps and detonator department employed 984 females and 168 males as of November, 1942, while the department in charge of pellets and tracer rounds (components within various bullets/rounds) was a meagre collection of only 149 females and 56 males.

¹⁸ Louise Johnson, interview and transcription by Lisa Tubb, 22 January 2018. Phone call interview with the author.

¹⁹ *Ibid.*

²⁰ Ruth Roach Pierson, *Canadian Women and the Second World War*, 9.

²¹ *Ibid.*

²² Louise Johnson, interview, 22 January 2018.

²³ Louise Johnson, embedded video "Female Factory Workers- Defence Industries Limited with Louise Johnson," *Honour Ajax Bomb Girls*, "DIL Interviews Former Defense Industries Limited Employee and Ajax resident, Louise Johnson." 1:00.

²⁴ *Ibid.*, 1:20-1:30.

²⁵ Louise Johnson, interview, 22 January 2018. Phone call interview with the author.

ees went through rigorous checks, interviews and processing procedures, including stern orientation lectures which reinforced plant safety protocol. During orientation, employees were issued with a handbook similar to a surviving document of former worker Evelyn Day, being held by the Ajax Public Library. The 1941 *General and Special Rules Defence Industries Limited Shell Filling Plant* handbook laid out the seriousness of munitions production quite clearly from the first page of text: "All persons in the service of Defence Industries Limited, must appreciate that, in the manufacture of ammunition, there are inherent hazards which can only be eliminated by careful work and strict observance of definite rules."²⁶ The extensive rules and regulations of DIL Ajax relied on common sense principles, prohibiting "rough play, unnecessary noise and any form of misbehaviour which may take attention of other employees from their work..."²⁷ Loose articles of clothing were to be removed, eyeglasses (if required) were to be firm fitting or secured, hair was to be secured as well, and the issued uniforms were mandatory.²⁸

To ensure clothing material that would not cause a spark or static, DIL issued each employee a set of white coverall

uniforms to be worn over their clothes or undergarments.²⁹ To the same effect, workers were also issued with factory-approved leather shoes, to ensure no sparks would be created from metal nails in the soles.³⁰ The employee handbook even provided suggestions for appropriate undergarments, advising "...in the interests of their own safety, workers are strongly advised not to wear underclothing made of flammable materials such as artificial silk and flannelette."³¹ For female employees, DIL also supplied bandanas, colour coded for specific shifts/lines, to cover and protect their hair (see figure one).

To be allowed onto the property for a shift, employees had to check in at the guard stations located at the official entrance/exit gates and present their factory issued identification badge. Johnson reflected on this exercise with a serious tone:

...as we started we were identified and we each were issued a badge with a number. Just like being in prison and our picture was on the badge and you didn't ever get into the plant without that. I mean every person going through, there were guards everywhere and you had to wear your identification badges.³²

As well, employees were only allowed

²⁶ *General and Special Rules Defence Industries Limited Shell Filling Plant 1941 Employee Hand Book*, Defense Industries Limited (Pickering, ON, 1941), 3.

²⁷ *Ibid*, 10.

²⁸ *General and Special Rules*, 16.

²⁹ "Louise Johnson arrives at Defence Industries Limited (audio only)," 1991/92, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada.

³⁰ Smith, *Ajax the War Years 1939/45*, 32.

³¹ *General and Special Rules*, 15.

³² "Louise Johnson arrives at Defence Industries Limited (audio only)."

Figure 1: A black and white photograph of an unidentified female employee of Defence Industries Limited on one of the assembly lines. Women Employees - Ammunition - Assembly Line - Defence Industries Limited. 1941-1945. Ajax Public Library, Ajax, ON. In Ajax Public Library Digital Archives. Accessed 24 April 2018. <http://images.ourontario.ca/ajax/2304569/data?n=37>.

on the premises during their scheduled shifts, regardless whether they were in possession of a valid ID badge or not.³³ Employees were also susceptible to random searches, asked to shake out their pockets to ensure no foreign material or forbidden objects were on their person, and were prohibited from smoking near the premises for fear of causing a fire.³⁴ The consequences of mishandling explosive material or falling victim to a lack of care or caution on the line were heavy. DIL workers, despite their background learned to fear and respect their essential wartime work, keeping their likely anxious thoughts at bay until shift's end.

Stringent as these procedures were,



Johnson respected their thoroughness: "...the safety regulations in the plant were excellent. That's why a lot of people never heard about Ajax, because we didn't have any major explosions or fires or deaths or this type of thing."³⁵ In her various reflections, Johnson never mentioned

³³ *General and Special Rules Defence Industries Limited Shell Filling Plant 1941 Employee Hand Book*, Defense Industries Limited (Pickering, ON, 1941), 7.

³⁴ *Ibid.*, 8.

³⁵ "Louise Johnson arrives at Defence Industries Limited (audio only)."

witnessing any accidents. In a 2018 interview, Johnson concedes that there was no formal report of injuries accessible to workers. Former DIL employee Ken Smith, on the other hand, recalled a few incidents on the production line: "...some of them lost fingers over it and some of them still have pieces of copper in their abdomen from explosions."³⁶ A dramatization of plant life told in a monologue by DIL worker 'Betty' for the plant's 75th anniversary confirms at least two fatal incidents at the plant.³⁷ The first casualty at DIL was a male employee who was observing the loading of gunpowder into leather sacks. The employee got impatient with the loading speed when a blockage formed at the machine mouth, and attempted to clear it by hand. His interference caused an explosion, which killed him and severely damaged the building.³⁸

A second incident occurred on Line Four, where shells being delivered to this line were found to be 1/2000 of an inch too thick, therefore requiring buffing down of excess metal to be useful. One employee, again male, used too much pressure, causing the shell to heat up

and explode, killing him and injuring his foreman.³⁹ On 31 July 1942, an incident at the 'Pickering munitions plant' was brought to the attention of the Minister of Munitions and Supply, Clarence Decatur "C.D." Howe. The worker in question was Alexander Dodwell, and the second fatal incident was an accident.⁴⁰ The report referenced the previously discussed work-related death at the plant, stating that "...the case of the first death... stated on his deathbed that it was his own fault, that he had broken the safety regulations."⁴¹ In his memoirs about his war work, Ken Smith also confirmed this account. The operator in question had attempted this manoeuvre of clearing a gunpowder blockage by hand once before, was only injured, and returned to work after a short stay in the infirmary; the second time he attempted the same action, the explosion killed him.⁴² Smith also highlighted a third accident:

Only one serious accident took place on Pellet and Tracer, and that was in the magnesium or gunpowder processing area. There are varying stories of what happened, but it is possible that the only person who really knew was one of the victims. She was a

³⁶ Ken Smith, interview and transcription by Ajax Public Library Student. *Ajax Public Library Digital Archive*. 1991/92. "Ken Smith describes shells & morale at Defence Industries Limited", accessed September 19, 2017.

³⁷ *The Story of Defense Industries Limited*, The Town of Ajax, February 16, 2016, "Betty's Monologue," YouTube. 41:30-42:15.

³⁸ Canada. Ministry of Munitions and Supply. *Inquiry Following Explosion – Alleged Defective Shell Casings* [Ottawa], July 31, 1942.

³⁹ Ken Smith, *Ajax the War Years 1939/45*, 29.

⁴⁰ Canada. Ministry of Munitions and Supply. *Inquiry Following Explosion – Alleged Defective Shell Casings* [Ottawa], July 31, 1942. Although Smith does not mention this incident, it is confirmed in the minutes of this inquiry by the Department of Munitions and Supply.

⁴¹ *Ibid.*

⁴² Smith, *Ajax the War Years 1939/45*, 29.

young woman who was a regular worker in that department, and must have been careless, or have made a mistake in procedure. The end of the building was demolished and the unfortunate woman and a male co-worker were taken to hospital. She was beyond help and he was badly injured.⁴³

This incident seems to be the only accident involving the serious injury and death of a female worker at DIL. Minor or non-life altering injuries were relatively commonplace, as Smith suggests.⁴⁴ DIL management produced an alternative narrative in *The Commando* by highlighting the number of injury-free days and by celebrating them through employee recognition. Furthermore, as indicated by the official investigative report after the explosion caused by Dodwell, C.D. Howe's faith in the security features and procedures in place at munitions plants remained unshaken. In the end, the overall low incidence of damage, disability, and death are remarkable, given that like the armed forces filled by civilians without previous military training, the munitions plants were also filled with relatively unskilled and recently trained men and women.⁴⁵

Despite the incidents resulting in injury and death, employees were imbued with safety as the top priority from their indoctrination lectures upon arrival at DIL Ajax. Safety precautions and clean-area drill became habit, however

the constant fear of becoming complacent within these practices kept management and employees alike on their toes. Adapting to their new jobs at DIL Ajax would require a certain amount of physical and mental courage from workers. Patriotism, financial incentives or even the infectious feeling of opportunity and adventure could motivate employees to continue their exhaustive work producing munitions. The dangers associated with creating explosive product however could not be offset so easily, and these fears were shared by employees as well as individuals outside the factory.

Beyond "Ronnie"

While there was a general scepticism among manufacturers and politicians about the suitability of unskilled civilians in war industry, most of these fears were directed at female workers. Women had been in the paid workforce since the early industrialization of the late nineteenth century. On the whole, however, their occupations were limited to traditionally gender-specific roles in textile or canning factories, and in the more "refined" occupations of teaching, clerical work, telephone operation, retail, and nursing (recall Johnson's former occupation in a Saskatoon hospital).⁴⁶ While those with factory experience may

⁴³ *Ibid.*, 35.

⁴⁴ "Ken Smith describes shells & morale at Defence Industries Limited," 1991/92, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada.

⁴⁵ Canada. Ministry of Munitions and Supply. *Inquiry Following Explosion – Alleged Defective Shell Casings* [Ottawa], July 31, 1942.

⁴⁶ Jeffrey Keshen, *Saints, Sinners, and Soldiers Canada's Second World War*. (Vancouver: UBC Press, 2007), 153.

have been seen as more suitable candidates for munitions production, their previous jobs were likely far from the labour required to produce shells, bullets, and bombs. Therefore, questions of their suitability for employment in war industries arose. Physically suited to industrial labour or not, women were needed to fill in the positions that men had left to join the services. In spite of deep-seated conservative values and sometimes misogynistic views about working women, the fourth and least “desirable” category of women—those who were married and had family responsibilities—were eventually offered employment in war industry out of necessity.

While patriotism may have been a factor, many women chose to enter the industry for a stable paycheck, especially important in wake of the Great Depression and the absence of male breadwinners due to enlistment. The majority of these women were identified by the National Selection Service and answered the call to aid in the war effort despite the widespread view that this work was a “violation of the social idea of the woman dedicated to home and family.”⁴⁷ On the factory floor, there was no room for debate about female workers’ employment. During peak production at DIL, female employees outnumbered their male co-

workers two to one.⁴⁸ There was no denying the important output by female workers; however, these contributions to the war effort were still be interpreted in a gendered manner. As Ken Smith reflected,

The people did it so willingly and the women particularly. You would see that boardwalk just full of people going to work in their coveralls, and the bulk of them would be women. The bulk of the people who did the work in Ajax were women. The men made the decisions and they managed the place and they did the heavy work and some of the most dangerous work around the amatol and TNT, but the women were the ones who did the important work of shell filling.⁴⁹

While Smith acknowledged the value of female production, he was pointed out the differences between male and female labour that were gender-defined.

In addition to the division of labor, wage discrepancy existed between male and female employees. While one may surmise that these two factors created male-female tensions on the line, this was not entirely the case at DIL. In fact, DIL paid their female employees well above the 1944 average war industry wage of 47.9 cents an hour.⁵⁰ Men at DIL received an average 71.2 cents an hour, however as historian Joan Sangster argues, relations between male and female workers

⁴⁷ Ruth Roach Pierson, *They’re Still Women After All: The Second World War and Canadian Womanhood*, 132.

⁴⁸ Keshen, *Saints, Sinners, and Soldiers*, 153. Additionally, Keshen comments that due to a woman’s natural inclination to succeed at these “repetitive and mundane” tasks, “they were less likely than men to become bored and distracted.”

⁴⁹ “Ken Smith describes shells & morale at Defence Industries Limited,” 1991/92, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada.

⁵⁰ Pierson, *Canadian Women and the Second World War*, 10.

could be a positive force in promoting an “unofficial” inclusive workplace environment strengthened by a recognition of class identity: all were workers.⁵¹ Work relations and experiences were gendered, but not necessarily polar extremes which caused tension between workers.

Johnson recalled that, at DIL, due to the separation of factory tasks, the only criticism women received had to do with incorrect job performance or incompetence. In her view, “There was no [male-female] competition going on, it was get the job done... The only thing that a man might say to a woman is she didn’t get it right, and if she didn’t get it right, she wouldn’t be there... it had to be exact.”⁵² On site, rooms and tasks were segregated by gender. She, for instance, worked in a strictly female environment. Men, such as Morris’s future husband Russell Johnson, handled explosives, carted heavy materials, or were employed in management.⁵³

While female workers may have had to struggle with both internal and exter-

nal tensions regarding their employment in a war factory, men were welcomed into this work environment. Russell Johnson sought work at DIL after being deemed ‘4F’, or medically unfit for active service.⁵⁴ As Louise Johnson reflected, “He had varicose veins in his legs and bad circulation I guess and he couldn’t pass the physical. So he was very disappointed when his friends went off to war and he was left behind...”⁵⁵ Many of the men on DIL’s floors were also deemed unable to serve. Again, in Morris’s view:

I would think that anyone well enough to serve would not have applied for a job there. There would be people that had four or five kids that would rather not, there would be that possibility... in the main, it would be people who could not pass the medical... it wasn’t that they weren’t well, it is just they weren’t well enough.⁵⁶

Canada, during the Second World War as during the First, upheld the traditional values that idealized the ‘masculine’, tough, militant warrior as the best

⁵¹ Joan Sangster, *Transforming Labour: Women and Work in Post-War Canada* (Toronto, ON: University of Toronto Press Incorporated, 2010), 153.

⁵² Louise Johnson, interview, 22 January 2018.

⁵³ “Louise Johnson describes how she met her husband at Defence Industries Limited.” 1991/92, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada. Although, Joan Sangster reports “...many women recalled in later years that their male co-workers had been polite and even “chivalrous,” [while some] remembered lewd comments or ogling...” Sangster, *Transforming Labour*, 153.

⁵⁴ Louise Johnson, interview and transcription by Ajax Public Library Student, *Ajax Public Library Digital Archive*, 1991/92. “Louise Johnson describes how she met her husband at Defence Industries Limited.” Additionally, the National Film Board production, *Rosies of the North*, which focused on the Canadian Car and Foundry plant in Fort Williams, Ontario highlights many cases of gender inequality and harassment which female workers were often subjected to in the industrial workplace during the Second World War. “Rosies of the North”, directed by Kelly Saxberg, aired 1999 (Montreal, QC: National Film Board of Canada, 1999), DVD.

⁵⁵ *Ibid.*

⁵⁶ Louise Johnson, interview, 22 January 2018.

type of male citizen.⁵⁷ As Ken Smith contended, many of his male co-workers were not healthy enough to cope with front line service or were highly educated in engineering or sciences and therefore put their talents to best use on the home front. These civilian engineers and tradesmen formed the backbone of the large civilian turned industrial-soldier population at DIL.⁵⁸

While these men were not huddled in foxholes, those who remained on the home front were still seen to be filling a critical wartime role. As well, in comparison to the hyper-feminization of their co-workers and their roles, the tasks men performed in war factories were often hyper-masculinized. Their assigned duties in war factories involved heavy lifting and the bulk of the handling of explosive material, duties designed only for men. It would appear that there would be no reckoning for 'lost masculinity' by men who could not serve and remained on the homefront for whatever reason. While male attitudes towards their female co-workers varied, the two genders were forced to come together within the factory, and often came together voluntarily on the dance floors of the Rec Centre.

Section Three: Operation Foxtrot

Focusing solely on weighing explosive and assembling shells reveals only half the story of DIL Ajax and its

residents during the war. How the men and women of DIL Ajax lived off-shift is as much a part of the munition worker experience as the job itself. Leisure during their downtime was critical to their mental well-being and ability to work through another shift the next day. Smith recalled that, "To balance the hazards of their daily shift the workers played almost as hard as they worked."⁵⁹ The long eight-hour shifts on the production line dealing with explosives drained any employee, skilled or newly trained. Additionally, the constant fear of producing a single, fatal spark, of causing an accident through the slightest miscalculation of movement or lack of care certainly must have weighed on each employee's mind. The importance of safety, meticulous attention to detail, and dedication during their forty-eight-hour work week led many employees to seek escape outside shiftwork, and in doing so, the workers created a community outside the factory.

In addition to covering plant news and announcements, *The Commando*, the plant's newsletter, was also a pillar for the social structure beyond the wire and is a key instrument for investigating the social lives of DIL workers. As the factory and its newspaper were approaching peak productivity, so too were the plant-wide sports leagues. Men's softball games in July 1942 were played at 5:30PM and 7:00PM, depending on the line or department division. Between the two divisions, nine teams were formed. A note

⁵⁷ Pierson, *They're Still Women After All*, 129.

⁵⁸ Smith, *Ajax the War Years 1939/45*, 130.

⁵⁹ *Ibid.*, 95.

below the advertised schedule stated "All players, men and women both with intermediate or senior baseball experience are requested to get in touch with Red Devlin...", suggesting more positions within the already populated league were open.⁶⁰ Nearly every edition of *The Commando* featured score updates and league standings for the various activities around the plant.

In their spare time, some employees also enrolled in classes and courses for vocational or other specialty training; Louise Johnson decided to take a typing class.⁶¹ Courses were also offered to further individual skills in war industry operations through the War Emergency Training Program.⁶² Just over 100 plant schools were established by mid-1943. These were originally intended to strengthen military trades and skill sets for potential candidates for the armed forces, if the need for enlistment rose, which included clerical roles.⁶³ Activities were abundant off-shift, and catered to a wide swath of interests and talents to keep workers occupied and engaged within the DIL community.

Amorous opportunities were abundant at DIL Ajax. Morris and co-worker Russell Johnson chatted while he dropped off fresh boxes of cordite to be weighed, which led to marriage in September 1944.⁶⁴ As frequent as sports scores in *The Commando* were announcements of worker marriages, births, anniversaries, etc. On 31 December 1943, *The Commando* reported that "Don and Marie Lawrence had their first child... She has been named Gloria Marie. Mrs. Lawrence is from Sidney Mines, Cape Breton, and has been an employee on Cap and Det for more than a year. Don at present is on night duty at the Gatehouse."⁶⁵ The cover of the June 1945 *The Commando* even featured figurines, titled the 'June bride' and her groom, who is holding a cook book in his hand while sporting a grimace.⁶⁶ The editors and artist Jim Lynch acknowledged that after the experiences of working at DIL, women would continue to be occupied in peacetime, as "...some of the husbands [would] have to handle the cooking in order to get a meal, but we really doubt that many of them will carry their cook-book to the altar."⁶⁷

⁶⁰ "Men's Softball League Schedule," 20 July 1942, COM1942VOL1NO1, *The Commando* 1, no. 1, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada.

⁶¹ Louise Johnson, interview and transcription by Ajax Public Library Student, *Ajax Public Library Digital Archive*, 1991/92, "Louise Johnson describes her job at Defence Industries Limited."

⁶² Jean Bruce, *Back the Attack! Canadian Women During the Second World War - at Home and Abroad* (Toronto: Macmillan of Canada, 1985), 69.

⁶³ *Ibid.*, 70.

⁶⁴ "Works News in Brief," September, 1944, COM1944VOL3NO2, *The Commando*, vol. 3, no. 2, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada.

⁶⁵ Smith, *Ajax the War Years 1939/45*, 93. Cap and Det refers to the line at DIL which was solely responsible for producing blasting caps and detonator components of various shells.

⁶⁶ "June," June, 1945, COM1945VOL3NO12, *The Commando*, vol. 3, no. 11, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada: 1.

⁶⁷ *Ibid.*

The construction of government wartime homes began in January of 1942, in anticipation of the new waves of workers, as personnel recruitment drives intensified.⁶⁸ Progress on these homes was slow, as applications had exceeded available homes a mere six months later, in July of 1942.⁶⁹ However, George Finley, the local administrator of the government-owned houses commented in *The Commando*, "...no one should be deterred in applying for a house as the prospect of further building is dependent on the number of applications filed with his office."⁷⁰ These wartime homes added to the formerly diminutive Pickering village.⁷¹ This little Pickering community blossomed and formed entire streets in the future city of Ajax—these homes were located north of the present-day 401 Highway, with the first homes being constructed on the newly constructed Mary Street and Cheese Factory Road (later Ritchie Road).⁷² The new residents of DIL created the foundation of the city of Ajax in between shiftwork and big band dances. Through employment at the factory, employees forged lifelong bonds with one another. For some, the al-

lure of this community would hold them to Ajax in the post-war years. Although as quickly as the hustle and bustle of war arrived in Ajax, the tide began to turn in favor of the Allies and the plant geared down for inevitable peacetime.

Closure: Moving On From DIL & Modern Reflections

The entry of the United States into the war in late 1941 introduced an industrial giant to the Allied war machine. The Canadian war industry began to gear down as early as 1943. For some at DIL, the war ended earlier than for others, with plant layoffs and transfers coming into effect in late 1942 or early 1943. Russell Johnson's pink slip was delivered to him during one of the late rounds of layoffs at DIL Ajax in early 1945.⁷³ He found employment in the village, working with a painting company, while DIL's numbers slowly eroded as the war drew to a close. His wife Louise remained on staff.⁷⁴ In early 1943, Louise Johnson's blue shift on Line No. Three was reduced to two shifts, which resulted in a lay-off of workers 'on the main,' Johnson remembers.⁷⁵

⁶⁸ Archie MacDonald, ed. *A Town Called Ajax*. (Ajax, Ont.: Ajax Historical Board, 1995), 46.

⁶⁹ "First Wartime Homes Completed and Occupied By Tenants." July 20, 1942, COM1942VOL-1NO2, *The Commando*, vol. 1, no. 2, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada: 1.

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

⁷² MacDonald, ed. *A Town Called Ajax*, 46.

⁷³ "Female factory workers kept army supplied during WWII," *NewsDurham*, uploaded 11 November 2010 (Metroland Media Group Ltd., 2010). YouTube: 3:40.

⁷⁴ "The Story of Defence Industries Limited - Ajax Bomb Girls Legacy Campaign 'Shell-a-bration' Performance," uploaded 16 February 2016 (The Town of Ajax, Ajax, ON, 2016), YouTube: 101:26.

⁷⁵ *Ibid.* 59:17.

Luckily, she had cordite experience from her original days at DIL and was subsequently transferred to Line No. One.⁷⁶ Eventually Louise Johnson joined the office staff:

...the area supervisor came down the line one day and said to me "I understand you can type". Well the typing course was the pits and it was an old manual typewriter and I couldn't do it without looking so it was a search and peck method. However, I said to him I have a card that says I can. I got a job in the office typing production reports. Searching and pecking. And I also got a raise. I think it was 4 cents more to do that.

Johnson's task thus shifted from weighing cordite to typing up pink slips for all DIL employees. Figuring she could not leave until this task was completed, Johnson set aside her name and slip as the last one to complete.⁷⁷ Louise Johnson was the last paid production employee on DIL's payroll in 1945.⁷⁸ While long anticipated, the official news of the plant's closing date was reported in *The Commando* in a June 1945 editorial:

THE PLANT IS CLOSING. It has come at last... Actually it is no surprise to anyone that the work of making munitions would not continue too long after we broke the back of Nazi Germany: but even then it's a bit of a shock to know that in only a couple of

months this huge plant will close its gates and the 'old gang' will be no more...⁷⁹

The headline on the opposite side of this page read: "CHECK OUT PROCEDURE: Where lay off is in excess of 100 per day."⁸⁰ The instructions outlined where to turn in company-issued kit and tools and access new temporary passes, which allowed the holder entrance past the guardhouse for a final punching of the time clock. This last step was to be completed by eight in the morning of the final shift.⁸¹ Wartime workers recruited for the cause moved on from DIL to find new work, return home across the country, or settle into the new post-war town of Ajax.

Post-war life for Canadians who had lived through the war was invariably shaped by their experiences and memories of those years. For DIL workers, who could forget the long shift hours, the dangerous and often tedious tasks, the kindling of friendship at after-shift gatherings at the Rec Hall for bowling or dances? For the men and women who came seeking employment and the promise of a hearty weekly paycheck, now gone, their loss of financial stability would be substantially felt as they transitioned back home or into another field of work—if they could find employment.

⁷⁶ *Ibid.*

⁷⁷ *Ibid.*, 101:26.

⁷⁸ "The Story of Defence Industries Limited -- Ajax Bomb Girls Legacy Campaign 'Shell-a-bration' Performance," uploaded February 16, 2016 (The Town of Ajax, Ajax, ON, 2016), YouTube: 101:26.

⁷⁹ "And We Say So Long," June, 1945, COM1945VOL3NO11, The Commando vol. 3, no. 11, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada: 2.

⁸⁰ "Check Out Procedure: Where Lay Off is in Excess of 100 Per Day," June, 1945, COM1945VOL-3NO11, The Commando vol. 3, no. 11, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada: 2.

⁸¹ *Ibid.*

Johnson, like many of her female counterparts, recalled a sense of confusion and lack of direction in the years following armistice:

...When I took my quit slip and went to selective service... we did get some payment, I don't know how long it lasted... it wasn't significant... the situation was, I said to the person who was processing my claim, and when this runs out I will come back and we will find a job for me? She said "Don't you come back here, there are no jobs for women." It never occurred to me that I wouldn't be able to work, I had been working since I was four, carrying buckets and picking weeds and here I wasn't able to find a job!⁸²

There was an assumption that on war's end, women would step aside and allow returning veterans to re-occupy the positions they held before the war.⁸³ Canadian women over the course of the war had involved themselves in war-related labour, homefront activities and organizations that had significantly affected their lives. A large number of the rural population had moved into urban centres, women had lived and supported themselves independently, and had enjoyed social outings without male accompaniment or family approval.⁸⁴ Yet the natural and expected course of action

was to return domestic life, to pre-war ideals. A contemporary public opinion poll revealed that "...70 percent of women supported giving veterans the first crack at postwar jobs, though such surveys never broke down the results between women who were employed and those who stayed at home."⁸⁵

Between the layoff in 1945 and the birth of their first daughter in 1948, Louise Johnson experienced the post-war transition as a dreadful phase in her life:

Women like me were very frustrated. We knew that the men who had sacrificed their youth needed the jobs, but, what about us? One of my friends joked that she was coming to inspect my house because I'd washed the walls so often that the nails probably showed through. Female war workers drifted around without money or activities. Few of us could take courses. It wasn't until the babies arrived that any of us felt that we had a purpose.⁸⁶

Thereafter, life seemed to come together for Louise Johnson. She and Russell purchased their wartime home on Glynn Road for \$2,995 in 1951.⁸⁷ There she busied herself as a wife and mother, through involvement at school activities and selling subscriptions for a local newspaper. She remained involved in the Ajax community beyond her husband's death in 1965.⁸⁸

⁸² "The Story of Defence Industries Limited -- Ajax Bomb Girls, YouTube: 103:25.

⁸³ Saxberg, "Rosies of the North," DVD: 39:30.

⁸⁴ Kate O'Rourke, Lorna R. McLean, and Sharon A. Cook, eds. *Framing Our Past: Canadian Women's History in the Twentieth Century*, (Montreal, QC: McGill-Queen's University Press, 2001), 319.

⁸⁵ Pierson, *Canadian Women and the Second World War*, 165.

⁸⁶ *Ibid.*

⁸⁷ "Louise Johnson describes accommodations after Defence Industries Limited," 1991/92, Defense Industries Limited fonds, Ajax Public Library Digital Archives, Ajax, ON, Canada.

⁸⁸ "Firing Up and Gearing Down." Reading and Remembrance: Women At War (Durham West Arts Centre: Pickering, ON, 2007), newsletter: 3.

Regardless how the men and women of DIL spent their years in peacetime, very few have reflected negatively on their experiences in munitions or manufacturing. Louise Johnson, a permanent resident of Ajax, though still a Prairie girl at heart, has had many opportunities to reflect on her wartime service through her involvement with the Ajax Historical Society and various campaigns to raise awareness through the DIL Ajax Bomb Girls organization. Johnson has commented that their work's immense importance was felt by all employees, who took seriously the responsibility to produce quality munitions: "We were glad we were contributing our little bit. To help the boys get back home... we just did our job, and did it well."⁸⁹ Many years later, her attitude and dedication towards the war effort remained unshaken: "Others may have a different view, but my view was that if we did not win this war, we wouldn't have a future."⁹⁰

Conclusion

To mark the seventy-fifth anniversary of DIL Ajax's founding, in 2016, the town of Ajax, Ontario hosted a celebratory gala with a formal programme featuring musical entertainment, and per-

formers acting through monologue different perspectives at DIL among other acts, and a special on-stage interview with Louise Morris Johnson. Also present were original 'bomb girls' Donna Anderchuck, Anna Bevy, Clara Lucier-Valleincourt, and Veronica Ryder alongside actors and producers from the Global TV 2012-2013 television series *Bomb Girls*. The series took place at the fictional Victory Munitions plant in Toronto, and followed the lives of several workers at the plant, male and female.⁹¹ Officially, the series was based on accounts from two Ontario plants—DIL Ajax and the General Engineering Company of Ontario (GECO) plant in Scarborough.⁹² Although dramatized to appeal to audiences, many of the scenes mirrored experiences and moments of terror that may have played out in either factory. Johnson held this show in high regard, having met with the producers in her living room to help create this fiction based on fact series.⁹³ The commemorative efforts in Ajax continue into 2018, as a statue featuring DIL workers to pay homage to the munition workers is currently being crafted by local artist Walter Schultz. His vision is to represent actual workers and soldiers in a two-sided monument, utilizing photographs of each group to add realism and meaning to the piece.⁹⁴

⁸⁹ Louise Johnson, interview, 22 January 2018.

⁹⁰ Louise Johnson, embedded video "DIL Interviews Former Defense Industries Limited Employee and Ajax resident, Louise Johnson," *Honour Ajax Bomb Girls*. 1:30.

⁹¹ Jessica Smith Cross, "Bomb Girls actress honoured to salute women like one she portrays on TV," *Metro News*, (Toronto, ON: 9 November 2012).

⁹² *Ibid.*

⁹³ Louise Johnson, interview, 22 January 2018.

⁹⁴ "Sculptor of Ajax Bomb Girls monument looking for inspiration from your old photos," *CBC news*, (Toronto: ON, 29 August 2017).

The finished monument will be erected in Pat Bayley Civic Square in downtown Ajax.⁹⁵

The story behind DIL Ajax and how its workers lived and worked, and how a community in rural Ontario grew through the war because of that war, deserves to be better known. DIL Ajax played a critical role on the Canadian homefront, supplying forty million units of munitions for the Allied war effort.⁹⁶ This monumental contribution from the largest munitions factory in the commonwealth family came through the substantial effort of its employees.⁹⁷ Munition workers at DIL and across war industry, while perhaps initially motivated by the impressive wages offered, remained motivated by a greater calling on relatively dangerous factory floors, which left them exposed to chemicals and explosives. This arduous work was not for the faint of heart. Every worker

at DIL had their own private challenges to overcome in terms of working in a live munitions factory, and often the women in these factories were subjected to a whole world of criticism for simply being employed in the war industry.

During the closing remarks of the seventy-fifth anniversary gala celebrating DIL and its employees, Colleen Jordan, Ajax Councillor and Chairwoman of the Honour Ajax Bomb Girls Legacy Campaign commented, “We have a responsibility; we are the stewards of that history. And our duty is to share the stories to future generations so they can understand the contributions... made so that we can enjoy the freedoms we live with today.”⁹⁸ The stories and everyday experiences of Defense Industries Limited workers are an incredible wealth of knowledge and insight into the dedication and struggle of civilians on the Canadian homefront during the Second World War.

⁹⁵ *Ibid.*

⁹⁶ D’Arcy Jenish, “The Bomb Girls of Ajax.”

⁹⁷ *Ibid.*

⁹⁸ “The Story of Defence Industries Limited - Ajax Bomb Girls,” YouTube: 107:00.