

190 Edwin Ave

A metals yard at 190 Edwin Avenue was one of many neighbourhood improvement projects of Toronto's Air Pollution Advisory Board in the mid 1950s. Tucked into the Junction Triangle, east of Osler Street and immediately south of the CPR, 190 Edwin absorbed scrap metals, and turned out ingots and metal coatings. The facility certainly emitted smoke, but industrial dust was a greater problem. 190 Edwin dumped metallic dust, fumes and smoke on a thickly-populated blue-collar neighbourhood. The emissions constantly fumigated the Catholic school next door. But although 190 Edwin's atmospheric offences were conspicuous they lay outside the scope of the city's smoke control bylaws until the mid 1950s.

From the 1890s 190 Edwin accommodated a variety of messy industries. In 1913 it was occupied by a firm of mining engineers and chemists, Isaiah D Dewar & Son, and the Toronto Wire Nail & Tack Co.¹ Dewar & Sons had departed by 1916,² while the fastenings operation continued under a variety of names. The P L Robertson Manufacturing Co Ltd was making nails here in 1922,³ and the Toronto Wire & Nail Co in 1927.⁴ The major long-term environmental risk from these types of operations would be non-ferrous metals, mainly zinc, used as coatings on nails and tacks, and possibly emitted by the mining chemists. 190 Edwin had two rail sidings off the CPR which suggests considerable quantities of material moved and processed, and major deliveries of fuel.

Non-ferrous coating would continue in the 1930s, but under new ownership and with new chemistry. By the early 1930s the Wagman family had acquired 190 Edwin and used it to accommodate two of their metals businesses. Their scrap metals business, Zelig Wagman & Son, harvested metals of all kinds from urban sources, while their metals coating business shared the same premises, company president, and phone number. It was known as the Toronto Cadmium Plating & Tinning Co Ltd.

Cadmium was a wonder metal of the 1920s. Its major use was as a corrosion-resistant coating for steel. Electro-plated cadmium coatings were applied to auto and radio parts from the later 1920s, and more generally in subsequent decades. Eaton's sold socket sets plated with cadmium, Rogers and DeForest sold radio sets with cadmium plated components. For several years cadmium plating on consumer goods was a mark of modernity. There were even 1930s race horses called *Cadmium*. Canada then as now was then one of the world's major cadmium producers. The first Canadian mine intended to extract cadmium began operating at Trail BC in 1928.⁵ Production was small, 3-400 tons a year in the early 1930s, but this was 25% of the world's total.⁶ In absolute terms the quantities of cadmium used at 190 Edwin must therefore have been fairly small, but they were significant.

¹ Might 1913.

² Might 1916.

³ Might 1922.

⁴ CTA City of Toronto Building Permit A10749 issued 30 Dec 1927.

⁵ *Toronto Star* 14 Jul 1930 p. 12.

⁶ *Toronto Star* 15 Jul 1930 p. 13.

There is some environmental risk attached to zinc, but cadmium has a much more hazardous reputation. It can be fatal to inhale fumes from cadmium plating or cutting cadmium-plated steel. The first two industrial deaths in Ontario to involve cadmium occurred in March 1937. Two men who worked at the Parmenter & Bulloch rivet plant in Gananoque were overcome by fumes from a cadmium annealing process, and died in a matter of hours. Some of the medical testimony at the subsequent inquest expressed surprise at the toxic nature of cadmium, but provincial industrial health officials seemed quite familiar with the hazard.⁷ Released into the environment, cadmium has little effect on plants, but harms animals, and remains long-term in soil and organ tissue. Ingested in sufficient quantities cadmium causes damage to major organs in humans, especially kidneys, it damages the reproductive system, the central nervous system and the immune system. Cadmium is suspected to play a role in DNA damage and cancer. It is one of the metals targeted for special attention in Ontario's *Contaminated Site Guidelines*.

The plating and tinning operations at 190 Edwin were active by the mid 1930s. Toronto Cadmium undertook to plate and re-tin enamelware and sanitary ware of various kinds, mainly for the food processing industry. Much of this was done on site, but the company had a portable operation which could be sent out to repair large immobile pasteurising equipment.⁸ To clean the metals awaiting electroplating in zinc or cadmium, there were vats of acid, degreasers and other chemicals. Toronto Cadmium had some tinning furnaces and annealing furnaces, and a hot-dip galvanizing plant, but most of the heat-treatment of metals was associated with Zelig Wagman & Son. The scrap side of 190 Edwin had several crucibles and reverberatory furnaces. There was one for brass scrap and one for aluminum scrap. Some of the furnaces were used to burn off solders and other impurities from incoming non-ferrous scrap, others were used to refine and smelt non-ferrous materials. Some described Wagman & Son as a scrap dealer, but in its corporate imagination it was a firm of refiners and smelters, and a manufacturer of ingots.⁹

The yards at 190 Edwin were packed with bales of scrap and metallurgical coal. The cluttered nature of the working space was mentioned frequently by visiting smoke inspectors and firemen. Pressed for space, the company absorbed the adjoining road allowance. The dead end of Edwin Avenue, south of the CPR became a place where trucks unloaded in a fenced area, with a large derrick. In this illegal encroachment on city property, incoming and outgoing scrap was piled, trucks loaded and unloaded.¹⁰ When the city stirred itself to act on the encroachment in 1948, it was mainly to ensure that the company paid for the property.¹¹ Edwin became a major truck route, with heavy loads of coming and going on behalf of both companies.

Although 190 Edwin was a fairly-small one-storey industrial site, it employed numerous workers. There were more than 100 of them in 1949, although the facility was

⁷ [Toronto] *Globe & Mail* 17 Apr 1937 p. 4.

⁸ [Toronto] *Globe & Mail* 19 Mar 1934 p. 19.

⁹ CTA City of Toronto Assessment Rolls 1948 for 1949 Ward 6 division 6.

¹⁰ CTA RDY 1761 Feb 6 48 Occupation of street Edwin Ave; CTA 1947 APM 18A.

¹¹ TCM 1949 Appendix A Works #7 6 Apr 1949 p. 837.

particularly busy at the time and was operating shifts more or less continually. Newspaper sports pages show that it was a workplace of considerable camaraderie. From the mid 1930s to the late 1940s Toronto Cadmium fielded a number of successful sports teams in the industrial leagues. The Cadmiums or Platers as they were known, faced the Electric Men of CGE in baseball, the Rubbermen of Dunlop at Softball and other local industrial teams. Occasionally they made the city or provincial playoffs.¹² Joe "Red" Wagman was a key figure in their success.¹³ The Wagman companies were still essentially Jewish family businesses, and Jewish names featured prominently in their sports teams. Their successful 5-pin bowling team in the late 1930s included a Kardish, a Wultz, a Soloway, a Grosbien, and an Abrams.¹⁴

Wartime and the immediate post-war period were busy years at 190 Edwin. Plating and coating was required for munitions production, but non-ferrous and scrap recovery were also crucial. The early post-war years were also ones of vastly increased civilian consumption and heavy demand for coating, plating and non-ferrous metals. Drapery tracking, metal furniture, cabinet hardware, and the automotive sector all demanded the services of 190 Edwin. In an effort to curb air emissions the city in 1946 persuaded Wagman's to install a 24-cell bag house on their brass furnace. By 1949 it had been expanded to 69 cells and was harvesting tons of dust daily. The company also added a 110 foot smokestack to disperse contaminants over a wider neighbourhood.¹⁵

During the 1940s the workforce increased, shift work intensified, and accidents multiplied at 190 Edwin. A worker was nearly electrocuted by machinery with a ground fault in 1942.¹⁶ A pan of oil exploded on a tinning furnace later the same year.¹⁷ In the busy post-war period there were two major fires.

The first major fire occurred in the early hours of Easter Sunday 1949. It began among Wagman's reverberatory furnaces, and spread to the Cadmium building. A two-alarm blaze drew nearly 100 firefighters. Uncovered vats of acid and jagged bales of scrap added to their hazards. Fire threatened to jump the narrow lane which separated 190 Edwin from the homes on Osler Street, but firefighters managed to extricate four company trucks in the path of the flames. A crowd of several hundred gathered in Carlton Park to watch. During the fire thousands of gallons of water flowed into the catholic schoolyard. The metals yard at 190 was badly damaged and shut down for repairs.¹⁸

From this point on the residents began to complain about 190 Edwin. They objected to its noise, its smoke and its dust. They complained about its 24-hour operations. The staff at St Rita's Catholic school objected to the smoke and dust issues. Prompted by

¹² [Toronto] *Globe & Mail* 11 Jun 1937 p. 19; 6 Aug 1937 p. 10; 10 Aug 1937 p. 10; 24 Jun 1938 p. 19; 3 Jun 1939 p. 17; 21 Jun 1939 p. 15; 17 Aug 1939 p. 14; 12 Aug 1943 p. 14; 27 Jun 1944 p. 17; 28 Jun 1945 p. 17.

¹³ *Toronto Star* 6 Aug 1937 p. 10; 10 Aug 1937 p. 10.

¹⁴ [Toronto] *Globe & Mail* 18 Oct 1938 p. 21; 9 Mar 1939 p. 20.

¹⁵ CTA Air Pollution Advisory Board Minutes 29 Dec 1949.

¹⁶ [Toronto] *Globe & Mail* 16 Jun 1942 p. 4.

¹⁷ [Toronto] *Globe & Mail* 18 Sep 1942 p. 4.

¹⁸ *Toronto Star* 18 Apr 1949 p. 3; *Globe & Mail* 18 Apr 1949 p. 10.

complaints the city's smoke inspectors began to make regular visits to 190 Edwin. There were 134 inspections between 1949 and 1955, but smoke violations were found on only 13 occasions.¹⁹ Residents deplored the nuisance of industrial dust, but this was beyond the scope of the smoke control bylaws. The inspectors could act against coal smoke, but not against emissions of zinc, cadmium, lead, bismuth, antimony and tin.

The complaints continued and the city's Air Pollution Advisory Board took up the matter. They spoke to Wagman's about their reverberatory furnaces, and sweating oven²⁰ and to Cadmium about its plating fumes. Wagman was persuaded to decommission the sweating furnace and send the crucible emissions to the bag house. To curb emissions from their aluminum furnace Wagman's added another 75 foot smokestack but balked at paying for an electrostatic precipitator, or venting the aluminum fumes through the bag house. Joseph Wagman complained that he had already spent \$40,000 on pollution control equipment and could not afford more. Smoke inspectors noted though that unpleasant fumes from the hot-dip galvanizing and pickling processes continued to be emitted.²¹ The plant's four smokestacks and numerous processes continued to spew nauseating nuisances into the air. The complaints continued, and Osler & Franklin residents petitioned for action in October 1952.²² Health inspectors were summoned, but in a place handling deadly toxins, strangely found no health nuisances. They did, however, notice open burning of wastes in the company's yard.²³

Some progress had been made, however, and the smoke inspectors were beginning to report satisfactory conditions at 190 Edwin by the fall of 1952.²⁴ It was unstable though, and by February 1953 the companies were backsliding.²⁵ There were unpleasant night-time odours, when smoke inspectors could not easily regulate "opaque" smoke. One spring morning in 1955 the principal of St Rita's summoned the smoke inspector who found classrooms filled with blue haze.²⁶ On another occasion the fumes were so strong that dozens of the children vomited.²⁷ Severe vomiting, diarrhoea and stomach pains are a classic sign of acute cadmium fume exposure.

A combination of the perpetual noise, smoke and dust, together with the alarming contamination of St Rita's stoked the fires of local opposition. The Air Pollution Advisory Board heard a number of the complaints, but so did the city's Board of Control. Alderman Mary Robinson was a key complaining voice at city hall, five hundred residents, she said, "were subjected to this torture day and night". The details of her complaints did not enter the reports of the Board of Control. To read her fiery statements

¹⁹ CTA Air Pollution Advisory Board Minutes 16 Sep 1955.

²⁰ CTA Air Pollution Advisory Board Minutes 29 Dec 1949.

²¹ CTA Air Pollution Advisory Board Minutes 13 Apr 1950.

²² CTA Air Pollution Advisory Board Minutes 16 Sep 1955.

²³ CTA Air Pollution Advisory Board Minutes 29 Feb 1952.

²⁴ CTA Air Pollution Advisory Board Minutes 12 Nov 1952.

²⁵ CTA Air Pollution Advisory Board Minutes 26 Feb 1953.

²⁶ CTA Air Pollution Advisory Board Minutes 16 Sep 1955.

²⁷ [Toronto] *Globe & Mail* 14 Jul 1955 p. 10.

about 190 Edwin you have to go to the newspapers or the Air Pollution Advisory Board.²⁸

The enforcement problem lay with the limited scope of the smoke control bylaws and the limited monitoring programmes the city had established. There were dust monitoring stations in use by 1955, but none was positioned to monitor 190 Edwin. In any case the city had no policy of enforcement of smoke control by instrumental monitoring. The criteria were visual, and could only be applied by smoke inspectors in daylight. Refining and smelting businesses were provided with exemptions from the smoke bylaws, and these only covered smoke emissions, not dusts. Invisible metallic fumes or translucent dust hazes were unregulated because the bylaws focussed on opaque smoke, not zinc oxide or cadmium sulphide. The Air Pollution Advisory Board suggested that 190 Edwin's smelter exemption be cancelled,²⁹ while the city merely suggested that the companies be prosecuted for violation of the Lord's Day Observance Act.

Another major fire erupted at 190 Edwin in September 1956. The two-alarm blaze lasted for less than an hour, with flames leaping 60 feet into the air. It started early on a Sunday evening, and may have been deliberately set. Once more, a crowd of hundreds watched from Carlton Park. Parts of the Cadmium plant were gutted, but the furnaces of Wagman's were unaffected. The clutter of the premises, particularly the bales of steel, added to the hazards of firefighting. Firefighters from three stations and 13 fire trucks attended.³⁰

Over the next 15 years the operations at 190 Edwin were gradually reduced. 190 Edwin continued as a non-ferrous scrap metals site through most of the 1960s.³¹ Wagman's was restructured in 1961, as shares changed hands privately.³² The company added a yard in suburban Agincourt³³ and around 1970-71 the premises at 190 Edwin were cleared by demolition.³⁴ At some point in the 1970s they were acquired by the Catholic school board, and incorporated into the school yard of a rebuilt St Rita's.

I have not been able to find out what happened to the metallic dusts which rained down on the neighbourhood during 70 years of non-ferrous plating and scrap recovery. Zinc would be a major constituent, along with cadmium and lead. There would have been some tin, bismuth and antimony mainly because these were common ingredients in non-ferrous solders and castings.

Contaminated soil as a legal concept, did not really exist in Ontario until the 1985 *Site Decommissioning Guidelines*. 190 Edwin was tidied up around 1970-71, and some of its

²⁸ [Toronto] *Globe & Mail* 14 Jul 1955 p. 10; CTA Air Pollution Advisory Board Minutes 16 Sep 1955.

²⁹ CTA Air Pollution Advisory Board Minutes 16 Sep 1955; TCM 1955 Appendix A Board of Control #15 1 Jun 1955 pp. 1399-1401.

³⁰ [Toronto] *Globe & Mail* 10 Sep 1956 p. 1.

³¹ DBS 1961 Non-Ferrous Scrap Metal Can1 CS8.5 41-007 V.16.1; DBS 1967 Non-Ferrous Scrap Metal Can1 CS8.5 41-007 V.23.1.

³² *Ontario Gazette* 1960 p. 3541; 1961 p. 2145.

³³ Dunn & Bradstreet 1968.

³⁴ CTA 1970 APM #66 shows them intact, CTA 1971 APM #66 shows demolition almost completed.

site contaminants no doubt went to landfill. The Leslie Street Spit, I suspect, received loads of Edwin Avenue's metallic-dusted demolition wastes. But most of the metallic dusts which rained down on the neighbourhood are presumably still there. For the sake of their kidneys, nervous systems, and pregnancies one hopes that today's residents have taken the precaution of growing backyard vegetables in clean, imported soil.