

Smells Like Money

Oakland County Residents Raise a Stink about Continental Aluminum

Robin Allen didn't used to have asthma. Then Continental Aluminum moved in 200 feet from his house in New Hudson, a tiny, and still mostly rural, community in western Oakland County. Now he can't go outside without breathing a noxious mixture of aluminum smelting fumes. "We are at our wits' end here, people are getting sick, we've talked to every agency and legislator, and no one is willing to step in and shut this place down," said Allen.

The fumes are produced by a secondary aluminum smelter which recycles aluminum. The aluminum arrives at the plant from shredders, huge machines which mechanically shred vehicles, home appliances and other metal scrap into small one-inch pieces. Emissions from aluminum smelters are especially toxic because the metal from shredder is often contaminated with toxics or materials which form pollutants when heated. For example, chlorine-containing



Continental Aluminum was kicked out of Wayne County for repeated environmental violations and hostile relations with residential neighbors. Now they've brought their business style to the small Oakland County town of Lyon Township.

Continental Aluminum's History of Non-Compliance

	Year	Complaints	Notices of Violation
Detroit	1990	27	5
	1991	16	2
	1992	18	1
	1993	14	4
	1994	23	3
	1995	24	3
	1996	18	3
	1997	13	2
Lyon Twp	1998	18	
	1999	113	4
	<u>2000</u>	<u>26</u>	<u>2</u>
	Total	310	29

Note: Continental Aluminum was also cited for MIOSHA violations for failing to inspect and maintain process equipment in July 1999.

materials, such as PVC plastics from cars and other products, and mercury from car switches show up at metal smelting facilities.

Emissions from the aluminum smelting process include hydrogen chloride, chlorine, hydrogen fluoride and, based on data from other aluminum smelters, dioxins. HCL and HF can burn and irritate the mouth, nose, throat and lungs potentially leading to bronchitis and other breathing disorders. Dioxin, one of the most toxic compounds known, causes a variety of severe health effects, including cancer.

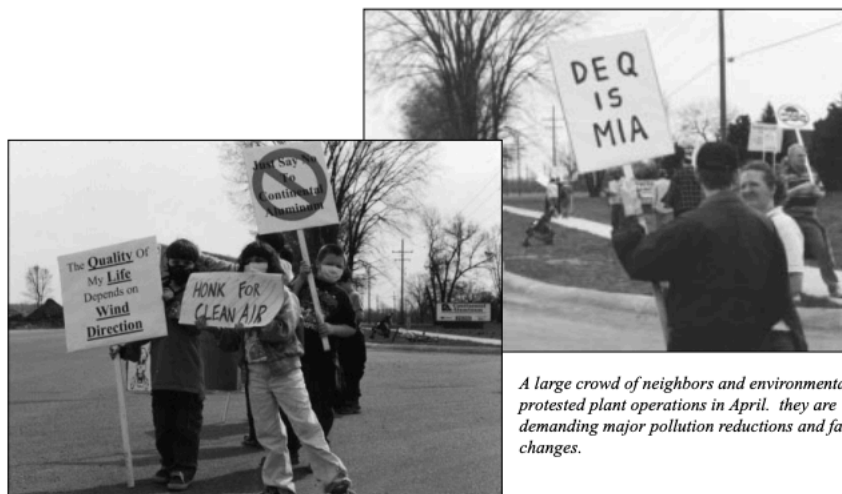
Continental Aluminum handles more than 6 million pounds of scrap aluminum from shredders each month, producing approximately 75 million pounds of 4- to 6-ounce ingots for use in steel making and in other cast aluminum products. Their customers include most of the major North American integrated steel manufacturers and cast parts for domestic automakers.

What Neighbors Knew for Years

On March 20, 2000, the Michigan Department of Environmental Quality Contin (DEQ) cited Continental for violation of State Air Pollution Rule 203 which requires a

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A large crowd of neighbors and environmentalists protested plant operations in April. they are demanding major pollution reductions and facility changes.

company to submit "sufficient and accurate information" on their potential emissions before receiving an air permit. This Notice of Violation confirmed what neighbors had known for three years. "Anyone who lives in the community already knew that the plant wasn't operating properly," stated Heidi Oprisiu, a plant neighbor.

The Notice of Violation is based on three emissions tests, conducted at the direction of the DEQ, which show that at many times the emissions from the plant are emitted directly into the air, entirely avoiding the pollution control equipment.

An Ecology Center review of the company's submittals confirmed that Continental submitted inaccurate information, and additionally found that the DEQ did not conduct an adequate review of the company's proposal. It appears that the control equipment was never engineered properly to work in the plant. Company officials confirmed this to Lyon Township in May and September 1998, stating that the "...plant is short of make up air...". Yet, which is the key factor in the malfunctioning of the control equipment. Yet, to date, there is no record of any changes being made to the plant to address this problem. And today, even DEQ officials have said they don't think the plant emission controls ever ran correctly. Yet no one can explain why the DEQ ignored the company's 7-year history as an environmental outlaw when they permitted this facility to open in Lyon Township, and then continued to argue that the

plant does not represent an imminent health threat.

An Environmental Outlaw

Anyone who had looked at Continental's checkered past in Detroit could have predicted the problems in Lyon Township. The company started by misrepresenting its Detroit history to residents and public officials in the township.

In their 1996 site review plan, the company claimed they would bring five inbound and three outbound trucks to the plant each day. Residents now estimate that over 80 trucks per day visit the plant. In the same application, the company failed to tell the township officials about a \$50,000 settlement with Wayne County over air pollution violations, about the 19 city fire and county environmental violations issued at the previous plant (now a polluted brownfield site), or about a 1992 plant fire which exposed four Detroit firefighters to ammonia gas. Company officials were explicitly asked at the township planning commission if the relocation was prompted by enforcement action. Continental's former president, James Shanahan was reported to reply that "there are no problems there. We stay in touch with MDEQ, no violations." Continental had 153 complaints filed against them and 23 Notices of Violation in their brief seven-year stay in Detroit. Since moving to Lyon Town-

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ship, they've incurred another 157 complaints and six violations of the ordinance. (See , page 17.) In addition, Lyon Township has taken Continental to court over six violations of odor provisions of its local township zoning ordinance. The Township has over 60 pending violations of the same ordinance over the last three years.

The facility's performance in Detroit was so bad that a 1997 Wayne County Staff Activity Report concluded that the "...facility presently cannot operate in compliance with State and County regulations. Facility is moving operations out of Wayne County by May 1, 1998 and has had permits issued . . . for the new facility."

The Auto Industry's Dirty Little Secret

While the auto industry congratulates itself for producing the world's most recycled consumer product, toxic emissions from metal smelting operations remain the industry's dirty little secret. Emissions of hydrochloric acid, hydrofluoric acid, chlorine and dioxins from aluminum smelters illustrate only a small part of the whole picture. The Ecology Center has documented high emissions from a variety of vehicle end-of-life operations, including: mercury from electric arc furnaces (EAF's) caused by mercury switches in cars, dioxins from steel production caused by PVC materials in vehicles, plastic and shredder "fluff" fires at scrap yards.

Currently, the non-ferrous (non-steel) metal content of the shredder fraction is between 6-8% of the dismantled weight of the vehicle. This primarily includes aluminum, cadmium, chromium, lead, magnesium, mercury, nickel, stainless steel, tin, and zinc. Up to half the weight of the non-ferrous fraction received by smelters is a non-metallic (plastics, etc) residue which is currently also being landfilled.

Non-ferrous metal scrap contains impurities, such as heavy metals (particularly, cadmium and mercury), chemical forms of chlorine, as well as organic compounds. Therefore, emissions of toxic heavy metals and chlorinated organics are expected from smelters. For example, a study of a Finnish reclamation plant processing scrap aluminum, copper, and different steels reported the emission of PCPs, PCBs, PCDD/PCDFs, and PAHs, as well as other chlorinated organic compounds during smelting operations. A large part of these emissions were formed from the PVC plastics used in electrical cables and equipment.

Because of the great savings in energy and resources, a high percentage of scrap aluminum is currently being recycled. Due to the increasing use of this light metal in automotive production, any potential toxic emissions from processing scrap aluminum is of great concern for smelters. Recycling of aluminum scrap involves two steps, pre-cleaning and smelting,

each of which may produce dioxin (PCDD/PCDF) emissions.

Pre-cleaning involves roasting at elevated temperatures to vaporize organic impurities and sweating at temperatures above the melting point of the metal. Chlorine gas is used to reduce the magnesium content during smelting. The dioxin emissions from four secondary aluminum smelters have been analyzed in 1994, three of which were performed in conjunction with representatives of the U.S. Environmental Protection Agency and the Aluminum Association. An average of 13.1 ng of dioxin TEQ/kg of scrap feed was found for these four facilities. German studies of 25 aluminum smelters resulted in a range of 0.01-167 ng TEQ/kg of scrap feed with a mean emission factor for the more reliable tests of 42 ng TEQ/kg. In 1995, the secondary aluminum industry smelted 1.3 million metric tons of aluminum scrap. Applying the average emission factors obtained in the two studies, the range of the annual U.S. dioxin emissions is between 17.0 and 55 grams of TEQ.

U.S. and European studies of aluminum smelters point out very significant differences in the dioxin emissions from this industry. For the U.S. study the emission range was between 0.26-30 ng TEQ/kg of aluminum produced and for the German tests it was between 0.01-167 ng TEQ/kg. Differences in these emission levels were largely due to the levels of impurities of the scrap, the pre-cleaning and smelting technologies employed, and the control technologies applied. The average of 13.1 ng TEQ/kg is currently used as the allowable emission level in new and modification type permits in Michigan and probably elsewhere in the United States. The fact that all smelters of aluminum scrap are basically performing the same task but with drastically different emission levels, suggests that toxic emissions from this industry can be largely avoided.

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To clean up the aluminum recycling business, the Ecology Center has proposed that auto manufacturers make cars more

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recyclable, and eliminate their use of PVC plastics, mercury switches, and other unnecessary toxic components. These steps would lessen the contamination of scrap aluminum going to smelters.

In addition, federal and state air quality standards for aluminum recycling smelters should be toughened. Using available and affordable control technology, U.S. aluminum smelters could achieve the same impressive results as German smelters.

Back in Lyon Township, Continental Aluminum's neighbors and the Ecology Center are demanding that the company dramatically reduce its air emissions and odors. Other aluminum recyclers are major air emitters too, but they've managed to abide by their permits, and by state and federal law.

But the prospects of voluntary (or even forced) acquiescence by Continental look slim. In fact, company officials have reacted belligerently to calls for cleaner operations. "Every stack we have has been tested and we're legal," declared company president Wayne Perry in an interview with a Detroit newspaper. "The odor that some residents talk about smells like

money to me."

Those kinds of comments have led some neighbors to even propose shutting down the plant entirely. An April rally organized by the Continental's neighbors shone more attention on the plant's problems. In May, the U.S. Environmental Protection Agency added the company to its Significant Violators list, which can lead to daily fines of up to \$27,500 and criminal prosecutions. But federal enforcement is excruciatingly slow for Continental's neighbors. Typically, a company receives nine months to fix operations after landing on the EPA's hit list. Robin Allen and his Lyon Township neighbors have made their point, but fear they'll be stuck indoors all spring, summer, and fall — avoiding Continental's fumes — in their once tranquil community.

Jeff Gearhart is the Campaign Director of the Ecology Center's Auto Project.
