



Robert Cooper Audubon Society

Waelz Sustainable Products Resolution

Adopted August 15, 2019

Whereas the mission of Robert Cooper Audubon Society—a Society of 330+ members of East Central Indiana—is to: “protect and enhance the quality of our natural environment; educate our members and others about the natural world and the special relationship that humans have with it; serve our members by providing educational programs, field trip activities, and other programs of interest; and to advance the goals and activities of the National Audubon Society;” and

Whereas the Society is a steward of Dutro-Ernst Woods, a 33-acre urban nature preserve with a prairie and woods currently undergoing restoration located at 4000 West Kilgore Avenue, Muncie. Red-tail Land Conservancy, whose mission is to “preserve, protect and restore natural areas and farm land in east central Indiana,” manages Dutro-Ernst Woods; and

Whereas the Society provides educational programs to youth of the Youth Opportunity Center located at 3700 West Kilgore Avenue, Muncie. The 400+ employees of Youth Opportunity Center offers detention and residential youth care facilities and programming at this address; and

Whereas Waelz Sustainable Products, a steel mill electric arc furnace (EAF) facility, proposes to build and operate an industrial facility at 5401 West Kilgore Avenue, Muncie, to recover zinc oxide and iron from EAF dust generated from steel mini-mills; and

Whereas the characterization of steel-mill EAF dust shows the order of abundance of major elements in EAF dust as Fe, Zn, Mn, Ca, Mg, Si, Pb, S, Cr, Cu, Al, C, Ni, Cd, and Hg¹ and is classified as a hazardous material with a broad range of hazards, including acute toxicity from inhalation, germ cell mutagenicity, carcinogenicity, and reproductive toxicity;² and

Whereas the proposed site for the Waelz Sustainable Products facility is directly adjacent to Dutro-Ernst Woods, a property of Red-tail Land Conservancy, within a half-mile to the White River, and about one mile east of the Youth Opportunity Center; and

¹ Sofilic, T, et al. (2004). Characterization of steel mill electric-arc furnace dust. *Journal of Hazardous Materials*, 109(1-3), 59-70.

² Gerdau. (2018). Steel mill electric arc furnace dust: Safety Data Sheet. Retrieved from https://www2.gerdau.com/sites/gln_gerdau/files/downloadable_files/2018-02-20_Gerdau_Steel%20Mill%20Electric%20Arc%20Furnace%20Dust_CAN-ENG_0.pdf

Whereas the transport, off-loading, and processing of electric arc furnace dust will result in air-borne emissions of carbon monoxide, nitrogen oxides, particulate matter, including PM₁₀ and PM_{2.5}, Sulfur dioxide, volatile organic compounds, and heavy metals, including lead, arsenic, and mercury;³ and

Whereas particulate matter, will be deposited upon the leaf surfaces of trees, forbs, prairie grasses and native plants of Dutro-Ernst Woods, the White River corridor, and the Youth Opportunity Center property; and

Whereas particulate matter and lead deposited upon plants physically screens out sunlight, blocks stomata, lowers conductance of carbon dioxide and curtails photosynthesis,⁴ thus reducing growth, flowering, and reproduction processes;⁵ and

Whereas birds depend upon plants for food—either directly by eating plant tissues (flowers, seeds or fruit) or by drinking the sap and nectar of plants, or indirectly by eating animals that eat plants, specifically insects—and protection from the elements;⁶ and

Whereas extensive data from the Women’s Health Initiative study, the extended American Cancer Society study, and the Medicare Study all show that levels of exposure to particulate matter lower than the U.S. National Ambient Air Quality Standards for particulate matter are associated with serious human health impacts, from initiating asthma attacks to premature death;⁷ and

Whereas the emission of hazardous air pollutants (HAPs), including lead and mercury, travel great distances around the earth and may stay in the atmosphere for more than a year.⁸ Eventually, these chemicals return to earth through wet and dry deposition. For mercury compounds, microbes consume mercury, and convert it to methyl mercury. Then, this toxic substance moves up the food chain and bioaccumulates in fish, fish-eating animals, including fish-eating humans. This neurotoxin disrupts the central nervous system and reduces cognitive function;⁹ and

Whereas, specific species of birds—loons, eagles, osprey, and diving ducks—are especially vulnerable to lead and mercury concentrations; and

³ Waelz Sustainable Products, LLC. (2019). Waelz Sustainable Products, LLC New Source Construction Permit Title V Application. Retrieved from https://ecm.idem.in.gov/cs/idcplg?IdcService=GET_FILE&dID=82756145&dDocName=82755950&Rendition=web&allowInterrupt=1&noSaveAs=1&fileName=82755950.pdf

⁴ Rahul, J., & Jain, M.K. (2014). An investigation into the impact of particulate matter on vegetation along the national highway: A review. *Research Journal of Environmental Sciences*, 8(7), 356-372.

⁵ U.S. Environmental Protection Agency. (2019). Basic information about lead air pollution. Retrieved from

⁶ National Audubon Society. (n.d.). Plants for the birds. Retrieved from <https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution#health>

http://netapp.audubon.org/AudubonAdventures/plants_birds_essay.htm

⁷ Nolen, J.E. (2012, July 19). Testimony of Janice E. Nolen to U.S. Environmental Protection Agency Hearing on the Particulate Matter National Ambient Air Quality Standards (Docket Number EPA-HQ-OAR-2007-0492). Retrieved from <https://www.lung.org/assets/documents/advocacy-archive/testimony-of-janice-nolen.pdf>

⁸ National Atmospheric Deposition Program. (2019). The mercury problem. Retrieved from <http://nadp.slh.wisc.edu/MDN/why.aspx>

⁹ National Institute of Environmental Health Sciences. (2019). Mercury. Retrieved from <https://www.niehs.nih.gov/health/topics/agents/mercury/index.cfm>

Whereas bird populations have been declining in Indiana and nearly half of North American bird species are at risk from climate change,¹⁰ habitat loss, herbicides, and pollutants; and

Whereas the construction application of proposed Waelz Sustainable Products facility to the Indiana Department of Environmental Management predicts that this facility will emit particulate matter (PM) and hazardous air pollutants (HAP) below the current U.S. Environmental Protection Agency's established standards, the Alabama steel dust recycling facility using the same or similar Waelz technology is the #1 emitter of mercury emissions in the state [of Alabama](#);¹¹ and

Whereas the location of the proposed facility is in close proximity—within 2 to 3 miles—to a nonattainment area for the 2008 lead National Ambient Air Quality Standards and will contribute to lead concentrations in this area; and

Whereas the effects of lead air pollution on human health is well established, including the most common neurological effects in children and cardiovascular effects in adults;

Whereas the TBBHI Bag control equipment proposed by Waelz Sustainable Products in the New Source Construction Permit Title V Application (see page 141-174) would be used for control of particulate matter, there were no pollution control systems identified to reduce lead, mercury or other Hazardous Air Pollutants (HAP); and

Whereas the standards for particulate matter and hazardous air pollutants have been insufficient to protect human's suffering from asthma and other lung afflictions, as well as plant health near the origin of particulate matter and hazardous air pollutants; and

Therefore, be it known that in order to protect the quality of our environment, the health of plants, birds, and citizens of East Central Indiana, the Robert Cooper Audubon Society:

Oppose the construction of a steel mill electric arc furnace (EAF) facility proposed by Waelz Sustainable Products at 5401 West Kilgore Avenue, Muncie;

Urge the City Council of Muncie to rescind any support, including tax abatements, for the proposed facility, and to immediately communicate these concerns to the Indiana Department of Environmental Management; and

Urges the Indiana Department of Environmental Management to deny the *New Source Construction Permit Title V Application* for Waelz Sustainable Products facility based upon these concerns.

Robert Cooper Audubon Society

Mary Annette Rose, President

Members of the Board

Passed: August 15, 2019

¹⁰ National Audubon Society. (2019). The climate report. Retrieved from <https://climate.audubon.org/>

¹¹ U.S. Environmental Protection Agency. (2017). Mercury and Mercury Compounds search of Alabama, TRI Explorer. Retrieved from <https://iaspub.epa.gov/triexplorer> at [EPA](#)