

June 21, 2019

City of Chicago, Department of Public Health
Attn: Environmental Permitting and Inspections
333 South State Street, Room 200
Chicago, IL 60604

Re: Comments on Proposed Rules For Large Recycling Facilities

To Whom It May Concern:

Thank you for the opportunity to comment on the Department of Health's Proposed Rules For Large Recycling Facilities ("Rules"). These comments are submitted on behalf of the Southeast Environmental Task Force ("SETF") and the Chicago South East Side Coalition to Ban Petcoke, active community groups dedicated to improving the Calumet neighborhood's environment; the Little Village Environmental Justice Organization ("LVEJO"), which is committed to organizing with the Little Village community to accomplish environmental justice, and to achieve the self-determination of immigrant, low-income, and working-class families; and the Natural Resources Defense Council ("NRDC") and our roughly 10,000 members and activists in the City of Chicago, including those who reside on the Southeast Side and along the I-55 Southwest corridor. Additional individuals and organizations joining these comments are noted below.

I. Introduction

These long overdue regulations proposed by the Chicago Department of Public Health (CDPH) are welcome as an important first step toward overseeing and controlling the many environmental impacts of recycling facilities, which have long gone un- or under-regulated by all levels of government here in Chicago and across the U.S. For years, community members – including residents of Chicago's Southeast Side, Pilsen, and Little Village communities (not to mention Lincoln Park) – have raised concerns about air and water pollution, noxious odors, noise pollution, and other impacts of recycling facilities. Regulators are finally taking a closer look in response, with auto shredders in particular the subject of enhanced scrutiny by environmental and public health agencies across the country in recent years. Our hope is that the final regulations adopted by CDPH will help reduce the impact of these facilities on the surrounding communities through:

- enhanced evaluation of proposed new and expanded facilities, along with existing facilities, that takes into account the existing burdens on communities, in particular the disproportionate impacts of these and other industrial facilities on environmental justice communities;
- robust performance standards that address the full array of potential impacts from recycling facilities, existing and new/expanded, ideally by building control into the frontend design;

- stringent monitoring requirements that ensure continuous compliance and relieve community members and regulators from the burden of surveillance and enforcement; and
- extensive public participation across the board.

II. Summary of Comments

The first several sections of these comments address the threats to public health, safety, welfare and the environment created by recycling facilities. They also address the characteristics of the Chicago neighborhoods that are at the most risk because of the clustering of large recycling facilities. Section V proposes enhanced monitoring, control and assessment measures to address the air pollution impacts caused by recycling facilities. Section VI asserts that additional measures are necessary to control the air, water and waste impacts of the hazardous auto shredder residue released by scrap metal facilities. Section VII asserts that additional measures must be employed at facilities handling construction and demolition materials to prevent the illegal processing and release of toxic substances. The concluding Section addresses the Rules’ environmental impact assessment provision, the need for CDPH to address the cumulative impacts arising from clustered facilities, and public participation.

III. Summary of Environmental and Health Issues Associated with (Metal) Recycling Facilities

On an annual basis, the United States processes 56 million tons of scrap iron and steel, including 10 million tons of scrap automobiles, along with millions of additional tons of other scrap metals.¹ Other states, such as California, have found that despite recycling facilities falling under the jurisdiction of various environmental and health agencies, certain aspects of the operation of metal and auto shredders are inadequately or unregulated, resulting in the release of toxic emissions into the local community. Specifically, as noted in a 2018 draft report by the California Department of Toxic Substances Control (“DTSC”) on its wide-ranging review of metal shredders and metal shredder residue,

In conducting the evaluation of metal shredding facilities and their hazardous waste management practices, DTSC found numerous examples of accidents, improper hazardous waste storage, soil contamination, and hazardous waste releases outside the facilities that were found to be contaminating the surrounding community.²

¹ Ex. 1, Occupational Health and Safety Administration (“OSHA”), *Scrap Metal Recycling*, available at https://www.osha.gov/SLTC/recycling/recycling_scrap_metal.html.

² Ex. 2, California Department of Toxic Substances Control, *DRAFT Evaluation and Analysis of Metal Shredding Facilities and Metal Shredder Wastes*, January 2018, available at <https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/05/Metal-Shredder-Analysis-DRAFT.pdf> (“DTSC Metal Shredding January 2018”), at 112. (While the report is marked “DRAFT” and “Do not cite or quote,” it appears that DTSC has not finalized a

The agency also performed “an analysis of the treatment and storage activities at the metal shredding facilities, the chemical and physical hazards that those activities present, the types of accidents that could occur, and the risks those activities pose to nearby communities,” finding that “the hazardous waste management activities pose substantial risks to nearby communities.”³ Thus, while metal recycling is relevant to reducing a municipality’s overall environmental impact, the negative impacts from the process itself must be addressed by the City.⁴

The recycling process is complex, particularly where the commodities being recycled are made of up different types of substances, some of which are coated in toxic substances, release hazardous substances when processed, and/or are themselves hazardous. Despite the risks of processing these materials, metal recycling facilities have a long and disastrous history of being under-regulated, leading to explosions and emissions that have harmed workers and residents. There are important environmental and public safety concerns with the continued operation of metal shredding facilities in particular and large recyclers in general. A brief summary is as follows.

Air Emissions. Metal shredders and metal recyclers produce numerous concerning air pollutants from a range of specific sources. First, the process of shredding (such as in a hammermill) or cutting (as with torchcutting) metal vaporizes the material and creates dust and hazardous air emissions that can affect the local air quality. For example, in 2012, hexavalent chromium (Chrome VI) was detected in the air outside of five of Houston’s metal shredding facilities as part of a study conducted by the Houston Department of Health and Human Services, Bureau of Pollution Control and Prevention.⁵ This detection came after nearby residents had made 139 reports to Houston’s 311 help line about red smoke, yellow smoke, explosions, fires, and children having trouble breathing.⁶ Chromium metal is added to alloy steel to increase the metal’s hardenability and corrosion resistance, but is released into the air when that metal is heated during cutting or welding.⁷ Chrome VI can cause cancer, asthma and damage to the nasal passages and skin.⁸

version of the report, so we are providing the draft version for purposes of our comments due to the important scope of the work and relevant draft findings.)

³ *Id.*

⁴ We note that, due to multiple city agencies having responsibilities with respect to environmental regulation of recycling facilities and due to zoning and land use ordinances and policies that largely govern siting processes, more reforms will be needed beyond the current proposed CDPH regulations.

⁵ See Ex. 3, Ingrid Lobet, “Danger in air near metal recyclers,” *Houston Chronicle*, December 29, 2012, available at <https://www.houstonchronicle.com/news/houston-texas/houston/article/Danger-in-air-near-metal-recyclers-4154951.php#photo-3961405> (“Danger in air”) and Ex. 4, Ingrid Lobet, “Metal recycling companies grow, but questions raised,” *Houston Chronicle*, December 20, 2012, available at <https://www.chron.com/news/article/Metal-Recycling-Companies-Grow-But-Questions-4152230.php>.

⁶ Ex. 3, Danger in air.

⁷ Ex. 5, OSHA, *Hexavalent Chromium*, available at <https://www.osha.gov/SLTC/hexavalentchromium/>.

⁸ Ex. 6, OSHA, *Small Entity Compliance Guide for Hexavalent Chromium*, available at https://www.osha.gov/Publications/OSHA_small_entity_comp.pdf, at 3.

The 2012 Houston study furthermore looked at a total of 11 metals and 75 volatile organic compounds (VOCs), along with PM10 as a whole, near metal recyclers.⁹ The study found significant cancer risks around the facilities using measured air quality data, including risks that were much greater than those calculated via the National Air Toxics Assessment (NATA). In addition, the Houston study points to sources of air pollution besides the shredder itself. Specifically, photos accompanying the study presentation implicate yard activities as significant emissions sources, showing white and brown visible emissions associated with outdoor torch cutting and movement of metals by construction vehicles, respectively.

In 2007, the SA Recycling Terminal Island facility in California experienced an explosion, which resulted in an enforcement action by the Los Angeles District Attorneys' office when the facility continued to operate after the explosion damaged its air pollution control system, resulting in the release of an estimated 52 pounds per hour of VOCs and 28.3 tons of PM over the course of 120 days.¹⁰ Further sampling by DTSC in 2008 found that the shredder had also released lead and mercury above the regulatory threshold during the same period.¹¹

In addition, once ferrous metals have been sorted out, metal shredder facilities produce a byproduct that can become airborne and that is referred to by many names, among them auto shredder residue, metal shredder aggregate, light fibrous material, and auto fluff. Section VI describes in more detail the hazards of this byproduct. From approximately 2009 until Sims Metal Management settled with the California Attorney General's Office in 2014, nearby residents in Redwood City had observed white fluff originating from the facility.¹² DTSC sampled at the facility as well as in nearby locations and identified exceedances for zinc, lead and copper and determined that Sims had illegally disposed hazardous shredder residue.¹³ Similarly, in 2015 DTSC issued the SA Recycling Bakersfield facility a letter for improperly managing shredded materials, which resulted in their escaping the property boundary as hazardous waste.¹⁴ It is our understanding that residents of Lincoln Park have reported concerns with auto fluff in the community that they attribute to the General Iron auto shredding operation.

Fires and explosions. There are inherent risks in the process of shredding metal, from the equipment used by shredders to the items being shredded themselves, such as improperly drained

⁹ Ex. 7, Arturo J. Blanco, Loren Raun and Don Richner, Houston Department of Health & Human Services, Bureau of Pollution Control and Prevention, "What is actually emitted from Area Sources: Results of a Special Study of Metals Recyclers," available at <https://www3.epa.gov/ttnamti1/files/2012conference/3BRaun.pdf> ("Houston DHHS Metal Recycler Study")

¹⁰ Ex. 8, Geoff Mohan, "Auto shredder to pay \$2.9 million to settle toxic waste case," Los Angeles Times, September 8, 2011, available at <https://latimesblogs.latimes.com/greenspace/2011/09/toxics-agency-settles-with-auto-shredder.html> ("LA Sims Settlement"); DTSC Metal Shredding January 2018, at 59.

¹¹ Ex. 8, LA Sims Settlement; Ex. 2, DTSC Metal Shredding January 2018, at 60 (citing *People of the State of California v. SA Recycling, LLC and Simsmetal West, LLC*, California Superior Court, Los Angeles County, case no. BC458943, Stipulated Judgment and Order, filed August 31, 2011).

¹² Ex. 2, DTSC Metal Shredding January 2018, at 64-65.

¹³ *Id.*

¹⁴ *Id.* at 66.

gas tanks.¹⁵ OSHA also warns that metals aluminum or iron in dust form can be explosible and lead to worker deaths or injuries.¹⁶ These risks are anticipated by operators of metal shredding facilities; one CEO has even stated that his facility has “never had a shredder operate for a year without an explosion or two or three. It just doesn’t happen.”¹⁷ That facility, in New Brunswick, Canada, was ordered by the provincial government to shut down immediately after a series of explosions.¹⁸ When the provincial government allowed it to continue operating during “probationary periods,” the explosions continued.¹⁹ Similarly, in Houston, the Texas Port Recycling facility had 41 fires and explosions during a four-month period in 2007 and 2008.²⁰ In California, DTSC found that four of its six metal shredding facilities had had fires on their properties from 2008 to 2018, including some that had required local fire departments to advise nearby residents to stay indoors and close their air intake systems.²¹

An air monitoring study of a 2014 fire at a Redwood City, California, metal shredding facility that lasted roughly 18 hours (based on the time the fire was reported until the time it was extinguished) also has demonstrated significant negative impacts to air quality from metal shredder fires.²² The study, conducted by Thomas Cahill, a professor emeritus of physics and atmospheric science at the University of California, Davis, found impacts from aerosols attributable to the fire that “grossly violated” the DTSC’s deposition standards, even though they were 20 miles away from the site of the fire.

Water and soil contamination. Byproducts from metal shredding may also contaminate soils, groundwater and nearby waterways when byproduct management methods are not required or ignored. A study of the soil and groundwater at the SA Recycling Terminal Island facility from 1990 to 1994 showed contamination by petroleum hydrocarbons, metals, polychlorinated biphenyls and polycyclic aromatic hydrocarbons.²³ In 2011, U.S. EPA found exceedances for lead, zinc, copper and cadmium in the soils surrounding the Sims Metal Management facility in Redwood City from shredding residue, scrap metal and other debris that Sims had been storing

¹⁵ Ex. 3, Danger in air.

¹⁶ Ex. 9, OSHA, *Combustible Dust: an Explosion Hazard*, available at <https://www.osha.gov/dsg/combustibledust/index.html>.

¹⁷ Ex. 10, Julia Wright, “Meet the ‘Scrap King’: controversial scrap yard CEO visits St. John,” *CBC*, November 23, 2018, available at <https://www.cbc.ca/news/canada/new-brunswick/herb-black-american-iron-metal-explisions-1.4919034>.

¹⁸ Ex. 11, Silas Brown, “AIM says Saint John facility may close if deal with province can’t be reached,” *Global News*, November 30, 2018, available at <https://globalnews.ca/news/4716033/aim-says-saint-john-facility-may-close/>.

¹⁹ Ex. 12, Connell Smith, “AIM’s operating permit renewed, but scrap yard still on probation,” *CBC*, March 7, 2019, available at <https://www.cbc.ca/news/canada/new-brunswick/scrap-recycler-explosion-blasts-waterfront-noise-dust-environment-1.5047432>

²⁰ Ex. 3, Danger in air.

²¹ Ex. 2, DTSC Metal Shredding January 2018, at 57, 64.

²² See Ex. 13, Cahill, Thomas, (*DRAFT*) *Final Report of Schnitzer Steel Products*, Prepared for the Alameda County District Attorney, April 2, 2014, at 42-43. (Note that we are in the process of obtaining permission from the Alameda County District Attorney’s office to share this report with CDPH.)

²³ Ex. 2, DTSC Metal Shredding January 2018, at 59.

outside the facility boundary since the 1990s.²⁴ In 2010 and 2011, the SA Recycling Terminal Island facility exceeded its water quality standards for chemical oxygen demand, specific conductance and zinc.²⁵ In 2014 and 2015, SA Recycling Anaheim facility received notices of violation of their storm water permit for chemical oxygen demand and lead and was required by the Santa Ana Regional Water Quality Control Board to implement a corrective action plan that included the best available technology treatment method.²⁶ In 2015, DTSC sampled soil from the areas where scrap metal was processed and from where non-ferrous metals were removed from metal shredder aggregate at the Schnitzer Steel Products and found exceedances for chromium, lead, nickel, zinc, copper and lead.²⁷ Also in 2015, following a DTSC inspection of the Ecology Auto Parts facility where metal processing operations were being conducted on bare ground, samples taken from soil near the aggregate lines showed exceedances for lead, cadmium, zinc, and copper.²⁸ In some cases, litigation has been necessary to require management practices to prevent further water and soil contamination. In 2019, after seven years of litigation, Seattle Iron & Metals agreed to implement numerous control measures at its auto recycling facility, including introducing a height limit on its auto shredder residue piles, updating its storm water pipes, and installing a shredder containment structure and dust containment wind fences.²⁹

Disparate, cumulative impact. Many metal shredding facilities operate in highly populated areas, individually and collectively posing a severe risk to the surrounding community when they contaminate the surrounding water and air. Often, these facilities are in low-income African-American, Latinx and immigrant communities, which also display sociodemographic characteristics that make them more susceptible to environmental burdens from a cumulative impacts' perspective. For example, Magnolia Park, home of a Cronimet metal processor, is simultaneously one the oldest historical Latinx neighborhoods in Houston and one of two locations in Houston associated with high cancer risk.³⁰ Furthermore, these communities are also home to other facilities that produce harmful emissions and environmental impacts, as recognized in the Houston air study.³¹

²⁴ *Id.*, at 63.

²⁵ *Id.*, at 58, citing SWRCB Letter to Ms. Nancy Felix, S.A. Recycling L.L.C., Annual Report Review – Second Benchmark Value Exceedance: NPDES General Permit (Permit) for Storm Water Discharges Associated with Industrial Activity (Order No. 97-03 DWQ; NPDES No. CAS000001), WID# 4 19I021125, July 5, 2012.

²⁶ Ex. 2, DTSC Metal Shredding January 2018, at 62.

²⁷ *Id.*, at 61-62.

²⁸ *Id.*, at 66-67.

²⁹ Ex. 14, *Puget Soundkeeper Alliance v. Seattle Iron & Metals, Corp.* Case No. 12-01201RSM, Proposed Consent Decree (January 17, 2019), available at https://pugetsoundkeeper.org/wp-content/uploads/2019/01/Dkt82-1_Proposed-Consent-Decree-Soundkeeper-v.-SIM.pdf. (The proposed Consent Decree was subsequently approved by the Court.)

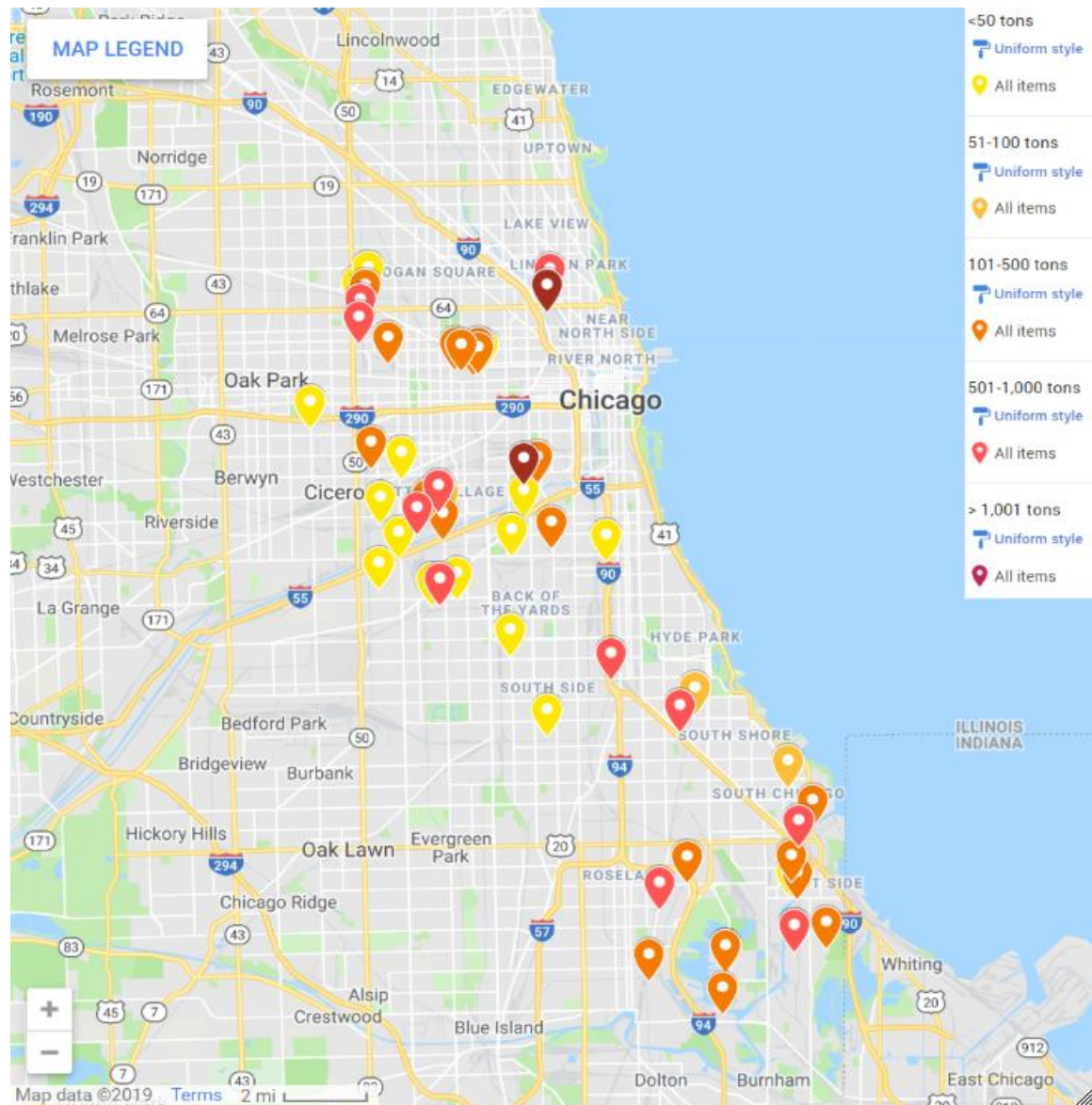
³⁰ Ex. 3, Danger in air.

³¹ Ex. 7, Houston DHHS Metal Recycler Study.

IV. The Chicago Communities Bearing the Greatest Burden

As noted above, the communities where recycling facilities are located are often more vulnerable and already overburdened by other facilities and the truck traffic that accompanies them. Chicago is no exception, where the threat of significant, adverse and disproportionate impacts associated with concentrated industrial facilities and attendant vehicles are evidenced in neighborhoods on the Southeast and Southwest Sides. Large recycling facilities cluster in these communities, along with the West Side, where their cumulative impacts are heightened due to not only this physical proximity, but also the socio-demographics of the surrounding community.

Figure 1. Map of Preliminary List of (Metal) Recyclers that Would Be Subject to the Rules



Compiled by NRDC using an Excel spreadsheet provided by David Graham, Deputy Commissioner, CDPH, on May 24, 2019. Note that due to uncertainty over the tonnage for the Again Auto Parts, we have omitted this facility from the map.

These neighborhoods are also environmental justice communities, with greater numbers of low-income and minority residents by comparison to Chicago generally. CDPH must take these disparate and cumulative impacts into consideration in adopting its final rules for large recycling facilities, along the lines set forth in these comments.

The following comments focus on the Southeast and Southwest side facilities because these communities are/have been the focus areas for our groups to date. Metal Management Midwest Inc., located at 2500 S. Paulina St., sits in the southwest side cluster of metal recyclers. It is located within a mile of 13,330 households where over 22,000 individuals live below the poverty level. 38% of the households make less than \$25,000 a year. The surrounding neighborhood is 74% Latinx with a significant number linguistically isolated (13%). Almost 30% of the residents are minors, with almost 3,000 of those children under 5 years old. As noted below, this facility was the subject of a 2017 U.S. EPA enforcement action that alleged violations of standards that originate in the Clean Air Act and its implementing regulations. Other large recycling facilities (by virtue of area or input) that are part of the Southwest Side cluster include, but are not limited to: Action Iron & Metal, Inc. (3345 W. 31st), C&J Auto Parts (3200 S. Archer Ave.), Chicago Industrial Catalytic Ltd (4427 W. 45th St.), Chuangyi Metals Corp. (3939 S. Karlov), E&O Plastic Recycling (2959 W. 47th St.), Earthlink Recycling Corporation (3333 W. 36th St.), Eco Green Recycling Inc. (1965 W. Pershing Pl.), El Paso Auto Parts (3245 S. Kostner Ave.), Elemento S.A. Inc. (3252 W. 31st St.), Jeff Thompson (2100 S. Kilbourn Ave.), McCoy Auto Parts (2301 S. Pulaski Rd.), Mr. Loop Paper Recycling (2401 S. Laflin St.), Northwest 1 Trucking and Metal Recycling (3200 S. Kedzie Ave.), Reliable Asphalt (3741 S. Pulaski), Stockyard Materials (4031 S. Ashland Ave.) and U-Pic-A-Part (3250 S. St. Louis Ave.).

Apart from metal recycling facilities, the Southwest Side is also home to other large recycling facilities that bring in more emissions and harms to the surrounding community. Many of these large recycling facilities, including the auto and metal shredders,³² are located within 600 feet of a sensitive area (residential use, park, hospital, clinic, church, daycare center or school, among other areas):

³² Fig. 1 includes the following auto and metal recycling facilities: Action Iron & Metal, Inc., which accepts up to 20 tons per day of recyclable material, including scrap metal, tires with rims and end-of-life vehicles; C&J Auto Parts, which accepts up to 10 tons per day of recyclable materials including batteries and vehicles; Elemento S.A., Inc., which accepts up a daily average of 750 tons per week of recyclable materials, including scrap metal; El Paso Auto Parts, which accepts up to 50 tons per day of Type C materials (motor vehicles and vehicle parts); McCoy Auto Parts, Inc., which accepts up to 10 tons per day of Type C materials; and Jeff Thompson, which accepts up to 500 tons per day of recyclable materials, including scrap metal.

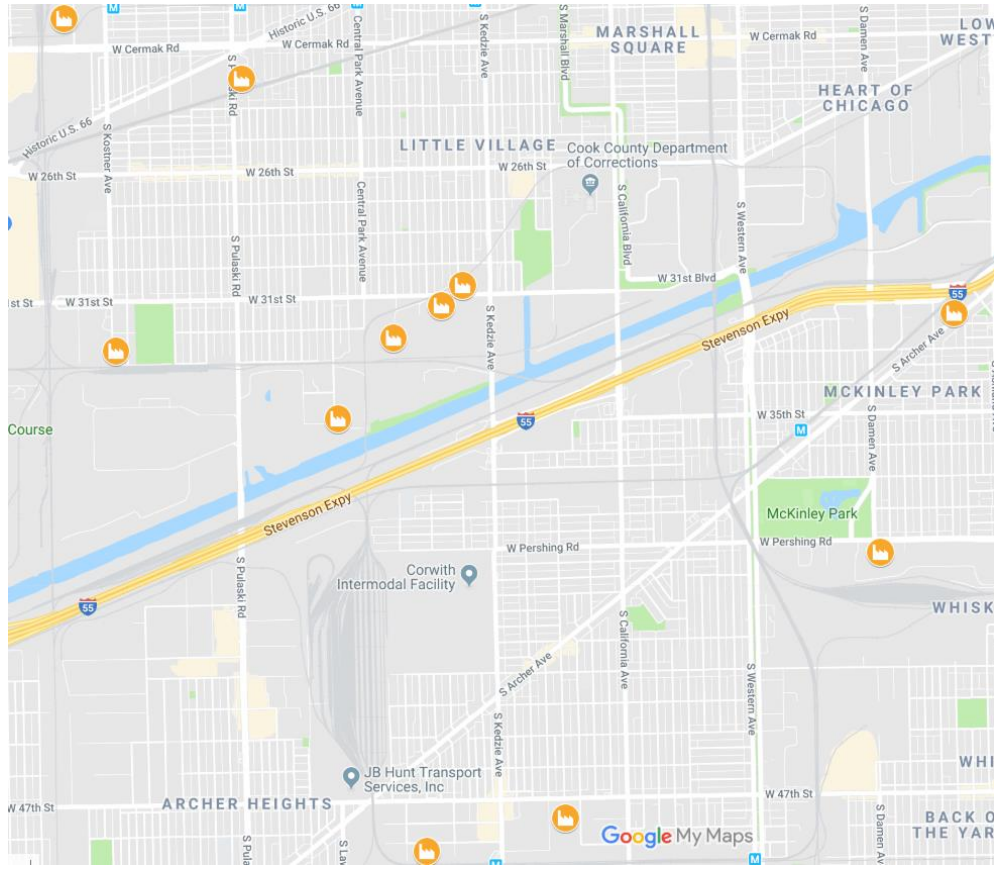


Figure 2. Large Recycling Facilities within 600 ft. of a Sensitive Area (Southwest)

Chicago's Southeast Side is home to another cluster of large recycling facilities. These facilities include, but are not limited to:

- Metal Management Midwest Inc (3200 E. 96th St.), located within a mile of 5,629 households where over 60% of the community lives below the poverty line, with almost 40% of households making less than \$25,000 a year. The surrounding neighborhood is 93% minority and 61% Latinx. Almost half of the residents are minors (40%) and 9% are children under 5 years old.
- Mittal Steel (3133 E 106th) and Cronimet (10602 S. Buffalo Ave.), located within a mile of approximately 6,000 households, where about 60% of the community lives below the poverty line, with more than 30% of households making less than \$25,000 a year. The surrounding neighborhood is approximately 85% minority and over 70% Latinx. 39% are minors and 8% are children under 5 years old.
- Nicholson Industrial Services (8501 S. Baltimore Ave.), located within a mile of 10,170 households where over 61% of individuals live below the poverty level. 43% of the households make less than \$25,000 a year. The surrounding neighborhood is 98% minority and 74% African-American. Almost 40% of the residents are minors, with almost 2,286 of those children under 5 years old.

- Waste Management (13707 S. Jeffrey), located within a mile of 3,137 residents where over 40% below the poverty level. 27% of the households make less than \$25,000 a year. The surrounding neighborhood is 91% minority and 83% African-American. 33% of the residents are minors.
- South Shore Recycling (11600 S. Burley Ave-C), located within a mile of 6,815 residents where over 37% live below the poverty level. 19% of the households make less than \$25,000 a year. The surrounding neighborhood is 74% minority and 71% Latinx. 34% of the residents are minors and 7% are children under 5 years old. This is also the location of the proposed relocation of the existing General Iron facility, which presently operates in a predominantly white, gentrifying community area on Chicago's north side. As noted below, this facility was the subject of a 2018 U.S. EPA enforcement action that alleged violations of standards that originate in the Clean Air Act and its implementing regulations.

Other Southeast Side large recycling facilities are Akat Scrap Metal Inc. (12100 S. Cottage Grove Ave.), All American Recycling (11900 S. Cottage Grove Ave.), Chicago Rail & Port (3250 E. 106th St.), Cronimet Corp. (3219 E. 106th St.), ELG Metals, Inc. (10301 S. Muskeon), Emesco Marine Services Corp. (12100 S. Stony Island Ave.), Maryland Pig Iron of Illinois (12901 S. Stony Island Ave.), Mr. Nuvareach Scrap Metal Corp. (641 E. 108th St.), Napuck Salvage of Waupaca, LLC (11610 S Ave.) and Reserve FTL (11600 S. Burley Ave.).

As on the Southwest Side, there are numerous large recycling facilities on the Southeast Side located within 600 feet of a sensitive area (residential use, park, hospital, clinic, church, daycare center or school, among other areas), of which most are auto and metal shredders³³:

³³ Fig. 2 includes the following auto and metal recycling facilities: Nickelson Industrial Services, Inc., which accepts up to 70 tons per day of scrap metal, including aluminum; Metal Management Midwest, Inc, which accepts up to 800 tons per day of recyclable material; ELG Metals, Inc., which accepts up to 450 tons per day of recyclable material; Cronimet Corp., which accepts up to 400 tons per day of non-ferrous and ferrous metal scrap; Napuck salvage of Waupaca, LLC, which accepts up to a weekly average of 400 tons a day, including aluminum, ferrous metal and non-ferrous metal scraps; All American Recycling, which accepts up to 250 tons per day of aluminum, ferrous and non-ferrous metal scrap; and Mr. Nuvareach Scrap Metal Corp., which accepts up to 1,000 tons of recyclable material, including aluminum, ferrous and non-ferrous metal scrap and motor vehicles and vehicle parts.

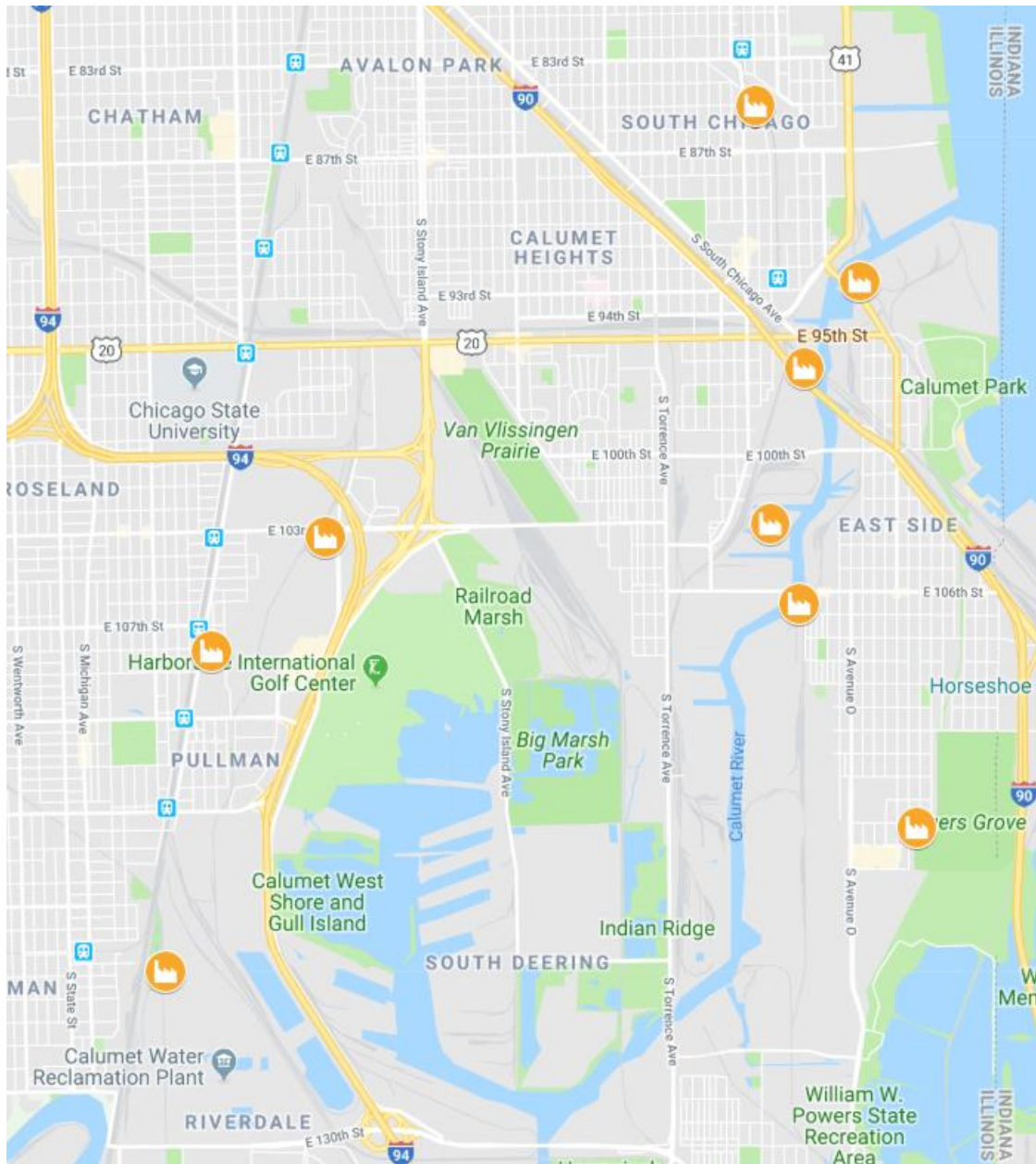


Figure 3. Large Recycling Facilities within 600 ft. of a Sensitive Area (Southeast)

In addition to the numerous scrap metal and auto shredders that already exist in the aforementioned overburdened communities, the placement of these facilities attracts other businesses that rely on a source of recycled metal, such as steel producers and distributors. For example, Atlas Tube is primarily engaged in the production of welded or seamless steel pipe and tubes and heavy riveted steel pipe from purchased materials. It is located within a two-mile radius of South Shore Recycling, All American Recycling, and Waste Management. While Atlas Tube is not within a mile of any residents, the company is just over a mile from the Altgeld Gardens community and within a three-mile radius of 79,507 residents, 90% of whom are people of color, who are at risk of impacts from Atlas Tube’s pollution and that of any truck traffic

necessary to bring recycled metal to the Atlas Tube site for processing. In addition, the facility is located in close proximity to a number of natural areas that serve as important recreational amenities for area residents.

Similarly, Kloeckner Metals is a seller and distributor of steel and non-ferrous metals located within a two-mile radius of Azcon Metals, Scrap Metals LLC, and Waste Management. Its site on 13535 South Torrence is less than half a mile from Carver Military Academy High School and 0.6 miles from Altgeld Gardens, located within a mile of 7,838 residents where over 44% live below the poverty level and 25% of the households make less than \$25,000 a year. The surrounding neighborhood is 62% minority. Almost 34% of the residents are minors. Again, nearby residents are at risk of exposure to harmful pollution from Kloeckner in combination with the many other nearby sources.

V. The Proposed Rules Must Be Significantly Enhanced to Address the Impacts of Air Pollution from Recycling Facilities

Recycling facilities can be significant sources of harmful particulate matter, especially inhalable fine particulate matter, which can contain toxic heavy metals, as well as volatile organic compounds, which can also contain a host of volatile toxic air contaminants. These facilities generate and emit air pollutants not only from processing of materials in various ways, but also from handling and storing materials and from the transport of such materials to and from the facility. Significant pollution problems arise from facilities conducting a range of processing and handling activities in the open air with little to no effective pollution controls or work practices – often affecting neighbors immediately adjacent such as residences, parks and other community features and sensitive land uses. Often multiple recycling facilities all impact the same community.

For far too long, such recycling facilities have largely escaped both assessment of and requirements to control their air pollution, flying under the radar of state and federal air pollution laws and regulations and virtually untouched by local regulations. As described above, new efforts to characterize air pollution from recycling facilities, in particular auto shredding operations, have arisen across the country in the past few years. These analyses have generated much-needed and disturbing information about the air pollution profiles of recycling facilities, confirming what neighboring residents have suspected and asserted for years.

A brief summary of the air impacts from recycling operations is provided above. In addition, here in Chicago, U.S. EPA has in recent years issued Notices of Violation to two auto shredders for failing to disclose and control air pollution from their shredders.³⁴ Prior to these actions,

³⁴ See Ex. 15, *In the Matter of Metal Management Midwest, Inc., d/b/a Sims Metal Management, 2500 South Paulina Street, Chicago, Illinois*, Docket No. CAA-05-2019-006, Consent Agreement and Final Order (December 20, 2018), available at <http://pilsenperro.org/wp-content/uploads/2018/12/Sims-Metal-Management-CAA-05-2019-0006-CAFO-12-20-2018-15-PGS-.pdf>; Ex. 16, *In the Matter of General Iron Industries, Inc., Chicago, Illinois*,

Illinois EPA brought legal action against an auto shredder in nearby Blue Island over materials emanating from its auto shredder and impacting the surrounding community.³⁵ Auto shredders in Chicago have also been the source of fires³⁶, which as shown in California air studies can have huge negative impacts on air quality due to the emissions of a wide range of volatile and semi-volatile toxic compounds. Neighbors of auto shredders and other metal handlers in Chicago also have reported particulate pollution and metallic tastes in their mouths close to shredders, consistent with a study of air pollution from scrap yards conducted in Houston, where photos capture brown and white visible pollution from movement of scrap metal by construction vehicles and from metal fumes due to outdoor torch cutting, respectively.³⁷ For these reasons, we strongly support Chicago stepping up to finally assess and control air pollution from recycling facilities.

With respect to air pollution, the proposed standards include two new sets of requirements. First, the regulations adopt a limited set of fugitive dust Air Quality Standards and Monitoring provisions, applicable to all Large Recycling Facilities. Second, a “Consequential Facility” must conduct air quality monitoring largely tracking the monitoring provisions of the existing fugitive dust rules, as well as include in its permit application an Air Quality Impact Assessment.

A. Air Quality Standards and Monitoring, Section 4.8

The proposed provisions in Section 4.8 for Air Quality Standards and Monitoring track the existing Bulk Material Rules, including fugitive dust plans, visible emissions and opacity limits, fence line air monitoring requirements, and Reportable Action Levels and Contingency Plans based on actual air monitoring data. In contrast to the Bulk Material Rules, however, the proposed Recycling Rules apply only the visible emissions and opacity limits to all Large Recycling Facilities, with the remaining air provisions such as monitoring applying solely to the smaller sub-set of Consequential Facilities. We provide the following comments in order to improve and strengthen these requirements.

Visible Dust. The proposed regulations include a “Visible Dust” provision that appears to be weaker than both the corresponding provision of the Bulk Material Rules and the visible emission limit contained in the Illinois State Implementation Plan (“SIP”), as it may be read to allow facilities to create visible emissions beyond the fence line before recording and taking corrective action to eliminate the visible dust.³⁸ In contrast, the Bulk Material Rules and the

Notice and Finding of Violation, EPA-5-18-IL-14 (July 18, 2018), available at

https://www.epa.gov/sites/production/files/2018-07/documents/general_iron_industries_inc_nov-fov.pdf.

³⁵ Ex. 17, Recycling Today Staff, “Illinois EPA scrutinizes Chicago area shredding plant,” April 27, 2014, available at <https://www.recyclingtoday.com/article/illinois-auto-shredder-epa-investigation/>.

³⁶ Ex. 18, Recycling Today Staff, “Fire hits Chicago scrap yard,” December 8, 2015, available at <https://www.recyclingtoday.com/article/fire-scrap-recycling-chicago-general-iron/>.

³⁷ Ex. 7, Houston DHHS Metal Recycler Study.

³⁸ See Proposed Rule at Section 4.8.2.1, “Visible Dust.” (“Any Fugitive Dust that is visible and travels beyond the boundaries of the Facility shall be documented by the Owner or Operator, who shall immediately implement corrective action such that no visible Fugitive Dust leaves the Facility boundaries.”)

Illinois SIP create outright prohibitions on visible dust or emissions beyond the fenceline – meaning that facilities must take proactive steps to prevent such pollution rather than reactive steps after the fact.³⁹ CDPH should amend the proposed visible dust provision to prohibit visible dust emissions beyond the fenceline of any recycling facility.

Opacity. Also, in Section 4.8.2, CDPH proposes to include a 10% opacity limit on any storage pile, transfer point, roadway or parking area for all Large Recycling Facilities. However, the provision requiring opacity *monitoring* to ensure compliance with this limit, Section 4.8.3.12, is (inadvertently) contained in Section 4.8.3, which pertains to air monitoring only for Consequential Facilities. CDPH should amend these sections to make clear that all Large Recycling Facilities subject to the 10% opacity standard must conduct regular opacity monitoring to ensure compliance with this opacity limit. We recommend that manual opacity monitoring using EPA Method 9 be conducted once daily at all locations where the 10% opacity limit applies when there has been less than 0.1 inches of precipitation in the previous 24-hour period.⁴⁰ Daily monitoring is needed because the quarterly monitoring approach (adopted from the original Bulk Material Rules) does not ensure continuous compliance with the opacity limit in the proposed rules.⁴¹ In addition, we recommend the development of site-specific night-time opacity monitoring protocols in order to ensure that facilities meet the 10% opacity limit during night-time hours.⁴²

Fugitive Dust Plans & Standards for Controlling Fugitive Dust and Other Air Pollution. Currently, the proposed requirement to prepare, implement and maintain compliance with a facility-specific Fugitive Dust Plan is housed in Section 4.8.3 and thus applies only to Consequential Facilities; and the requirement to prepare a Fugitive Dust Plan likewise is contained in Section 3.8.22 regarding Air Quality Impact Assessments in Design Reports, again applicable only to Consequential Facilities. The proposed rules also lack additional performance standards like those in Part E of the Bulk Material Rules pertaining to outdoor storage and handling of non-coke/coal materials (e.g., cessation of operations during high wind events). As a

³⁹ See 35 Ill. Admin. Code at 212.301, “Fugitive Particulate Matter”: “No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source”; Bulk Material Rules at Section 3.0(2)(a), “Visible Dust”: “The Facility Owner or Operator shall not cause or allow any Fugitive Dust that is visible beyond the property line of the Facility.”

⁴⁰ See Ex. 19, Ohio EPA, Draft Air Pollution Permit-to-Install and Operate, Omnisource, July 31, 2008, at 13 of 38 (requiring daily checks for any visible emissions of fugitive dust from sources subject to opacity limits). Note that we cite this permit for purposes of monitoring for opacity only, and not as an endorsement of any other determination reflected in the document.

⁴¹ Since facilities should have trained staff conduct any required opacity monitoring, requiring daily instead of quarterly monitoring should impose little additional burden on facilities.

⁴² This comment should not be construed as supporting extension of recycling facility operating hours into the night, especially for facilities in close proximity to residential areas. Instead, we have concerns that yard-related emissions may continue into the night even when active operations have ceased, thus warranting nighttime opacity monitoring to ensure continuous compliance with the opacity limits and protection of communities. Such protocols also are needed to assess opacity levels during regular operating hours in winter months, when daylight is limited.

result, the only proposed fugitive dust or other air quality standards that apply to all Large Recycling Facilities are the visible emissions and opacity limits discussed above.

Allowing all Large Recycling Facilities that are not “Consequential” to escape the requirement of preparing Fugitive Dust Plans and complying with specific air quality standards and practices is unwarranted with respect to their potential for harmful dust. Moreover, doing so would permit such Large Recycling Facilities to escape specific fugitive dust control measures that are required of (other) bulk material handling facilities conducting similar operations with similar dust profiles.

While Consequential Facilities may pose the greatest risk of air pollution impacting communities, other Large Recycling Facilities can also generate significant quantities of air pollution and may be located close to residential areas, parks, and other community features.⁴³ The Bulk Material Rules recognized that a wide range of material handling facilities should have to comply with robust fugitive dust measures that are objectively described in those Rules themselves, such as the use of covered conveyors to minimize the emissions of fugitive dust; control of all transfer points; and installation of weather stations (which can measure wind speed, wind direction, and precipitation, among other parameters) to inform cessation of operations during high winds.⁴⁴ These objective measures are critical means for not only ensuring that facilities meet the visible emissions and opacity limits by preventing the generation of fugitive dust before it can then disperse, but also, in combination with the opacity limits and opacity monitoring requirements, ensuring that facilities minimize fugitive dust to the greatest extent feasible as a general matter.

CDPH should likewise require all Large Recycling Facilities to prepare and submit Fugitive Dust Plans and comply with the types of fugitive dust controls contained in the Bulk Material Rules.⁴⁵ These requirements should be housed in Section 4 of the proposed regulations and implemented through CDPH’s air permit and air certificate of operation programs, instead of via the every-three-year recycling permit program. Structuring the requirements in this manner instead of tying them to the recycling permit program will mean, in turn, that Existing Consequential Facilities (along with all other Large Recycling Facilities) will need to ensure compliance with air monitoring, Fugitive Dust Plan and air pollution controls in their next

⁴³ Even small operations, located proximate to neighbors, can pose significant risks to community health. While we understand the rationale of the proposed rule to focus on Large Recycling Facilities, and the subset of Consequential Facilities, CDPH should not assume that all small recycling facilities pose little or no risk to neighbors. As an example, see the City of Paramount investigations in the South Coast AQMD region in the Los Angeles area, where relatively small facilities proximate to residential areas posed large risks. *See* Ex. 20, South Coast Air Quality Management District, Summary of Efforts in Paramount, December 2017, at 2-3 of 7, available at <https://www.aqmd.gov/docs/default-source/compliance/Paramount/summary-of-efforts-in-paramount.pdf?sfvrsn=8> (finding that three sites, Carlton Forge Works, Aerocraft and Anaplex, were responsible for elevated levels of Chromium IV and Nickel in 2013 (for Carlton) and 2016 (the other two facilities)).

⁴⁴ *See* Bulk Material Rules at Part B, Section 3.0(7), (8) and (6), and Part E, Section 7.0(4).

⁴⁵ With respect to the Bulk Material Rules Part E requirements for outdoor storage, we note our concern with allowing such outdoor storage and handling for recycling facilities, as taken up below.

certificate of operation, rather than delaying these critical measures until the next recycling permit renewal.

CDPH should also include the following additional air standards and controls in Section 4.8:

1. *Auto Shredders*. CDPH should require that all auto shredders use effective controls of VOCs – such as catalytic oxidizers or biological-based controls where feasible. Properly designed and maintained, such controls can ensure over 95% destruction of inlet VOC levels from shredders. In addition, shredders should capture at least 95% of all of exhaust and then control all sizes of PM emissions using baghouses or fabric filters with an efficiency of at least 99%. Relatedly, the VOC and PM10 emissions sampling plan proposed in 3.9.22.4 should be moved to Section 4.8 accompanying these control requirements. In addition, the sampling should be required on a more frequent periodic basis (such as annually) and/or whenever the feed stream changes significantly from when which prior sampling was required, instead of “at least every 5 years.” More frequent sampling is necessary because the feed stream to the shredder can change in ways that alter the types of VOC and PM emissions and due to the inevitable deterioration of containment devices such as hoods over time.
2. *Auto Shredder Residue (Fluff) – Fugitive Dust*. Requirements to (a) conduct all auto shredder residue (“ASR”) processing in fully enclosed buildings outfitted with robust air pollution controls, (b) move all ASR between the shredder and any subsequent enclosed residue processing buildings via fully enclosed conveyors, and (c) store any ASR in fully enclosed structures with appropriate air pollution controls.⁴⁶
3. *Storage, Staging and Tipping Floor Areas*. Related to the concerns with ASR handling and storage, it appears that the current proposal allows all storage areas, staging areas and tipping floors to be outdoors, completely in the open air with no specific air pollution

⁴⁶ According to court documents in the case regarding Northern Metals, the former Minneapolis shredder created significant amounts of dust from processing of ASR subsequent to the auto shredder but before any treatment or storage of residue. See Ex. 21, *In the Matter of Revocation of Air Emission Permit 05300480-003*, OAH Docket No. 60-2200-33647, Memorandum in Support of MPCA’s Motion for Summary Judgment, at paragraphs 22, 26 and 57-67 (describing processing of shredder residue to recover additional metals, including (a) at a Metals Recovery Plant in which “particulate matter coated the equipment in the building, as well as the floors and fixtures” and which had garage doors that remained open during processing and openings for conveyors, as well as (b) outdoors next to the Metals Recovery Plant without any controls). The proposed replacement shredding operation in Becker, Minnesota, appears to better control this processing step, with materials conveyed between the new shredder and the new Metals Recovery Plant via a covered conveyor, and the Metals Recovery Plant itself controlled by a baghouse. See Ex. 22, *In the Matter of the Decision on the Need for an Environmental Impact Statement for the Proposed Northern Metals, LLC Becker Sherburne County City of Becker, Minnesota, Findings of Fact, Conclusions of Law and Order*, June 13, 2018, available at <https://www.pca.state.mn.us/sites/default/files/p-ear2-134b.pdf>, at paragraphs 12 and 13. (Note that our citation of this decision is not an endorsement of its findings or conclusions, but is included solely to show that measures can and should be taken to control fugitive dust from the shredder residue processing step. We also note our concerns with allowing the Becker facility to store auto fluff in a covered three-walled bin instead of a full enclosure.)

control requirements.⁴⁷ This open-air operation runs counter to the positive movement towards enclosure of dust-generating activities seen with the Bulk Material Rules. As shown in Houston and California studies, yard activity itself can cause significant fugitive dust, especially when construction vehicles move metal materials to and from piles to other areas of the site and vice versa. Given the potential for heavy metal and other emissions from these areas, CDPH should require enclosure, consistent with requirements for treatment of petcoke, coal, and manganese. Such enclosures will not only protect against harmful air pollution, but will also prevent the creation of contaminated stormwater runoff on the front end and prevent visual blight and odors, further justifying the cost of enclosure.

4. *Torch Cutting.* A prohibition on outdoor torch cutting and accompanying requirement to conduct torch cutting in buildings outfitted with robust air pollution controls, along with requirements to minimize any torch cutting that cannot be conducted indoors. Again, the Houston experience identifies outdoor torch cutting as a significant source of air pollution, as well as steps that can be taken to minimize torch cutting at sites near communities and address any remaining pollution from torch cutting.
5. *Storage Tanks.* CDPH should require periodic FLIR monitoring of storage tanks containing high vapor pressure liquids in order to ensure that tank fittings are properly maintained and that all fugitive VOC emissions are thereby minimized.
6. *Fires.* Due to the impacts of fires on air quality, CDPH should require thermal camera hot spot identification and fire suppression systems at recycling facilities.

Air Monitoring Requirements. The fenceline monitoring component of CDPH's Bulk Material Rules has been a central and critical feature of those rules. The data generated by the monitoring program (and EPA's parallel monitoring requests under Section 114 of the Clean Air Act) has provided critical air pollution information to the agency, surrounding community and general public, serving as the basis for several enforcement actions against polluters, confirming community concerns, and raising awareness about pollution issues in industrial areas more broadly. Academic researchers and agency officials, at times in partnership with community advocates, are using the monitoring data to help assess the impacts of facilities on public health. And companies themselves have cited the monitoring as helpful in identifying their own un/under-controlled sources of air pollution - driving the adoption of more effective or enhanced control measures. In addition, technologies such as video monitoring are available as important compliments to more traditional air monitoring. In short, we support requiring recycling facilities to also to conduct robust fenceline air monitoring and implement Reportable Action Level programs.

⁴⁷ See Proposed Rules at Section 3.9.12.

CDPH should strengthen the proposed air monitoring requirements as follows:

1. Require all Large Recycling Facilities that have any outdoor operations located within 600 feet of a sensitive receptor to conduct initial fenceline monitoring. In addition, per our prior comments on the risks that can be posed by even small facilities, CDPH should also consider requiring such fenceline monitoring at small recycling facilities that have outdoor operations and are located very close (say less than 100 feet) to residential or other sensitive receptors.
2. Fenceline monitoring should include dry season total suspended particulate (TSP or PM) measurements which should then be analyzed for major pollutants expected from the facility – such as metals.
3. Due to the high likelihood of significant toxic metals emissions from certain Large Recycling Facilities, and similar to the manganese-specific dust regulations adopted earlier this year by CDPH, the regulations should de facto require fenceline filter-based metals air monitoring of auto shredders. While we appreciate the inclusion of an “Additional monitoring” provision at Section 4.8.3.2 and the range of facilities covered by the proposed recycling rules, leaving metals monitoring to case-by-case determinations does not provide the public with the assurances that these extremely harmful pollutants will be identified and addressed in a timely fashion. Moreover, as noted above, studies of the air quality impacts from auto shredder operations support the need to require metals monitoring of all such facilities, due to shredder, processing, fire-related, and yard/handling emissions.

B. Air Quality Impact Assessment, Section 3.9.22

As an initial matter, as noted above, CDPH should implement the air monitoring and control requirements of the proposed rules through its air certificate of operation and permit programs, rather than through the recycling permit program. Moving these provisions to Section 4 would leave solely the proposed emissions and air dispersion modeling study in the recycling permit program via the Design Report, to inform the overall decision of whether to permit recycling facilities to operate.

We strongly support requiring all Consequential Facilities to conduct emissions and air modeling studies and to publicly report the results of such studies as a condition of receiving their permits.⁴⁸ Doing so will help ensure that a more detailed understanding of a facility’s air impacts is available to the public along with other information about facilities’ operations and environmental impacts. Moreover, CDPH should strengthen the emissions and air modeling study provision by requiring the use of baseline air quality monitoring data, collected via

⁴⁸ We note that we have concerns with Existing Consequential Facilities deferring their air demonstrations to the next recycling permit cycle, potentially pushing out such demonstrations for years. However, ensuring that Existing Consequential Facilities are employing both air monitoring and control measures via Section 4 requirements implemented through the air permit and certificate of operations programs helps to reduce the air impacts of such facilities in the meantime.

monitors placed at the site (as opposed to remote monitors from other locations), in the demonstration. Because the proposed rules already contemplate fence-line monitoring of the site once operational, a requirement to use actual monitoring data from the site in the air quality demonstration would impose little additional burden on the company, while greatly enhancing the accuracy of the air demonstration to the agency's and the community's benefit.⁴⁹ (As discussed above, we believe filter-based metals monitoring should be required as well, and thus note here that filter-based metals monitoring data should be used in the air demonstration.)

In addition, all applicants should be required to include both their emission calculations for each source (including the bases for any assumptions used in those calculations) and their modeling files as a part of their recycling permit Design Report/Application.

VI. As Auto Shredder Residue Contains Hazardous Constituents, CDPH Must Mandate ASR Management Methods to Prevent Releases of Hazardous Substances.

Automotive shredder residue ("ASR" or "auto-fluff") is a byproduct of scrap metal recycling facilities. ASR is usually generated by hammermill industrial shredders when vehicles, household appliances, and other manufactured metal products are collected and reprocessed for commercial value.⁵⁰ Chemically, ASR is primarily composed of aluminum, carbon, and zinc.⁵¹ However, ASR may also contain polymers and/or hazardous contaminants, including heavy metals, PCB's, and petroleum hydrocarbons.

⁴⁹ Alternatively, CDPH can consider allowing the use of mobile monitors by applicants to quickly generate baseline data at multiple locations for purposes of the air quality study.

⁵⁰ Ex. 23, Institute of Scrap Recycling Facilities (California Chapter), *Treatment of Auto Shredder Residue*, available at https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/05/ISRI_ASR_Study_JPM_8_2_13.pdf.

⁵¹ Ex. 24, Gerdau, *Material Data Safety Sheet for ASR*, available at https://www2.gerdau.com/sites/default/files/downloadable_files/Automobile%20Shredder%20Residue%20ASR%20MSDS%20NA%202-15-12.pdf.

Table 1
WET Metal Values in Untreated ASR (mg/L)

Sample Date	Cd	Pb	Zn	Cu
6/18/2009	0.086	58.7	925	1.25
7/28/2009	1.29	41.8	1320	2.66
8/21/2009	0.657	88.3	1423	0.426
11/12/2009	1.25	49.6	1456	5.98
5/19/2010	2.57	155	864	6.83
10/26/2010	2.09	109	2603	9.1
1/5/2011	1.62	86.7	1685	3.97
1/25/2011	0.64	74.4	1025	3.35
4/28/2011	1.26	68.9	1110	4.51
10/31/2011	1.86	29.4	1970	4.60
11/7/2011	1.79	51.0	1525	2.03
Regulatory Values (CCR, Title 22 Ch. 11, § 66261.24)	1	50*	250	25

Bold numbers indicate values at or above the STLC value.

* Each of the reclassification letters issued to the shredders allows a soluble lead concentration of 50 mg/L. The requirements of the reclassification letters vary with respect to other Title 22 metals.

(Table 1 above is from Exhibit 23 to these comments, page 7). ASR can vary in chemical and physical composition depending on the treatment process. Untreated ASR may contain a heterogeneous mixture of materials, including plastics, rubber, foam, fabric, carpet, glass, wood, road dirt, debris, and other residual metals. Physically, ASR can range from small granular particles to identifiable pieces of material (i.e. small pieces of glass, wood, etc.).

ASR can be a characteristic hazardous waste under RCRA because of the toxicity of entrained metals and other components of the waste. As described in its Material Data Safety Sheet, ASR contains multiple toxic substances in addition to cadmium, lead and zinc. In Illinois, ASR is characterized as a special waste (specifically, "a waste material generated by shredding recyclable metals").⁵² According to 35 IAC § 808, special wastes are given a "toxic score." The generator of a special waste has the burden of characterizing their waste according to ASTM test methods to determine the toxic score of the waste.⁵³ Because of the hazardous constituents of ASR, CDPH should mandate specific measures to control every aspect of ASR management. These measures include screening scrap materials, rejecting components in these wastes that commonly include hazardous substances, managing and storing ASR in full enclosures and requiring full disclosure of the treatment technologies that will be applied to ASR.

⁵² Ex. 25, Illinois EPA, "Do I Have a Special Waste?" available at <https://www2.illinois.gov/epa/topics/waste-management/waste-disposal/special-waste/Pages/do-i-have.aspx>.

⁵³ See 35 Ill. Admin. Code 808.121(a)

CDPH should mandate strict controls to screen for and exclude hazardous materials to minimize the quantity of hazardous substances that will be entrained in ASR. CDPH should prohibit specific components that can accompany scrap metal wastes, including switches, batteries, gas and propane tanks and any components that contain traces of transmission fluid, gasoline, diesel fuel, lubricating oils and antifreeze. These prohibitions require stringent enforcement practices by the facilities. Visual gate inspections of incoming loads of scrap materials for prohibited components are essential but not adequate. Facilities should be required to employ photoionization detectors to screen for volatile organic compounds and other gases, as well as radiation detectors. Based on screening, facilities should be required to categorically reject “materials requiring special handling”, and maintain documentation detailing the supplier, the screening technique that was utilized and the basis for rejecting the materials.

CDPH should mandate that all ASR-related operations (storage, management, processing and transportation) should take place in fully enclosed and controlled structures. This is necessary to prevent the release of hazardous substances into two environmental media. First, as discussed elsewhere in these comments, material, including entrained hazardous substances, can be released from outdoor ASR piles into the air. Second, rainfall and snowmelt can penetrate outdoor ASR piles, causing contaminated leachate (containing suspended solids and hazardous constituents). Enclosure prevents the uncontrolled release of airborne particulate matter. Enclosure also prevents rainfall and snowmelt from penetrating ASR piles, minimizing the release of contaminated leachate.

CDPH should mandate that facilities which generate, treat and/or store ASR must designate the on-site or off-site treatment method that will be employed to address their ASR wastes. With respect to treatment, *Stabilization/Solidification* are the preferred methods for heavy metals contained in ASR. *Stabilization* reduces the contaminants’ mobility through physical or chemical reactions, and is effective for a wide range of constituents (e.g. lead, arsenic, and chromium). *Stabilization* causes precipitation, complexation, and/or adsorption of the contaminants. *Solidification* requires cement or another inorganic binder to solidify the material. Applying this to ASR treatment processes, the ASR is exposed to a blend of liquid polysilicates (either potassium silicate or sodium silicate) and additives (wetting agents). The liquid polysilicates and additives chemically bind to heavy metals in the solution (forming the “ASR matrix” and completing the *Stabilization* process). Inorganic binders and alkaline activators (cement, lime, or other pozzolanic materials) are then added to the ASR matrix to finalize the *Solidification* process.

VII. Construction and Demolition Debris Can Pose Lead and Asbestos Hazards, thus CDPH Should Mandate That Facilities Employ Specific and Empirical Testing Measures to Exclude Hazardous and Contaminated C&D Waste.

In a 2015 article in the Journal of Hazardous, Toxic, Radioactive Waste, researchers published the results of sampling construction and demolition (“C&D”) waste for asbestos and

lead.⁵⁴ Notably, the researchers acknowledged that existing regulations require asbestos and lead removal prior to demolition and renovation activities that lead to the generation of C&D waste. Nonetheless, actual sampling of the C&D waste stream revealed that 4.9% of C&D waste included asbestos and 14.4% of the C&D waste tested positive for lead-based paint. The authors traced the asbestos and lead contaminated C&D waste to projects that are either excluded from regulations or less likely to adhere to regulatory requirements, typically, demolition/renovation projects involving single family homes or multi-family dwellings with fewer than four units. The authors concluded, “[I]n the case of asbestos and lead, residential projects contributed overwhelmingly to positive detection, at 94% and 85%, respectively.” Notably, certain residential waste streams were more likely to be contaminated. Gypsum waste presented both asbestos and lead hazards. Lead was also detected in painted/stained wood as well as painted brick and concrete. To a lesser extent, roofing materials also presented asbestos hazards.

According to existing Chicago requirements, only “non-hazardous” and “non-contaminated” waste qualifies as recyclable C&D waste. Yet, no specific protocols are imposed on recycling facilities to verify loads of C&D wastes are free of asbestos and lead hazards. Unless a load is entirely traceable to the work of professional contractors that employed pre-demolition asbestos and lead detection and removal measures, it is dangerous and naïve to assume asbestos and lead are not “along for the ride” with C&D waste streams, especially gypsum and painted wood, concrete and brick. Unless specific load screening measures are mandated, dust that is released from subsequent dumping, processing, separation and transport activities could include entrained asbestos and lead hazards. Just as importantly, a load that isn’t effectively screened for lead and asbestos hazards may violate the fundamental, categorical legal requirement that only “non-hazardous” and “non-contaminated” C&D waste is eligible for processing.

The new regulations should include specific protocols for permitted facilities to verify that demolition projects are being professionally managed. If a certification doesn’t accompany a load, the facility should be required to employ specific screening techniques before allowing the load to be deposited on the site. Visual inspection cannot form the basis for assessing whether wastes are lead-bearing and/or asbestos-containing. For lead, screening should instead include XRF reading on all painted surfaces. Common (but uncharacterized) asbestos containing materials should be rejected until appropriate sampling using a polarized light microscopy analysis is complete.

⁵⁴ Ex. 26, “Development and Application of A Framework to Examine the Occurrence of Hazardous Components in Discarded Construction and Demolition Debris: Case Study of Asbestos-Containing Material and Lead-Based Paint.” J.Powell, P. Jain, A. Bigger and T. Townsend. *J. Hazrd. Toxic Radioact. Waste*, 2015, 19(4): 05015001.

VIII. CDPH Should Assert Its Authority to Require Environmental Impact Assessments, to Assess Cumulative Impacts on Public Health, Safety and Welfare Arising from Multiple Permitted Facilities, and to Provide for Public Participation.

A. Environmental Impact Assessments

Proposed Section 3.10 requires that an Environmental Impact Assessment (“EIA”) shall be included in the Design Report “as applicable.” However, the requirement to prepare an EIA, found in Section 17-13-0902-B of the Chicago Municipal Code, only applies to waste-related uses. Consequently, the obligation to conduct an EIA appears to apply only to a small percentage of large recycling facilities; most categories of recycling facilities are not traditionally regarded as waste-related uses as that term is used in Section 17-13-0902-B.

Limiting the applicability of the EIA (either purposefully or inadvertently) is a significant lost opportunity in the context of the proposed Rules. The EIA is extremely valuable because it requires the broadest range of factors to be evaluated as part of permitting decisions, such as the impact on the surrounding area and the dynamic physical environment, which include but are not limited to 1. critical wildlife habitats, 2. fluvial systems, 3. natural wetlands, 4. air quality, 5. water quality, 6. flora and fauna, 7. public health, 8. potential risks and effects of accidental releases, fires or explosions on surrounding communities, 9. alternatives to the proposed facility, their costs and their environmental impacts. Assessing these factors with respect to large recycling facilities would significantly enhance the scope, depth and quality of CDPH decision making, and provide a basis for CDPH to respond to the common concerns which are expressed by members of affected communities, their elected officials, and groups aligned with them.

The quality of CDPH’s permit review will be significantly enhanced by asserting CDPH’s authority to require permit applicants to complete EIAs. This would give discretionary authority to CDPH to require an EIA for facilities which otherwise may not be subject to Section 17-13-0902-B, for example, proposals for new, large facilities, or, proposals for significant modifications of existing consequential facilities. This would enable the permit applicant and CDPH to address the widest range of community concerns on the basis of an EIA, rather than mere assertions, aspirations and speculations.

Section 3.10 should be modified to allow CDPH to require an Environmental Impact Assessment as part of a permit application for facilities which are not encompassed in Section 17-13-0902-B. Correspondingly, Section 3.10 should be amended to include the EIA description found in 17-13-0902-B, but as an independently authorized feature of the Rules for Large Recycling Facilities.

B. Cumulative Impacts

CDPH should add a provision to the rules underscoring its authority to make permitting decisions based on the cumulative impacts of clustered large recycling facilities. That is, CDPH

should expressly reserve the right to deny or modify permits to facilities that in combination with other facilities create impacts that could endanger public health, safety and welfare.

The Chicago Municipal Code provides CDPH with the authority and responsibility to assess and act upon cumulative impacts. Section 11-4-600 recognizes that air pollution can pose hazards to human health and the environment. This Section's focus is on air pollution hazards to health and the environment, not on the hazards of any specific air pollution source. Section 11-4-610 authorizes CDPH to take measures to address buildings, structures, facilities, devices, processes and other air pollution sources, within the city. CDPH's mandate is not limited to the narrow business of issuing a single permit to an individual facility, but rather, is explicitly framed as an omnibus authority to regulate "in the plural" to address air pollution that poses hazards. That is, once CDPH identifies air pollution that can pose hazards to human health and the environment, its obligation is to regulate the buildings, facilities, devices, processes, and other sources within the city to eliminate that hazard. Emission sources that can be subject to CDPH's activities are also broadly and inclusively defined, including any and all sources of air pollution, including the widest range of stationary and mobile sources.

This broad mandate carries over to CDPH's authority in permitting. Section 11-4-630 gives the Commissioner an omnibus authority in permitting to achieve the purposes of preventing air pollution hazards. Similarly, pursuant to Section 11-4-800, the Commissioner may issue regulations to implement the mandate to prevent air pollution hazards. At no point is the Commissioner restricted to addressing only the air pollution hazards attributable a single facility. Consistent with the purpose of protecting public health from air pollution hazards, the Commissioner has the authority and responsibility to assess if these hazards are the result of activities within the city, and to take the steps which are necessary to address hazards from contributing air pollution sources. This fundamental responsibility cannot be achieved if CDPH takes a narrow, facility-by-facility, pollutant-by-pollutant approach to its public health mandate. The Rules should be clear that CDPH retains the authority and responsibility to assess the air quality impacts of any individual facility in light of the cumulative air pollution hazards that will affect members of the public, even if those hazards are the result of other stationary and mobile sources. This is especially important in areas like the Southeast and Southwest Sides where facilities are clustered and where this trend is accelerating.

c. CDPH is to be commended for proactively providing for public participation opportunities in rulemaking and permitting. In its Rules, CDPH should expressly commit to the notice-and-comment public participation process it already (but informally) uses in regulatory and permitting activities for Large Recycling Facilities. This will provide consistency in practice, clarity for regulated entities, assurance for members of the public, and clear direction to future CDPH leaders and staff members.

Thank you for your consideration of these comments. Please contact us if you have any questions or comments. We would welcome the opportunity to meet to discuss these matters.

Sincerely,

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