From: Geertsma, Meleah <mgeertsma@nrdc.org>
Sent: Thursday, January 14, 2021 3:16 PM
To: envcomments; Dave Graham; Jennifer Hesse; Mort Ames; Angela Tovar; Megan Cunningham; Daniel Lurie; Candace Moore
Subject: NRDC et al comments on recycling permit application for the proposed General III/Southside Recycling
Attachments: Exhibit 1.pdf; Exhibit 3.pdf; Exhibit 4.pdf; Exhibit 5.pdf; Exhibit 6.pdf; Exhibit 7.pdf; Exhibit 2 - text of comments to IEPA.pdf; FINAL GIII Application Comments NRDC 1.14.2020.pdf

[Warning: External email]

Please find attached comments drafted by NRDC and joined by our partners the Southeast Environmental Task Force and the Southeast Side Coalition to Ban Petcoke, regarding the application for a recycling permit for the proposed General III, aka Southside Recycling, operation at 11600 S. Burley.

Also attached with the text of our comments are Exhibits 1 and 3-7, and part of Exhibit 2. Exhibit 2 in its entirety consists of our air permit comments to the IEPA plus exhibits to those comments, which we previously sent to CDPH this past summer and are incorporating by reference here. We are also working on getting a link to CDPH where the full Exhibit 2, including exhibits to our IEPA comments, can be (re)downloaded.

Sincerely,
Meleah Geertsma

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January 14, 2021

Chicago Department of Public Health
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Submitted Via Email To: envcomments@cityofchicago.org

Re: **Large Recycling Facility Permit Application, General III, LLC (d/b/a Southside Recycling), 11554 S. Avenue O – Chicago, Illinois**

To The Chicago Department of Public Health:

The Natural Resources Defense Council ("NRDC") writes to oppose the permitting of yet another heavy industrial facility – in this case of a metal shredding operation relocating from the well-off, White Lincoln Park community that has ejected it – in Chicago's Southeast Side environmental justice community. This opposition is based on a long list of omissions, gaps and other deficiencies in Reserve Management Group's ("RMG") application for a recycling permit from the Chicago Department of Public Health ("CDPH") for the proposed General III (d.b.a. Southside Recycling) facility at 11600 S. Burley ("General III"). These comments are supported by our partners the Southeast Environmental Task Force ("SETF") and the Southeast Side Coalition to Ban Petcoke ("Coalition"), who are submitting additional application comments that NRDC supports and incorporates by reference as well.

We recognize and thank CDPH for its detailed application deficiency letter issued to RMG/General III on December 23, 2020 ("Deficiency Letter"), which focuses on requirements under the Rules. We support the items raised in this letter and provide related comments below. In addition to shortcomings under CDPH's new Rules for Large Recycling Facilities ("Rules"), the application is deficient because it fails to provide critical information necessary for CDPH to carry out the full suite of the agency's and the City's legal duties to the Southeast Side community and city as a whole. As explained in more detail below and in comments on the application for the proposed General III submitted by SETF and the Coalition, these duties include the City's obligations to comply with the federal Fair Housing Act and other civil rights laws, as well as to prevent open dumping and public nuisances, and to implement provisions of the City's 2014 Recycling Facility Rules and Regulations that are still in effect.

Furthermore, while our organizations and members appreciate CDPH's response to our concerns and its resulting efforts to regulate recycling facilities and to scrutinize the proposed General III, the Rules fail to expressly include a number of important environmental impacts of and issues associated with metals recycling facilities that we have raised with CDPH and the City repeatedly over the past several years. These impacts and issues include the need to treat adjacent, co-owned and operationally interconnected recycling facilities as a single entity for

permitting purposes to prevent improper segmenting that would allow concerning operations to circumvent permitting requirements; to assess and prevent air pollution hot spots and other impacts from diesel trucks serving such truck-intensive facilities; and to assess and require monitoring of toxic heavy metals[1] and other volatile organic compounds that such facilities emit. Again while we appreciate CDPH's statements that it understands/agrees with and will address a number of these issues in the future[2], we emphasize that CDPH is failing its duties to protect the public if it does not fully consider these issues *now* at this critical juncture for the proposed General III.

NRDC submits these comments on behalf of our organization and our roughly 3 million members and activists, including approximately 17,000 members and activists in the City of Chicago, a number of whom reside on the Southeast Side in close proximity to 11600 S. Burley, the location for the proposed new metal shredding facility. Regarding our partner organizations who join these comments, SETF's mission is to ensure a healthy and safe environment for its residents, to preserve regional ecological resources and to achieve a sustainable economy that enhances local communities. The Southeast Side Coalition to Ban Petcoke is a community-based organization dedicated to the health, safety and welfare of the people who live, work and recreate in the Calumet region. In addition to the specific comments raised here, we incorporate by reference our organizations' prior comments on metals recycling facilities to CDPH with respect to the Rules, as well as to the Illinois Environmental Protection Agency ("IEPA") regarding the air permit to construct for the proposed General III.[3] These comments provide additional grounds

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[1] At the outset, we raise particular concern with CDPH's lack of attention to heavy metals (and other hazardous air pollutants) with respect to the air pollution profile of recycling facilities. As we have noted in the past, the Rules should fully recognize and require the assessment of heavy metals and other HAPs as a baseline requirement. In addition, in its response to public comments from the December hearing regarding the long-term health impacts of exposure to PM10, CDPH only addressed impacts from a respiratory perspective, failing to acknowledge and describe the impacts to health from exposure to particulate toxic heavy metals that can have devastating impacts on neurological development and other bodily systems. We also note that coarse particles larger than PM10 can be of heightened concern to health where such particles contain heavy metals. This is because there is a direct exposure path from the nose to the brain, such that larger particles potentially result in a larger per-particle exposure. Metals facilities are associated with high levels of such larger particle size heavy metals. *See, e.g.*, Ex. 1, Minnesota Pollution Control Agency, "North Minneapolis Air Monitoring Project," https://www.pca.state.mn.us/air/north-minneapolis-air-monitoring-project (website providing information on the Northern Metals facility in Minneapolis exceeding the state's standard for total suspended particulate). We also note here the concern with manganese at the other RMG facilities that we raised in a January 8, 2021 email to CDPH.

[2] *See* CDPH, Official Response to Comments on Proposed Recycling Rules for Large Recycling Facilities, June 5, 2020, , at p7 (regarding treating recycling facilities as a "single source"), available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/CDPH%20Response%20to%20Comments%20on%20Proposed%20Rules%20for%20Large%20Recycling%20Facilities%20-%20June%205,%202020.pdf; CDPH Responses to questions raised at the hearing [for the proposed General III], , at p1 (regarding future rulemaking regarding on-road mobile emissions sources and PM2.5), available at https://www.chicago.gov/content/dam/city/sites/rgm-expansion/documents/CDPHRMGResponse.pdf.

[3] Ex. 2, Public Comment on the Draft Permit for General III, LLC, and supporting exhibits submitted by NRDC to IEPA, June 15, 2020 ("Comments to IEPA") (noting that we forwarded our comments and a link to the exhibits to CDPH on June 18, 2020); CDPH is in possession of our prior comments and exhibits to the agency on metals facilities, including supplemental comments and emails raising specific issues, which we incorporate by reference here.

for the concerns raised here, and thus additional grounds for CDPH to require information as part of fulfilling its duties. Ultimately, this information is necessary to ensure that any permit granted to GIII by CDPH will not endanger the Southeast Side community or cause a public nuisance. Absent submission and full consideration of this information, CDPH cannot issue a permit to General III.

To assist CDPH in its review of these comments, the following comments first take up issues not addressed in the Deficiency Letter, then raise additional deficiencies that fall under and/or overlap with the issues raised in the Deficiency Letter and that are supported by the provisions of the Rules cited in the Deficiency Letter. With respect to the latter, we provide additional bases for requesting the identified information where such bases extend beyond the Rule sections noted in the Deficiency Letter.

I. Legal Summary.

The more detailed legal comments on the General III application submitted by our partners set forth the City's and CDPH's duties and authorities that bear on this recycling permit process, including:

- the City's broad home rule authority that extends to environmental, safety, and public health matters;
- the exercises of that home rule authority in code provisions and local rules setting forth application requirements and the authority to deny applications that fail to meet such requirements, as well as the affirmative duty of applicants to demonstrate that they will operate in a manner that prevents public nuisance and protect public health, safety, and the environment;
- Illinois municipalities' authorities and duties to prevent nuisance; and
- the City's/CDPH's duties to uphold civil rights laws.

These duties and authorities provide ample ground and, in some cases, compel CDPH to require the information set forth below from the applicant, and to itself conduct necessary reviews, as prerequisites to making a determination on the proposed General III permit. Conversely, CDPH must deny a permit to the proposed General III if the applicant cannot or will not provide the required demonstration or otherwise fails the necessary analyses. We provide additional discussion of specific authorities/duties that are particularly relevant to specific application deficiencies below.

II. Deficiencies Not Included in CDPH's Deficiency Letter.

Civil Rights. As set forth in SETF's comments, CDPH must conduct an environmental justice analysis as part of this permitting process, pursuant to the City's civil rights obligations. The analysis should address whether the environmental consequences of the applicant's facility, viewed comprehensively and in the context of where it will operate, will cause or contribute to significant, adverse and disproportionate risks for local communities. Such an analysis should

also employ a cumulative impacts approach. As set forth in these comments, the current application is deficient in a number of respects necessary for conducting such an environmental justice analysis.

Diesel Truck Pollution. CDPH's duties to prohibit nuisances, to protect the public from harmful air quality and to comply with civil rights obligations require it to evaluate diesel truck impacts during this process, when CDPH can address vehicle pollution through its authority to regulate vehicle-intensive facilities. Such evaluation is especially important for metals recycling facilities like the proposed General III, as demonstrated by recent monitoring studies of local air quality that associate metals recycling facilities with creation of diesel truck hot spots akin to those next to highways.[4] Thus, in addition to the traffic study and stacking plan information required by CDPH (see below for additional comment), the applicant must provide a hot spot air quality modeling analysis, employing the onsite monitoring data discussed elsewhere in these comments and taking into account other truck-intensive developments in the area. This analysis must include both onsite diesel vehicles (which can be significant sources of air pollution) and those that move on and off the site.

PM2.5, TSP, and HAPs Air Quality Assessment and Monitors, Impacts from Fires and Other Catastrophic Events. The Rules require an "air quality impact assessment" and expressly lay out the minimum required elements of that study that focuses on PM10, making it clear that CDPH may require additional information/analysis.[5] Given studies cited in these and our past comments to CDPH and IEPA that show hot spots of diesel pollution, larger particles and toxic heavy metals and other hazardous air pollutants ("HAPs") attributable to metals recycling facilities; the compliance history of these operators; and the evolving understanding of the true impacts of metals facilities on local air quality, such additional analysis is necessary here to aid CDPH in fulfilling its duties to prevent nuisances and protect public health and the environment, as well as its civil rights obligations. Thus, as discussed in more detail below, the applicant must provide a full evaluation of total suspended particulate matter (TSP), including speciated fractions of metals and organics including diesel particulate matter, as well as the PM2.5 fraction of total suspended particulate matter, including proposals for siting monitors and collecting and evaluating air quality data for TSP and PM2.5. Given the risks of fires, explosions and equipment failures at metals facilities discussed here and in other comments to CDPH and IEPA, the air quality impact assessment must also include an evaluation of impacts to air quality from these and other non-standard operating conditions.

Other RMG Operations. Full descriptions of the other RMG operations at 11600 S. Burley – including Reserve Marine Terminals, South Shore Recycling, Napuck Salvage of Waupaca and

[4] *See, e.g.,* Ex. 3, David J. Miller, et al., "Characterizing Elevated Urban Air Pollutant Spatial Patterns with Mobile Monitoring in Houston, Texas," *Environ. Sci. Technol.* 2020, 54, 4, 2133–2142, https://pubs.acs.org/doi/10.1021/acs.est.9b05523.

[5] *See* Rules at Section 3.9.21 ("The Design Report for a Consequential Facility shall contain an air quality impact assessment that includes, but is not necessarily limited to…").

Regency Technologies[6] – including whether/how their operations have related and/or will relate to each other and the proposed General III, are necessary to determine whether such operations and General III are in fact a single recycling facility subject to a single recycling permit evaluation (and whether General III is in fact an expansion of the RMG operations, as it was treated during the zoning process). Such description is also necessary in general in order to determine the overall impact of these co-owned, co-located recycling operations on the surrounding community and any needed controls or other measures to ensure that they will not result in significant disparate cumulative burdens. Treating the operations as a single recycling facility for recycling permit purposes is not only necessary to accurately describe the operations and ensure facilities are not improperly circumventing regulation, but will also avoid complications with compliance and liability that might arise from so many co-located, largely-outdoor industrial operations (where attribution is more difficult than if they were more discrete, fully enclosed operations owned by wholly separate entities).

In addition to IEPA's determination that the RMG S. Burley facilities and proposed General III constitute a single source for air permitting purposes, and the treatment of the facilities under one NPDES permit, evidence in CDPH's records indicates that the RMG S. Burley operations are linked physically/operationally as recycling facilities. For instance, CDPH inspection records describe the facilities sharing equipment, as well as handling and further processing material from each other.[7] It appears that the operations also share personnel. Furthermore, CDPH inspection reports indicate that the RMG S. Burley operations have undertaken work at their sites in conjunction with the proposed General III.[8] As discussed in our comments to IEPA, it also appears that the other RMG operations undertake significant torch cutting, such as of railcars, raising a question that must be answered in this proceeding of whether the other RMG facilities

[6] As we have noted elsewhere in our comments to agencies, there appears to be a fifth operation at the same site as well, which may be a Calumet Transload facility. Information on this facility's operations must also be included in the General III application to the extent that the facility's operations are connected to the RMG operations, e.g., if the facility provides or will provide material loading and/or transportation services to General III and/or any of the other RMG operations at the site.

[7] *See, e.g.*, CDPH Inspection Report ID# 1152450 (December 12, 2017, Regency Technologies uses the mobile refrigerant unit owned by South Shore Recycling); Inspection Report ID#s 700782 and 1187872 (May 5, 2015 and February 6, 2018, South Shore sends its auto scrap to Napuck and Regency sends its plastic to Napuck). (Given that CDPH is in possession of its own inspection reports, we are not separately providing such reports as exhibits to these comments. The same applies to other CDPH documents such as those posted on its website for Environmental Rules and Regulations.)

[8] *See, e.g.*, CDPH Inspection Report ID# 1356389 (April 11, 2019, South Shore added a cement dock "in preparation for the increase in peddlers that will result from the General Iron facilities addition to the area.") It is unclear from the inspection reports whether the new Above Ground Storage Tank system installed by Reserve Marine Terminals in late 2020, described in a CDPH Inspection Report from October 30, 2020 (Inspection Report ID# 1599885), is related to the proposed General III; given the timing of installation, such relatedness is likely. We note that to the extent that the proposed General III is in fact an "expansion" of the RMG operations, CDPH must also determine whether any of the construction activities related to General III at the other RMG and/or General III sites violate the prohibition on construction of an expansion in advance of receiving a recycling permit for the expansion. *See* Rules at Section 3.0 ("An Expanding Facility must receive a permit for the Expansion *before* beginning construction or otherwise implementing the Expansion," (emphasis added)).

will conduct torch cutting of materials that are then further processed by the proposed General III.

CDPH has stated that it acknowledges our concern about segmentation of recycling operations and approach to treating co-located, inter-dependent facilities as a "single source" for recycling permit purposes, but will take up this issue in future actions after it considers the General III application.[9] However, CDPH does not need to amend its regulations (or seek a code revision) to undertake this critical analysis with regards to the proposed General III and the other RMG S. Burley facilities. The Code and CDPH's regulations currently define "recycling facility" broadly and similarly require a "recycling facility" broadly defined to obtain a recycling permit.[10] Thus the authority to take a "single source" approach already exists and such treatment may in fact be compelled: CDPH cannot adopt an interpretation of the recycling permit requirement that would allow operations to escape or circumvent the intent of the permitting requirement – to regulate the environmental impacts of such facilities – through segmentation. Nor does any provision of the Code expressly prohibit such an approach, and CDPH has the discretion to reasonably interpret code provisions relating to recycling permits to effect the intent of the code and to implement its broad authority/duty to protect public health and the environment.[11]

Finally, the descriptions of the RMG S. Burley facilities and whether/how they will relate operationally to the proposed GIII must include the RMG facilities' pre-and-post General III capacity. Such information is necessary to determine whether the proposed General III entails an expansion of the RMG S. Burley facilities under the Rules, i.e., if the creation of General III would enable one or more of the other RMG S. Burley facilities to increase their capacities by more than 10%.[12]

Full Characterization of All Auto Shredder Residue (Not Just Fluff). The Deficiency Letter requests waste characterization of fluff that is transported offsite. Characterization of the auto shredder residue ("ASR") that will be handled onsite in the open air is critical as well, given that it is essentially untreated fluff plus nonferrous metals, so it poses similar (and potentially greater) threats to the surrounding community and environment as fluff. The current proposal is deeply concerning because it would allow ASR to be staged in an open pile and transferred to the

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[9] *See* CDPH, Response to Comments on Proposed Large Recycling Facility Rules, at p7, available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/CDPH%20Response%20to%20Comments%20on%20Proposed%20Rules%20for%20Large%20Recycling%20Facilities%20-%20June%205,%202020.pdf.

[10] *See* Chicago Municipal Code at §§ 11-4-120, 11-4-2510, and 11-4-2520; Rules at Section 2 ("recycling facility" is defined by 11-4-120).

[11] For instance, with respect to Chicago Municipal Code § 11-4-2540 regarding classes of recycling permits, CDPH can require operations like RMG's to obtain a single recycling permit for the full operations and create subclasses of requirements that apply to portions of the facilities engaged in handling and processing certain classes of materials (where it is clear that such lines can be drawn, i.e., where there is not flow of materials of different classes between such operations and/or support operations occurring between them).

[12] *See* Rules at Section 2, Definitions (definition of "expansion"). Note that to the extent the Rules and/or Code contain requirements/standards that apply to recycling facility renewal permits, CDPH should interpret those requirements as applying to applications for expansions as well.

nonferrous process area and open storage bins using construction vehicles with minimal controls. It appears that such staging and handling will occur prior to any treatment of the material to reduce its hazard profile. Moreover, General Iron, including under RMG's ownership and management, has a history of poor control of ASR, increasing the need to closely scrutinize this portion of the proposed facility and ensure tight control (such as full enclosure of ASR at all points in the processing and handling). It appears from CDPH's inspection records that at least some of the RMG facilities at S. Burley have also generated/handled ASR in the past[13], necessitating a full examination of this history for purposes of the current permitting process as part of the mandatory compliance history assessment discussed below.

Information on the ASR should include third-party-conducted, representative testing of ASR from General Iron (including samples that capture the range of feedstocks expected at the proposed facility over time), as well as a discussion of whether there will be any difference in operations and/or feed stream between General Iron and the proposed General III that might impact the expected ASR make-up.

To the extent not already requested by the Deficiency Letter, the applicant must provide a detailed discussion of the controls to be used on the ASR pile when worked by vehicles, as well as controls employed at the three-sided ASR storage bins that are part of/adjacent to the nonferrous process and during any vehicle working of material held in those bins. Additional comments on this issue are included below.

Finally, we note that the application should use terminology with respect to auto shredder residue that is consistent with that in the Rules. The Rules employ "Auto Shredder Residue" with a broad meaning, including variants such as "post-process Auto Shredder Residue." The current application uses varying terms, e.g., "shredder fluff" and "processed shredder residue" that may create confusion regarding the material at issue and its treatment by the rules.

(Non)compliance History. As noted in comments submitted by our partners, the 2014 Recycling Rules explicitly require the Commissioner to evaluate the applicant's history of compliance/experience in recycling or other waste handling operations.[14] Such evaluation is broad, encompassing all federal, state and local laws, regulations and other legal requirements pertaining to any and all aspects of operating such a facility, including issues related to worker

[13] *See, e.g.*, CDPH Inspection Report ID# 707117 (entered for Reserve Marine Terminals from August 21, 2015, describing processing of vehicles 'in their entirety" and "resulting fluff" being shipped to a landfill).

[14] *See* 2014 Recycling Rules at Section 4.0. We also note that the compliance history assessment as described in Section 4 is not explicitly limited to a past three-year period and that there is nothing magical about a three-year timeframe as it relates to potential problems from the applicant (e.g., a serious compliance issue that occurred three years and a day ago may still be deeply concerning). Thus, CDPH should not treat the express language in Section 4.0(1) as drawing a bright line in time for purposes of the compliance review. This is especially true where, as here, there is evidence that the applicant continues to engage in behaviors similar to those underlying compliance issues dating back further than three years.

safety.[15] In addition, the compliance inquiry by its terms is not limited geographically to operations that occur within the City of Chicago; instead, it attaches to the history of the "applicant, or any owner or officer of the applicant, or any person having control of applicant or any of its operations" with respect to recycling facilities broadly speaking. Given the scope of the required compliance inquiry and that RMG has operations in many different cities and states, CDPH should require the applicant to provide information sufficient to conduct this evaluation, including, at minimum, the compliance history of General Iron, all RMG operations at 11600 S. Burley, and of all entities under the RMG umbrella. This topic is taken up in more detail below with respect to specific topics (noting that CDPH may identify additional federal, state and/or local requirements that must be encompassed in the compliance review beyond the topics taken up in our comments).

Open Dumping. Federal and Illinois law prohibit "open dumping," broadly defined to entail the "disposal" of solid or hazardous "waste" at a facility or site that is neither a sanitary landfill nor a hazardous waste landfill.[16] The Chicago code likewise prohibits open dumping and broadly declares that "[d]isposal or treatment of any waste without a permit is hereby declared a nuisance."[17] Given the many ways in which the proposed facility threatens to release solid waste into the environment based on the current application; evidence in the record that General Iron and the RMG operations at 11600 S. Burley have likely engaged in open dumping[18]; and the compliance history requirement, CDPH cannot grant a permit based on the application in front of it. Instead, the applicant must provide information sufficient to demonstrate that the proposed General III will not result in open dumping. Specific required information going to open dumping is set forth below.

III. Deficiencies Related to Those Included in CDPH's Deficiency Letter.

Item 1: Zoning Board Findings. In addition to the Zoning Board documents required by the Deficiency Letter, the applicant must provide its full application to the Zoning Board and related

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[15] *See id.* at 4.0(1) (evaluation's scope inquires into violation of "*any federal, state, or local laws, regulations, standards, permit conditions, or ordinances* in the operation of any junk facility, recycling facility, or any other type of waste or recyclable materials handling facility or site…" (emphasis added)).

[16] *See* 42 U.S.C. §§ 6945(a) and 6903(14); 415 ILCS 5/21(a) and 5/3.305.

[17] *See* Chicago Municipal Code §§ 11-4-120 ("Open dumping" means the consolidation of waste from one or more sources at a disposal site that does not fulfill the requirements of a sanitary landfill; "Dispose" means to discharge, deposit, inject, dump, spill, leak or place any waste into or on any land or water or into any well so that such waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or be discharged into any water, including groundwaters,") and 11-4-1500(b) ("No persons shall (1) cause or allow the open dumping of any waste, (2) abandon or dispose of any waste upon public property, except in a sanitary landfill approved by the Illinois Environmental Protection Agency and the Commissioner, (3) dispose, treat, abandon or transport any waste, except at a site or facility which meets the requirements of the Illinois Environmental Protection Act and which is permitted pursuant to this chapter,") and (c). The Code also expressly recognizes that open dumping is grounds for revocation of a recycling permit. *See* Chicago Municipal Code § 11-4-1930(D).

[18] CDPH inspection reports describe RMG operations at 11600 S. Burley as allowing material to accumulate on the ground, including one report that also describes processing of vehicles at the site. *See, e.g., supra*, CDPH Inspection Report for August 21, 2015. *See also* various discussions of and CDPH inspection reports documenting General Iron's history with release of ASR, including fluff, to the surrounding environment.

documents, including a February 13, 2019 letter from Scott Borstein to Patrick Murphey regarding qualification as a Special Use instead of a mandatory waterway Planned Development. Moreover, given that this February 2019 letter discusses solely the *area* of the General III site relative to the other 11600 S. Burley recyclers, the applicant must provide additional information on whether General III's operations will be "subordinate in… extent" to the existing RMG uses at the property, including the relative amount of material that General III will handle and process compared to that handled and processed at the RMG facilities prior to General III's proposed addition. To our knowledge, such information was notably omitted in the request for a zoning determination that the proposed project could seek a Special Use approval instead of going through Planned Development review, rendering the determination that General III required a Special Use questionable and potentially providing grounds for revocation of the Special Use approval on the basis of false representation or mistake.[19] The basis for requiring this information is the 2014 Recycling Rules' mandatory compliance review and the City's overall duty to ensure that entities are fully complying with and not circumventing land use and zoning requirements.

Item 2: Proposed Boundary of Site, Including Barge Area. Related to the above comment on the zoning approval, to the extent that the applicant intends to conduct barge loading and so must extend the facility boundaries to the River, the applicant and CDPH must determine whether such change to the facility boundary impacts the prior zoning determination(s) as part of the mandatory compliance review.[20] To the extent that General III will not conduct barge operations at the riverfront bordering on its portion of the site but will instead utilize the barge area(s) of one of the other RMG operations, like Reserve Marine Terminals, such interconnectedness/interdependence provides grounds for considering the operations as a single recycling facility for recycling permit purposes as discussed above.

Item 3: Pavement (activities over proposed gravel areas, pavement maintenance plan). In addition to the information required by the Deficiency Letter, as part of the mandatory compliance review, the applicant must submit information on RMG's history of poor pavement design and maintenance at its 11600 S. Burley operations, a description of which is included in our comments to IEPA. CDPH should require the same of General Iron. Maintaining the integrity of paved areas is an ongoing challenge at heavy-use industrial facilities such as the proposed General III. A combination of poor design, heavy use, weather-induced deterioration, and poor/inadequate maintenance causes paved surfaces to break and crack and lose effectiveness. This is evident, given the long history of pavement problems at the other RMG S.

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[19] *See* Chicago Municipal Code § 17-16-0505 (the Zoning Administrator may revoke any permit or other form of authorization required and issued under the Zoning Ordinance when s/he determines that "(1) there is a departure from the plans, specifications, or conditions required under terms of the permit, (2) the development permit was *procured by false representation* or was issued by mistake; or (3) any of the provisions of this Zoning Ordinance are being violated," (emphasis added)).

[20] *See id.,* regarding revocation of zoning approvals where there is a departure from the plans, specifications, or conditions required under terms of the permit.

Burley operations as set forth in our comments to IEPA. Moreover, more recent CDPH inspection reports since this summer indicate that the pavement problems are ongoing at these operations.[21] In addition to the historic accounting, the applicant must submit an evaluation of whether alternative paving/cover materials and better designs with greater likelihood of withstanding heavy equipment over time and ensuring compliance with soil/air/water requirements related to ground cover than the selected materials are available, and if available why these materials were not selected. Such evaluation should take into account the geological conditions at the site.

Item 5: **Water Usage**. The applicant must include a description of the source of water to be used in all Dust Bosses, including its expected total dissolved solids ("TDS"), and an evaluation of how water source/composition will be taken into account in operation and maintenance of the Dust Bosses, including periodic testing of TDS along with cleaning to ensure that nozzles remain unblocked.

Item 6: **Handling Capacity and Detailed Specs of All Structures and Fixed Equipment; O&M Plan (including welding); Estimate of Liquid and Solid Waste Generation from Devices**. In addition to the information required by the Deficiency Letter, the applicant must provide one-hour and twenty-four-hour/daily maximum capacity/rate information for any and all equipment at the site, as well as for the site as a whole and in conjunction with any related/supporting activities undertaken at the other RMG facilities. Such information is necessary to ensure that the required air quality impact assessment properly accounts for short-term impacts on air quality (such as measured against the 24-hour PM10 and PM2.5 NAAQS), as short-term operations are highly likely to run at a higher capacity (and so higher emissions) than the simple average based on annual capacity assumed by the applicant. The applicant must also discuss whether its submitted emissions estimates (and so the modeling that employs the emissions estimates) reflect such short-term maximum capacities/rates. To the extent that the emissions estimates and air quality modeling do not reflect short-term maximum capacities/rates, the applicant must revise both the emissions estimates and air quality modeling to reflect these short-term periods to ensure protection of short-term air quality, along with the annual/long-term assessment.

The applicant must also provide detailed engineering drawings of the shredder and shredder enclosure, including plan, elevation, and isometric views, that make clear any and all openings in the shredder enclosure in all sides. Furthermore, the applicant must provide information on how the shredder and shredder enclosure design ensures the ability to maintain negative pressure within the structure. In addition, the applicant must include the engineering basis for sizing the air flow that will be evacuated to the air pollution control devices during shredding operations.

[21] *See., e.g.,* CDPH Inspection Report ID#s 1585460 (South Shore, December 4, 2020, "The pavement was still dirt and I had previously questioned the drainage of the one drain in this area,") and 1566973 (Regency Technologies, September 11, 2020, "The pavement in the outdoor storage area was again in need of pavement repair due to potholes and standing water ?RT [sic] had repaired this recently but more repairs were now necessary,").

To the extent that there are any openings in the solid enclosure, the applicant must describe whether any additional measures will be used to control any potential emissions from these areas if adequate negative pressures cannot be maintained within the entire enclosure.

The applicant must also provide a clear list of all conveyors at the site, identifying where they are located and which conveyors at each location will be "covered" and which will not. For each of the "covered" conveyors, the applicant must provide detailed engineering drawings, including cross-section views, that clearly show the degree to which each conveyor is covered/enclosed so as to prevent material from escaping the conveyor. The applicant must also provide drop heights from one conveyor to another, as applicable, and/or drop heights from or to a conveyor from other handling elements, in appropriately scaled drawings.

The applicant must provide detailed information on the disposal plan for each liquid or solid waste generated by or associated with processing and/or material handling, including composition information for the wastes (e.g., the expected content of material collected by any baghouses). Wastes, as we use the term here, are materials that cannot be used by General III onsite and therefore need to be sent elsewhere, including to related entities at the site such as the other RMG operations.

To the extent not already required by CDPH's Deficiency Letter, the applicant must include a detailed description of controls on any manual sorting activities contemplated at the site.

Item 8: Inbound Loads and Staging/Screening Areas. In addition to the information required by the Deficiency Letter, the applicant must provide plan and elevation drawings of any bins or other storage or staging areas used for Auto Shredder Residue other than the covered post-processed ASR storage enclosure, e.g., what appear to be three-sided bins for ASR on the north portion of the Nonferrous Processing area.

The applicant must also confirm whether any ASR will leave the site without going through the Nonferrous Process, under either normal or exceptional operating circumstances (e.g., in the event that a portion of the Nonferrous Process is non-operative). If so, describe how such ASR will be handled onsite prior to shipping, the type of vehicle that will be used to ship, and vehicle loading processes and controls.

Item 9: NPDES Permit. In addition to the information required by the Deficiency Letter, the applicant must describe in detail the measures to be used to prevent material from washing into the water from land at the barge area, as well as remediation plans to address any material that washes into the water from land.

The applicant must also provide detailed information on barge handling areas at General Iron and the other RMG operations (and/or the fifth S. Burley operation, Calumet Transload), including the information requested above for the proposed General III and any inspection history related to the barge area, as part of the mandatory compliance assessment and to aid in determining whether General III and the other RMG operations constitute a single recycling facility.

Item 10: Stormwater Treatment Unit and Detention Ponds. Related to the likelihood of fires at the proposed facility (see comment on Items 26 and 27), and as evidenced by the February 2020 fire at the Northern Metals facility in Becker, Minnesota and its resulting contamination of onsite ponds[22], the applicant must provide in its description of the stormwater and wastewater systems whether and how the systems are designed to address deposition/contamination of ponds from onsite fires.

Items 11 and 12: Stacking Plan of All Trucks and Vehicles During the Facility's Peak Hours; Traffic Study. In addition to the information required by the Deficiency Letter, the applicant must describe in detail the expected volume and types of trucks at/that will deliver material to the site, especially in light of RMG's recent purchase of the Windy City facility and its statements that the company will be transferring material in bulk from that facility to the proposed General III. Additionally, the applicant must provide a detailed description of road conditions where trucks will drive/stack, as well as a discussion of available measures to minimize truck combustion emissions and whether any will be employed at/by vehicles serving the proposed General III and other RMG operations.

The February 2019 traffic study submitted as part of the zoning process and previously provided to CDPH is nearly two years old and so, is too dated for present purposes given significant developments in this area in the past two years (including new truck-intensive land uses and physical/legal road modifications). The applicant must provide an updated traffic study that takes into account the adjacent/nearby Northpoint facilities and any other new and/or proposed developments served by trucks in the area, and that clearly describes the adjacent roads that trucks serving the facility will use, including their current legal status as public or private roads and any proposed or planned changes in legal status.[23]

Pursuant to Section 4.14 of the Rules, the applicant must provide information on trucks routes, including those for trucks taking fluff to the Indiana landfill (also pursuant to area clean-up requirements, open dumping, public nuisance), and discuss whether and how it will monitor these routes for possible ASR deposition and reentrainment from trucks.

(*See* related comments on incorporation of diesel in the air quality assessment and vehicle operating plans.)

Item 13: Backup Calculations for Annual Liquid and Solid Waste Generation Rates, Refrigerants Recovered. In addition to the information required by the Deficiency Letter, the

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[22] *See* Ex. 4, Minnesota Pollution Control Agency, "Northern Metal Recycling (Becker)," https://www.pca.state.mn.us/air/northern-metal-recycling-becker (website containing information about the agency's investigation of a massive fire at the new Becker facility, including contamination of onsite ponds with SVOCs, VOCs, total PCBs, and lead).

[23] The updated traffic study must take into account, for example, the 6 million square foot underground INVERT warehousing facility that we understand is being developed for underneath the RMG S. Burley site. *See* INVERT project page at https://theinvertchicago.com/location/. In addition, the traffic study must fully support any projected rate of traffic increase that it employs in light of this current and expected development activity in the area.

applicant must describe whether any refrigerant recovery for materials that General III processes will be conducted by one of the other RMG operations and/or with equipment owned by one of the other RMG operations. (*See* related comment on Item 6.)

Item 14: Stormwater Pollution Prevention Plan. In addition to the information required by the Deficiency Letter, the applicant must describe in detail any and all materials to be handled in the barge area and loaded onto barges, including composition data.

Item 16: Storage Tanks. As noted elsewhere in these comments, the other RMG operations have added storage tanks in the recent past. As part of the mandatory compliance assessment and determination of whether General III is a single recycling facility along with the other RMG operations, the applicant must include a description of whether storage tanks at any of the other RMG operations will be used to store liquids recovered during General III operations (as well as recovered from one or more of the other RMG operations) under normal or any other operating scenarios.

Item 17: Air Quality Impact Assessment. (*See* comments above regarding the necessary scope of the air quality impact assessment, including the need to ensure protection of short-term air quality.) At the outset, we note that even if revised air quality modeling demonstrates that the proposed General III will not cause or contribute to an exceedance of the PM10 NAAQS or otherwise adversely impact air quality (absolutely or relatively as the latter pertains to civil rights compliance), robust monitoring of the full suite of air pollutants expected from the facility is necessary to help ensure protection of public health and the environment. Robust monitoring is necessary because of the many enforceability issues raised in our comments to IEPA, which render the emission calculations unreliable/unlikely to represent actual operating conditions, as well as the overall issues with accurately estimating and modeling fugitive emissions, which are a primary concern at facilities like the proposed General III. In sum, CDPH should not allow the applicant to engage in minimal air quality monitoring based on its modeling demonstration, but must require robust monitoring to ensure that the facility does not in fact exceed the impacts projected by the modeling. Such robust monitoring is fully contemplated by the Rules[24] and is further supported by CDPH's duties to prevent nuisances and protect the environment, safety, and public health.

In addition, as a practical matter, the impacts of General III to air quality will be compounded by the RMG operations that share the site. Thus, regardless of whether the facilities required a single recycling permit as discussed elsewhere in these comments, the required air quality impact assessment for the proposed General III must take full account of the other RMG operations at 11600 S. Burley, as well as any additional operations at the site. More specific required items are as follows:

[24] *See, e.g.*, Rules at Section 4.7.7.2 and 4.7.7.3.

The applicant must conduct, provide and base its modeling studies on at least 12 months of onsite representative baseline air monitoring data for TSP, PM2.5, and associated HAPs given control of/access to the site well in advance of application. The monitors for such data collection must be situated so as to account for the other RMG facilities at the site, as well as surrounding nearby sources, and take into account meteorological conditions at the site.

With respect to the modeling demonstration and monitoring proposal, the applicant must provide monthly wind roses from onsite monitoring and nearby monitoring sites with publicly available data (like KCBX just to the north). The applicant must evaluate the number and placement of monitors relative to meteorological conditions, as well as given likelihood of the other RMG operations' emissions impacting/adding to those of General III (e.g., the applicant must include placement of North and South monitors) (see also above comments on the proposed General III and other RMG operations constituting a single recycling facility).[25]

Again given access to the site well in advance of the application, the applicant must retain a third party to collect and provide representative onsite silt content data, including multiple samples as necessary to properly characterize the levels of silt at the site. The applicant then must use this onsite silt data in revised fugitive dust calculations.

The applicant must provide detailed information on the General Iron sampling that went into the General III metals emission calculations submitted to IEPA, including a map of sampled areas, the surface materials present, and what housekeeping measures were taken in those areas in advance of the sampling (and historically).

The applicant must retain a third party to collect onsite General III samples to be evaluated for metals content for use in emissions calculations (given the lack of data on current soil composition in the area and history of contamination, as well as history of the other RMG operations).

The applicant must provide detailed information on the sampling that went into South Chicago Property Management's ("SCPM") metals calculations provided to IEPA, including the same information as for the General Iron sampling. The applicant must retain a third party to collect onsite RMG/SCPM samples that do not composite samples for fugitive sources (as compositing for IEPA purposes likely "washed out" higher levels in sampled areas).

The applicant must explain whether the emissions calculations and modeled emissions in its revised air quality impact assessment reflect worst case emissions, e.g., emissions under high winds and/or near-freezing/freezing temperatures (as well as short-term maximum capacities/rates as discussed above). To the extent that the emissions calculations and modeled emissions do NOT reflect these real world conditions, the applicant must revise the modeling to reflect worst case emissions.

[25] *See* Comments to IEPA, at pp63-67.

The applicant must provide additional justification for the use of a 95% control factor for conveyor emissions absent wet suppression, based on 1.5% moisture content.[26]

The applicant must provide detailed information on how it modeled paved and unpaved roads. The challenge of modeling the emissions and associated air quality impacts of haul roads has been a particularly vexing problem for years. An EPA-sponsored "Haul Road Workgroup" was formed in 2009 with a collection of federal, state, and local government dispersion modelers to examine and better understand haul road characterization issues and recommend a modeling methodology back to the broader dispersion modeling community. In 2012 the Haul Road Workgroup issued a "best practices guide" for modeling of haul road fugitive emissions in the AERMOD modeling system. The General III modeling report is utterly devoid of any real discussion regarding the modeling of the fugitive emissions from the onsite haul roads and how these modeling efforts comport with the relevant guidance. The 2012 Haul Road Workgroup "best practices guide" requires a number of data points (including vehicle height, width and length; type of roadway; roadway width, etc.) selection and supporting rationale for which no mention is made in the application. In addition, the modeling report fails to clearly identify the location of the roads and the nature of the hauling undertaken on them. Finally, the modeled emission rates are not summarized or correlated to the individual roads, making agency review impossible. The modeling should be resubmitted with all of these deficiencies corrected.

Regarding an updated HAPs analysis, the air quality impact assessment must: (a) justify the use of the Wisconsin air toxics rules versus other available state approaches, e.g., from Michigan, Minnesota, Ohio, California, and Texas; (b) include VOCs along with metallic HAPs; (c) conduct an assessment of the combined health impacts of the air toxics modeled; (d) account for non-cancer HAP impacts; (d) account for the toxicity of hexavalent chromium; and (e) evaluate results against available short-term health thresholds, such California's 8-hour REL for manganese (and use onsite baseline data per the above).[27]

The applicant must include a proposal for siting of additional monitors as discussed above. The siting of the monitors should be based on the revised modeling demonstrations once the haul road modeling and other deficiencies are remedied. We reiterate, however, that the modeling demonstration should not be used as a brightline test of whether and how many monitors must be installed and operated on an ongoing basis at the site, given the complexities and likely inaccuracies involved in modeling fugitive sources in particular.

Item 19: Peak Daily Quantities Accepted. In addition to the information required by the Deficiency Letter, the applicant must describe whether and how materials to be processed at General III will be accepted/staged/stored at one of the other RMG operations, and/or any other property owned by South Chicago Property Management in the vicinity, either before or after processing and under "normal" or emergency/exceptional operating conditions.

[26] *See* Comments to IEPA, at p74.
[27] *See* Comments to IEPA, at pp78-79.

Item 20: Documentation that Facility Can Determine and Record Amounts of Material Entering and Exiting. In addition to the information required by the Deficiency Letter, the applicant must describe the ability of all of the RMG operations at 11600 S. Burley to determine and record amounts of material entering and existing, as part of the assessment of whether the operations in fact constitute a single recycling facility (and conversely to ensure that they are able to demonstrate the separateness of their facilities over time if such independence is claimed).

Item 21: Demonstrate that Peak Capacity Can Process Anticipated Peak-Season Max Daily Quantities. The demonstration required by the Deficiency Letter must include the vehicle capacity to transfer and load material between process areas and into staging/storage areas, including from the ASR pile to the nonferrous process and nonferrous process bins (and include a description of how often the ASR pile will be worked/turned over). The demonstration must also include General III's maximum theoretical processing capacity on a daily and monthly basis, without any limitation on hours of operation, to determine whether it is likely that the applicant will ask for increased hours operation after its initial approval and how such increase would impact health and the environment. As discussed elsewhere in these comments, the air dispersion modeling must model the maximum short-term emission rates as well. The modeling, as submitted, models annual average emission rates.

In addition to the information required by the Deficiency Letter, the applicant must describe whether it will rely on any storage, staging, and/or processing capacity at the other RMG operations during "normal" or emergency/exceptional operating conditions.

Items 22 and 23: Health and Safety Plan, OSHA. Available public materials show issues with worker safety at both General Iron and the other RMG operations, including that the RMG facilities together account for among the highest total number of OSHA violations and fines of operations in the Calumet Corridor, according to research conducted by partners at the Metropolitan Planning Council. Specifically, it appears that RMG has had issues with exposure to lead and cadmium; failing to clean containers leading to explosion risks; and safety risks associated with portable ladders. A Google search of General Iron and RMG produces articles on workplace deaths and injuries, as well as private legal actions over retaliatory discharges for raising unsafe workplace conditions (such as extreme cold), along with records of workers compensation claims. Thus, in addition to the information required by the Deficiency Letter, the applicant must provide the Health and Safety Plans for General Iron and the RMG operations as part of the mandatory compliance review. In addition, the applicant must provide any and all documentation required by the General Iron and RMG Health and Safety Plans dating back to January 1, 2016, to the extent required to be retained by the companies. The applicant must also provide a detailed history of OSHA notices of violation, penalties paid, and corrective actions taken for General Iron and the RMG operations, as well as a detailed history of any private litigation or other legal claims brought against any entity under the RMG umbrella related to worker safety.

Items 26 and 27: Fire extinguishers, Thermal Infrared Detection Devices. Fires continue to be a major source of concern related to the proposed General III. General Iron and RMG have histories of fires at their facilities.[28] Indeed, only two months ago while under RMG's control, the General Iron facility in Lincoln Park had a smoldering debris fire that sent a dark gray plume into the community, evidencing that this company, even today, cannot prevent fires at its operations.[29] It is critical that the proposed General III use a robust, integrated approach to fire prevention/response employing thermal infrared detection devices that incorporates trained, dedicated staff and detailed protocols for identifying hot spots that trigger a response and for the response itself. Merely having the cameras is not enough.[30] Even at facilities with infrared cameras, there is a significant risk of toxic fires, as seen by the massive fire in February at the brand-new Becker facility in Minnesota.[31]

In addition to the information required by the Deficiency Letter, the applicant must provide a detailed history of fires at General Iron and the RMG facilities, including any fires at RMG facilities located outside of Chicago. The history must include the source/cause of, response to, and duration of each fire, as well as any impact assessment conducted in conjunction with the fire. The history must also include a detailed description of any and all fire detection/prevention/response measures in place at the time of each fire, and an assessment of whether and how those measures differ from what will be employed at the proposed General III.

The applicant must also provide detailed information on: (a) how the proposed locations of the thermal infrared cameras will provide comprehensive coverage of all stockpile/yard operations with the potential for fires; (b) the reviewing/monitoring plan for data generated by the thermal infrared cameras, including training and staffing dedicated to reviewing such data; (c) protocols/metrics for determining whether a hot spot that requires response exists and protocols for such a response once triggered; and (d) fire evaluation and clean-up response in the event that a fire in the yard does in fact occur, including air quality evaluation, ash deposition evaluation onsite (including soil and water) and within the community/for the Calumet River/onsite/adjacent property owners, and ash/sludge/soil clean-up, including of water/retention treatment ponds.

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[28] *See* Comments to IEPA at various.

[29] Ex. 5, Brett Chase, "Fire breaks out at General Iron week after company pays settlement to city over explosion," *Chicago Sun-Times,* November 10, 2020, https://chicago.suntimes.com/2020/11/10/21559380/general-iron-fire-lincoln-park-southeast-southside-recycling-metal. Such low temperature fires can be more detrimental to air quality than high temperature, large burning fires, given the large number of partially combusted products of incomplete combustion. Local assessment of air quality impacts from such fires rarely if ever captures the true impact to air quality from the fires (*see* discussion of metal shredder fire impacts on air quality in our past comments to CDPH and IEPA).

[30] *See* Ex. 6, Emily Atkins & Treena Hein, "Facilities on Fire," *Waste & Recycling Magazine,* May 14, 2019, https://www.wasterecyclingmag.ca/feature/facilities-on-fire/.

[31] *See supra*, MPCA Becker website; Ex. 7, Kirsti Marohn, "As fire continues, state halts most Northern Metal operations in Becker," *MPR News*, February 21, 2020, https://www.mprnews.org/story/2020/02/21/as-fire-continues-state-halts-northern-metal-operations-in-becker. According to Cory Boecker at the Minnesota Pollution Control Agency, the Becker Northern Metals facility employs thermal infrared cameras.

To the extent that any materials with the propensity for igniting or causing fires that will be handled or processed by General III will be handled, stored/staged and/or processed at one of the other RMG facilities at any point during the material's residence at the site, the applicant must provide all of this information for the RMG operations as well.

Items 29 and 30: **Vehicle Operating Plans, Process Rates/Capacity**. To the extent not already required by the Deficiency Letter, the applicant must provide information on the engine rating (Tier) of any and all vehicles that will serve the facility onsite and/or bring material to or away from the site, as well as the ownership or leasing status of each vehicle type. The applicant must also provide information on how fugitive dust will be controlled during vehicle operations involving handling of ASR, including how fluff will be loaded onto trucks and what kind of tarp will be used to cover fluff in trucks. In addition, with respect to the water trucks, the operating plan must include detailed information on whether (including under what operating and/or weather conditions), where and how the water trucks will be deployed to control fugitive dust, including how actual use of the trucks will be documented. (This information is also necessary with respect to the fugitive particulate operating program.)

Item 31: **Waste Characterization of Shredder Fluff, Description of Treatment, Disposition at Landfill**. Given the history of noncompliance and ongoing issues with auto shredder residue (including fluff) depositing in the Lincoln Park community even after the company settled CDPH's Notices of Violation over ASR, it is especially critical that a high level of scrutiny be paid to this portion of the proposed operations.

Thus, given the mandatory compliance review, the applicant must provide a full accounting of how General Iron handled ASR/fluff up until today, including a description of all staging and storage practices, controls employed, and transfer operations (including into vehicles), as well as ASR-related results of inspections (local/state/fed). In addition, CDPH's inspection reports indicate that RMG has generated/handled auto shredder residue in the past. Thus, the applicant must provide a full accounting of how RMG has generated/handled ASR/fluff, including the same information as for General Iron. The applicant must also compare such operations at General Iron and the RMG facilities to the proposed ASR-handling and/or treatment operations for General III.

In addition to describing treatment to reduce the hazardous properties of the ASR, the applicant must provide the expected efficacy of any such treatment in reducing hazardous properties prior to shipping the ASR offsite, and the basis for that expectation.

Item 32: Fugitive Particulate Operating Program. To the extent not already covered by the Deficiency Letter or other portions of these comments, the applicant must do the following with respect to the fugitive particulate operating program:

- Provide any and all fugitive particulate operating programs submitted to IEPA for the four other RMG/SCPM operations at the site, as well as for General Iron.

- Provide a detailed history on inspections and any compliance issues/notices related to fugitive dust control at General Iron and/or the other RMG operations.
- Provide a plan for dust control at below- and near-freezing temperatures.
- Provide a plan for dust control during periods of high winds, i.e., periods when average wind speeds exceed 15 miles per hour over two consecutive five minute intervals of time (as defined by CDPH's dust rules).
- Provide information on how the use of Dust Bosses will take into account wind direction and speed, as well as temperature; the source(s) of water for Dust Bosses and how water make-up might impact Dust Boss performance; the schedule for cleaning and testing Dust Bosses to ensure proper droplet sizing and mist formation; training for staff in proper use of Dust Bosses to ensure proper droplet sizing and mist formation and targeting of material with dust potential; and how use of Dust Bosses will be tracked to ensure they are actually being employed given history at General Iron with failure to use spray applications.
- Provide an opacity monitoring plan.
- Describe how the plan and schedule for patrolling and cleaning adjacent areas will include the Calumet River and adjacent/nearby industrial properties under different ownership, as well as the fluff truck routes beyond a quarter-mile radius.
- Evaluate loading of fluff onto trucks within an enclosure, including whether such an enclosed loading operation is feasible at General III and if so why such an enclosure is not being employed.
- Describe in detail how material will be handled and controlled in the barge loading area and during active barge loading operations, including how dust generation will be minimized and how material drop into the river will be eliminated during loading (and/or unloading, to the extent the proposed General III will receive material by barge), pursuant to the prohibitions on open dumping and nuisances. This information must include an evaluation of enclosure of barge loading operations, including whether such an enclosed loading operation is feasible at General III and if so why such an enclosure is not being employed. The description must also include evaluation of other available methods of loading barges and controlling fugitive emissions beyond the vehicle-based method included in the current application, such as telescoping chutes or other partially enclosed methods.

Item 33: Hours of Operation in Conflict with IEPA Permit. In addition to the information required by the Deficiency Letter, the applicant must provide a detailed history of any compliance issues regarding hours of operation imposed by local and/or state requirements at General Iron and/or other RMG operations. In addition, the applicant must describe how hours of operation will be tracked and recorded in order to ensure compliance with any limitations on hours of operation.

Item 34: Odor Control Plan. The applicant must include in the odor control plan odor inspections and investigations for the Calumet River adjacent to the site.

IV. Conclusion

For these reasons, the application for the proposed General III is deficient and CDPH must deny a permit unless and until the applicant can cure these deficiencies and demonstrate through the additional information that the proposed General III facility (and/or the single recycling facility that encompasses General III and the other RMG facilities) will operate without posing a threat of harm to the health, safety and welfare of the residents and workers on the Southeast Side.

Sincerely,

/s/ Meleah Geertsma
Meleah Geertsma
Senior attorney, Environmental Justice
Natural Resources Defense Council
On behalf of NRDC

CC:
Dave Graham, CDPH
Megan Cunningham, CDPH
Jennifer Hesse, CDPH
Mort Ames, Law Dept.
Jeffrey Levine, Law Dept.
Daniel Lurie, Mayor's Office
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Candace Moore, Mayor's Office

MINNESOTA POLLUTION CONTROL AGENCY

North Minneapolis Air Monitoring Project

The MPCA began a special project to monitor air quality in a heavily industrialized area of north Minneapolis in 2013. The project started as part of the MPCA's process in re-issuing the air quality permit for Northern Metal Recycling, Inc., which operates a metal shredding facility south of the Lowry Avenue Bridge on the west bank of the Mississippi River. The project started with one monitor.

The air monitoring sites measure multiple air pollutants including total suspended particulates (TSP), coarse particulates (PM10), and air toxics (metals, VOCs, and carbonyls). The majority of air samples are collected for 24-hours once every six days. PM10 is collected hourly. To date, air monitoring has found violations of the state TSP standards, exceedances of the daily PM10 standard, and elevated metals concentrations at the monitors located adjacent to the Northern Metals facility.

Under a settlement that Northern Metals and the MPCA agreed to in Ramsey County District Court in March 2017, the company will move its metal shredding operation to a new location in 2019 (more info below).

History

- **January 2013** — The MPCA begins air monitoring for fine particles (PM2.5) at Lowry Avenue (909)
- **October 2014** — The MPCA adds TSP and air toxics monitoring to Lowry Avenue (909). In the first month of operation, the monitor violates the daily TSP standard.
- **June 2015** — Monitoring for TSP, PM10, and metals begins at Pacific Street (910)
- **January 2017** — Monitoring for TSP, PM2.5, metals, VOCs, and carbonyls begins at Bottineau/Marshall Terrace (1909)

Map of monitoring sites

Air monitoring results

Elevated levels of airborne particulate and heavy metals have been measured at the Lowry Avenue and Pacific Street sites. Air monitoring results have identified:

- Violations of the daily and annual Total Suspended Particulate (TSP) standards
- Exceedances of the daily PM10 standard
- Elevated lead concentrations, measured at 80% of the national lead standard

- Elevated heavy metal concentrations including three metals (chromium, cobalt, and nickel) measured above chronic inhalation health risk benchmarks

Summary reports

- North Minneapolis Air Monitoring Study: 2017 Data summary (aq2-209)
- North Minneapolis Air Monitoring Study: 2016 data summary (aq2-206)
- North Minneapolis Air Monitoring Study: 2015 data summary (aq2-78)
- Fine particle study results: North Minneapolis 2013-2014

Data reports (updated quarterly)

- North Minneapolis Air Pollution Monitoring Results (aq2-75)
- North Minneapolis Air Data Explorer — interactive data viewer
    - For additional data requests, complete an Information Request Form (e-admin11-36).

What the MPCA is doing

The MPCA is actively working to address the elevated air pollution levels in the area surrounding these monitors.

Air monitoring is continuing at the Lowry Avenue and Pacific Street sites (sites 909 and 910, respectively) and the MPCA is providing timely public access to results. In 2017, the agency added a third air-monitoring site on the east side of the Mississippi River in the Marshall Terrace neighborhood at 2522 Marshall St. NE.

In addition to addressing Northern Metals, the MPCA is working with the city of Minneapolis to identify other sources in the area that may be contributing to elevated air pollution levels, and to have these facilities take pollution-reduction measures to improve air quality. These activities include increasing the frequency of site and street spraying and sweeping, moving activities indoors, and changing material-handling practices.

Court action

Northern Metal Recycling was ordered by Ramsey County District Court to cease operation of the Metals Recovery Plant effective September 2, 2016. Subsequently, on February 28, 2017, Northern Metals, the MPCA and the City of Minneapolis signed a court-overseen agreement (Consent Decree) requiring the facility to relocate its shredding operation by no later than August 1, 2019. On July 18 2019, the MPCA announced it would not grant Northern Metal Recycling's request to extend the shut-down date for its shredding operations in North Minneapolis to October 1, 2019.

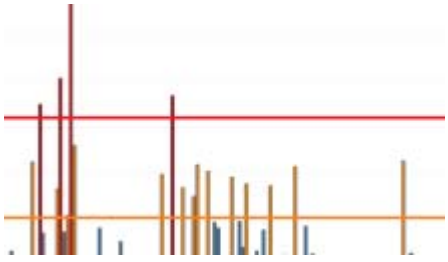
The company disputed the decision and invoked their right to pursue dispute resolution with MPCA, an option available to them under the 2017 consent decree. On July 25, while the dispute resolution was still underway, the company requested court intervention to allow them to continue operation after August 1. On July 30, the Ramsey County District Court issued an order that allows Northern Metals to continue operating after August 1, while Northern Metals and MPCA are engaged in the dispute resolution process.

The MPCA reached a settlement agreement with Northern Metal Recycling regarding its errors in reporting emissions records. Under the settlement, Northern Metal Recycling will permanently shut down its Minneapolis facility at 6 p.m. on September 23, 2019. The company is required to pay a $200,000 civil penalty by October 1, 2019. The MPCA will also be able to reopen Northern Metal Recycling's permit for the new Becker facility to incorporate additional monitors and reports for pollution control equipment.

- Second Consent Decree with Northern Metal Recycling (September 23, 2019) (aq2-56)
- MPCA extension denial news release
- Northern Metals extension Frequently Asked Questions (aq2-56f)
- MPCA news release (2017)
- Ramsey County District Court Order
- MPCA Consent Decree with Northern Metal Recycling

For more information

- About the MPCA's North Minneapolis air monitoring project, contact **Steve Gorg**, 651-757-2396
- About Northern Metal Recycling, contact Sarah Kilgriff, **sarah.kilgriff@state.mn.us** or 651-757-2492



North Minneapolis air monitoring results

View results for pollutants measured at air monitoring sites in North Minneapolis, make comparisons over time, and compare with other metro area monitoring sites (updated quarterly).

Northern Metal Recycling (Becker)

In February, there was a major fire at the Northern Metal Recycling facility in Becker. MPCA is investigating potential impacts to soil, surface and ground water.

Environmental Science & Technology

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Article

Characterizing Elevated Urban Air Pollutant Spatial Patterns with Mobile Monitoring in Houston, Texas

David J. Miller,* Blake Actkinson, Lauren Padilla, Robert J. Griffin, Katie Moore, P. Grace Tee Lewis, Rivkah Gardner-Frolick, Elena Craft, Christopher J. Portier, Steven P. Hamburg, and Ramón A. Alvarez

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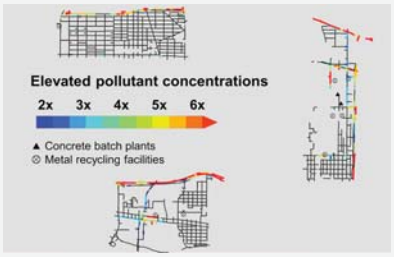
ABSTRACT: Diverse urban air pollution sources contribute to spatially variable atmospheric concentrations, with important public health implications. Mobile monitoring shows promise for understanding spatial pollutant patterns, yet it is unclear whether uncertainties associated with temporally sparse sampling and instrument performance limit our ability to identify locations of elevated pollution. To address this question, we analyze 9 months of repeated weekday daytime on-road mobile measurements of black carbon (BC), particle number (PN), and nitrogen oxide (NO, NO_2) concentrations within 24 census tracts across Houston, Texas. We quantify persistently elevated, intermittent, and extreme concentration behaviors at 50 m road segments on surface streets and 90 m segments on highways relative to median statistics across the entire sampling domain. We find elevated concentrations above uncertainty levels (±40%) within portions of every census tract, with median concentration increases ranging from 2 to 3× for NO_2, and >9× for NO. In contrast, PN exhibits elevated concentrations of 1.5−2× the domain-wide median and distinct spatial patterns relative to other pollutants. Co-located elevated concentrations of primary combustion tracers (BC and NO_x) near 30% of metal recycling and concrete batch plant facilities within our sampled census tracts are comparable to those measured within 200 m of highways. Our results demonstrate how extensive mobile monitoring across multiple census tracts can quantitatively characterize urban air pollution source patterns and are applicable to developing effective source mitigation policies.



1. INTRODUCTION

Urban air pollutant concentrations vary substantially from neighborhood blocks to city-wide scales,[1,2] impacting public health.[3−5] These patterns are driven in part by spatially heterogeneous primary particulate matter and nitrogen oxide (NO_x = NO + NO_2) sources, exposure to both of which is associated with increased mortality.[6] Black carbon (BC) and fine particle number (PN) serve as effective tracers for health-relevant, fresh combustion emissions, and PN is also a tracer for particle nucleation events.[7−9] Primary NO_x and volatile organic compounds (VOCs) also play key roles in photochemistry, serving as precursors to secondary fine particulate matter ($PM_{2.5}$) and ozone (O_3) formation.[10,11]

Approaches to quantify fine-scale (~kilometer) spatial patterns of urban air pollution and their source drivers include chemical transport and dispersion model simulations, satellite retrievals, and ground-based stationary monitoring. Modeling approaches provide attribution of spatial patterns to specific principal source sectors (e.g., Zhang et al.[12]), but have uncertainties at sub-kilometer scales associated with emission inventory spatial allocation and micro-meteorology representation.[13] Recent satellite retrieval approaches have pinpointed and quantified larger industrial and mobile urban sources, though once-daily, typically afternoon overpass observations must be oversampled over several months to achieve a kilometer-scale spatial resolution and could miss sources during other hours of the day.[14] Ground-based stationary sensor networks are capable of characterizing spatial patterns continuously at greater spatial density (sub-kilometer scales) than typical regulatory networks, but they are likely to miss local sources located between monitoring locations.[2,15]

As a complement to fixed sensor networks, ground-based mobile monitoring provides high spatial resolution observations, though temporally sparse at any individual location.[1,16−19] Mobile measurement studies are typically conducted at relatively small scales, including a few city blocks, individual neighborhoods, and major roadway transects.[20−22] These approaches have been valuable to assess the spatial representativeness of stationary monitors,[4,23] characterize temporal variations in spatial patterns along urban transects,[18] and evaluate vehicle emission inventories.[21] Mobile monitoring has also provided observations for inversion modeling using Lagrangian dispersion model footprints[13] and for building land-use regression exposure models.[8,9,24]

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Using multineighborhood, on-road mobile monitoring, Apte et al.[1] found that BC and NO_x concentrations can vary by >5× within individual city blocks and semi-quantitatively identified hotspot locations using the median concentrations from repeated drive passes through 30 m road segments. These temporally aggregated concentration estimates are typically reported with ±10 to ±30% precision, depending on the pollutant and study region,[1,19] yet are summarized using domain-wide average uncertainties and generally do not report instrument drifts over time or between mobile vehicles. Some studies also include an hourly temporal adjustment.[1,19,22,23] However, temporal concentration variability across multiple drive periods may contain valuable information on intermittent or extreme concentrations resulting from local sources and/or meteorological influences that are not captured by the median approach. It remains unclear whether elevated spatial concentration patterns across even larger multineighborhood domains can be quantified and distinguished from potentially large and spatially heterogeneous sampling uncertainties.

In this study, we examine the presence and persistence of elevated concentration patterns using fine-scale, multipollutant mobile monitoring data with large spatial coverage of the Houston, Texas metropolitan area. Houston is a large (~1620 km^2) urban area with diverse emission sources, including on-road and nonroad vehicles, oil refining and petrochemical operations,[25] large industrial[26] and hazardous air pollutant emissions,[27,28] a lack of zoning leading to intermingling of industrial and residential areas, and nonattainment designation with regards to Environmental Protection Agency O_3 standards.[29] Our approach focuses on mobile source tracers because of the close proximity of vehicle traffic to our on-road sampling, though point or area source plumes could also be captured using this approach if they are present at ground level. We apply descriptive statistical methods with comprehensive uncertainty analyses to characterize concentration behaviors of ~10,500 road segments across a nine-month period. We utilize our on-road concentration pattern observations to identify segments with elevated central tendency, high variability, and extreme concentrations relative to typical characteristics across the entire sampling domain, as well as individual census tracts. Then, we investigate their possible source drivers by examining the proximity of identified road segments to known source locations. Specifically, we conduct three transect case studies focusing on the local source and meteorological influences along road transects where multiple pollutants exhibit elevated concentrations. These analyses can help to improve the effectiveness of mobile monitoring strategies to evaluate fine-scale urban emission inventories, identify missing sources, and inform source mitigation policies.

2. MATERIALS AND METHODS

2.1. Instrumentation. We conducted on-road mobile measurements of BC, PN, NO, and NO_2 concentrations with two Google Street View vehicles (2009 Hyundai Santa Fe) equipped with a Global Positioning System (GPS) unit (Garmin 18×). $PM_{2.5}$, O_3, and carbon dioxide (CO_2) were also measured, though we do not use these species in this study as they are the subject of ongoing research. Mobile data were quality-controlled and quality-assured. Data were removed during instrument warm-ups, calibrations, and if conditions were outside an instrument's concentration or relative humidity operating range. Mobile measurements were synchronized to GPS timestamps and time offsets were applied to account for the inlet residence time differences as detailed in Supporting Information Section S1. Instrument specifications and analytical uncertainty estimation are detailed in Supporting Information (Table S1 and Section S2).

We assessed pollutant-specific spatial resolutions of on-road measurements to choose an appropriate fixed road segment spatial scale such that on-road plumes measured at a particular location are assigned to the most likely corresponding road segment. Spatial resolutions were estimated by multiplying the sampling system (inlet and instrument) response time (e-folding time for a step change in concentration) by percentiles of the mobile platform vehicle speed distribution. Pollutant-specific spatial resolutions ranged from 15 to 72 m on surface streets and 62−170 m on highways with higher vehicle speeds (Table S1). To compare across pollutants with the instruments used on our mobile platform, we chose a consistent 50 m road segment spatial scale for surface streets and 90 m road segment spatial scales on highways. The majority of on-road surface street measurements (e.g., >80% for BC and NO) have a spatial resolution finer than 50 m. There is a small probability that for the slowest instrument responses and highest vehicle speeds on surface streets (i.e., longest spatial resolution), a portion of a detected plume will be observed in an adjacent segment. However, for the worst case scenario of a persistent point source plume, wind direction variations will shift the location of an artificially longer plume decay (due to instrument response time) within a specific road segment. In addition, on-road vehicle plumes are intercepted at a variety of locations, and are observed only on a subset of drive periods. Thus, these artifacts are rare and do not significantly impact summary statistics.

The minimum method detection limit (denoted as MDL) was determined for each pollutant via methods detailed in Supporting Information Section S2. Zero concentration time series were collected periodically throughout the study. We aggregated these periods into one time series for each pollutant, a total of ~4.5 h for particles and ~25 min for gases. The mean + 3σ of the aggregated time series is our best estimate of the MDL, and 3σ is the largest term contributing to MDL values.

2.2. Spatiotemporal Coverage. We repeatedly sampled all public roads within 35 representative census tracts in Harris County, Texas containing ~1300 total road kilometers across ~85 km^2 area with a range of emission source influences, adverse health outcome rates,[3] and population characteristics (further details in Supporting Information Section S3). To select census tracts for sampling, we created a unit-less rank score based upon average daily traffic counts, the spatial density of metal recycling, concrete batch plants, and petrochemical facility source locations, and the presence of freeways. These sources were chosen because of their importance for regional stakeholders and recent public scrutiny in Houston, and our ability to probe source plumes from the ground-level, on-road mobile sampling locations. Some selected census tracts contain a regulatory air quality monitoring site.

We analyzed data collected on arterial, local, and service drive (frontage) roads, as well as highways and ramps (only ~5% of sampled road segments). The near-highway road segments within our sampling domain capture concentration patterns immediately adjacent to or below highways associated with on-highway vehicle emissions. VOCs are the primary species of concern that have been observed downwind of

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Environ. Sci. Technol. 2020, 54, 2133−2142

petrochemical facilities.[30] Because we focused our measurements on mobile combustion source tracers at ground level (rather than atmospheric columns) with no VOC measurements, our mobile measurements were generally not able to detect lofted petrochemical facility source plumes, nor distinguish elevated stack emissions of NO_x or PM from ground-level emission plumes near roadways.

Mobile measurements covered ~51,900 km total driving distance from July 2017 through March 2018. We attempted to drive every public road in a census tract at least once during every drive period. The start times of drive periods in each census tract were distributed across time of day and day of week to minimize systematic temporal biases, in addition to varying the starting location within census tracts. Mobile measurements mainly covered weekday, daytime hours (7:00 to 16:00 local standard time; 5−95 percentile range of timestamps), with limited early morning, late evening, and weekend drive periods (Figure S4). We limited our analyses to the 24 census tracts with 15−44 repeated drive periods to ensure reasonably small uncertainties. The number of drive periods varied across road segments within an individual census tract because practical considerations required additional passes of some roads to obtain full road sampling coverage (Figure S5).

2.3. Geolocation. Measurements were assigned to fixed road segments via methods detailed in Supporting Information Section S1. In brief, GPS coordinates were map-matched to a digitized road network of 10 m spaced points along the roadways. This minimizes road assignment misclassification within the ~8 m GPS location accuracy and preserves the mobile sampling trajectory along the road network length. We defined the boundaries of road segments with a preference to separate segments by road types (Figure S1). Data collected <30 m from a dead-end and >30 m from a 10 m road point were removed because of potential self-sampling of the mobile vehicle's exhaust while stationary or driving in reverse or a GPS error assigning measurements to nonroad locations.

2.4. Statistical Approaches. We created distributions of concentrations measured at each individual road segment during each sampling (drive) period conducted throughout the study (Figure S6). Because census tracts were sometimes sampled during the morning and afternoon on the same day separated by > 4 h, we defined these 4 h periods as distinct drive periods. First, we aggregated multiple 1 s mobile measurements collected during each unique drive-pass of a fixed road segment into a drive-pass mean, consistent with Messier et al.[24] Drive-pass means equal weight passes of variable durations and sample sizes, reducing artifacts associated with oversampling of vehicle exhaust plumes during passes in slow-moving traffic. Because NO and NO_2 measurements were acquired at a 5 s time resolution, we repeated data points across the 1 s timestamps, consistent with Shah et al.,[17] to represent this integrated measurement across road segments. Second, we calculated the median of drive-pass means for each fixed 4 h drive period, termed "drive period median". This second level of aggregation minimizes overweighting repeated drive-passes of a road segment within short (minutes) time intervals. Most drive periods have one drive pass of a single road segment, meaning that drive pass mean = drive period median. Approximately 12% of drive periods have >3 drive-passes per road segment. Third, we built distributions of drive period median concentrations at each road segment and extracted summary statistics of these distributions to characterize near-source plume behaviors. Persistently elevated concentrations are represented by elevation in median and 90th percentile, intermittent elevation or high variability by interquartile range (IQR), and high extreme concentrations by exclusive elevation in 90th percentile or skewness.

Next, we compared summary statistics of each road segment's distribution with the median of its corresponding summary statistic across all road segments within the entire sampling domain of multiple census tracts (hereafter referred to as "domain-wide"). We mainly focus on domain-wide comparisons because of their relevance for city-scale emission inventory evaluation and mitigation strategies for the highest impact urban sources. Furthermore, domain-wide comparisons allow for detecting elevated concentrations even when the majority of road segments in a given census tract exhibit elevated concentrations. We also performed finer scale analyses to detect locally elevated concentrations relative to each census tract domain and nearest-neighbors, the latter via normalization by the inverse distance-weighted median of the road segment summary statistic. Our individual road segment comparison is distinct from traditional hotspot analyses. Those approaches identify statistically significant hotspots as locations that are part of a cluster with other locations of elevated concentration.[31]

2.4.1. Elevation above Uncertainty Levels. We defined an elevated summary statistic at an individual road segment as one with a lower confidence bound that does not overlap with the upper confidence bound of a reference domain median statistic, nor the MDL. Although nonoverlapping confidence bounds is a descriptive measure not directly based on a statistical probability, our approach provides a robust test beyond rejection of the null hypothesis (p clearly less than 0.05) that the drive period median distributions at a given road segment are the same as that of the domain median statistics. We found a weak inverse linear correlation ($r = -0.3$, $p < 0.01$) between median NO_2 or PN concentration confidence intervals and their drive period sample size, which is likely associated with a high number of drive periods on roads used to enter or exit other census tracts (Figure S5). However, the discrete locations we detected on local roads have similar sample sizes as other roads within their census tract.

Sampling precision (95% confidence interval) was calculated separately for each summary statistic based upon distributions at each road segment as 1.96 times the standard error via bootstrap resampling with 2000 draws. If the instrument error (bias and precision summed in quadrature) or median temporal sampling uncertainty (Section 2.4.2) were larger than the sampling precision, the higher of these values defined the 95% confidence interval (Table S2). This assumes that these uncertainties have some dependence on or are somewhat correlated with each other. The same method was applied for the domain median summary statistics. For NO_2 and PN, a small number of drive period medians were below the MDL and we included below MDL values without substitution for bootstrap resampling. For NO_2 and PN standard error estimates, we substituted below MDL values with MDL/2 to compute the domain median statistics. Because the majority of BC and NO data are below the MDL, we estimated confidence intervals for the median and 90th percentiles using the reverse Kaplan−Meier estimator of the cumulative distribution function,[32] a logarithmic variance approach that appropriately bounds the confidence intervals (Supporting Information Section S4).

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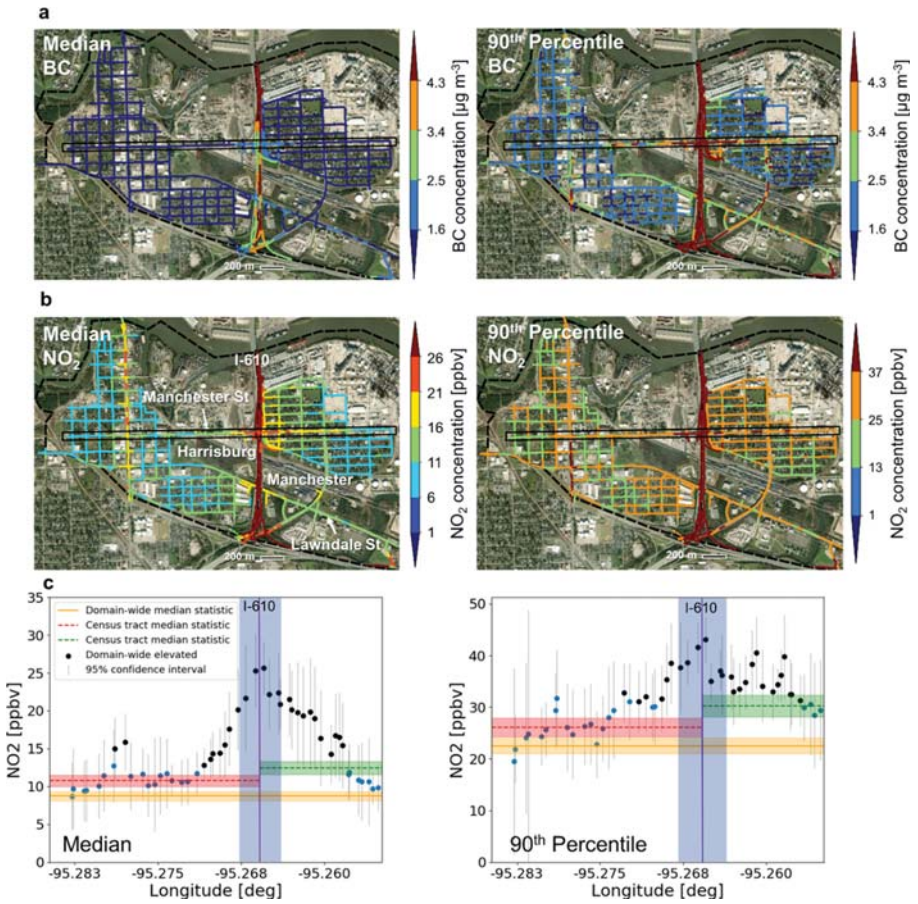

Figure 1. (a) BC and (b) NO_2 median and 90th percentile concentrations at 50 m (surface street) and 90 m (highway) road segments in the Harrisburg and Manchester census tracts, separated by the I-610 interstate highway. The concentration increments represented by the shades of color in the color-bar are based upon the BC instrument precision at 3500 ng m^{-3} and for NO_2 the 95% confidence interval of the highest (90th percentile) summary statistic concentration across the domain (Table S2 and Section 2.4.3). Black rectangles indicate the Manchester St transect, and dashed black lines denote census tract boundaries. The Esri World Imagery Map is shown in the background (sources: Esri, DigitalGlobe, Earthstar Geographics, CNES/Airbus DS, GeoEye, USDA FSA, USGS, Aerogrid, IGN, IGP, and the GIS User Community). (c) Road segment NO_2 median and 90th percentile summary statistics across the Manchester St transect. Locations with elevated concentrations relative to domain-wide median statistics are shown as black points, with the remaining road segments shown as blue points. The I-610 interstate highway location is denoted by the purple line and the blue shaded region is ±200 m horizontal distance from I-610.

2.4.2. Temporal Uncertainties. We considered additional uncertainties associated with aggregating temporally sparse mobile measurements at an individual road segment. First, inter-census tract temporal sampling error can occur when sampling census tracts on different subsets of days with different background concentrations. This uncertainty is important when comparing statistics associated with individual road segments with those across the entire sampling domain. We estimated the potential magnitude of the error associated with inter-drive period atmospheric variability is <±13% for NO and NO_2 based on regulatory monitoring data from the study region (details on other pollutants in Supporting Information Section S5). Second, temporal uncertainty occurs at the intra-census tract level associated with 1−2 h concentration changes associated with boundary layer mixing conditions during an individual drive period (Supporting Information Section S5). We found this uncertainty is relatively small (<9% for pollutants reported here) and can thus be ignored in our analysis (Table S2). Because of the relatively small magnitude of these uncertainties and limited or nonexistent stationary monitoring for some pollutants in some census tracts, we did not perform background adjustments as used in other geographies.[1,23]

2.4.3. Summary of Uncertainties. Overall, the uncertainty of road segment-specific summary statistics was dominated by sampling precision (Table S2, Figure S7). Instrument or temporal sampling uncertainties exceeded sampling precision uncertainty for ≤5 and ≤1% of locations for PN and NO_2, respectively (Figure S7), indicating that mobile data exhibited a larger variability than the stationary data on which the temporal sampling error estimates were based. NO_2 and PN 90th percentiles exhibited similar confidence intervals (±35 to ±39%) as those of the median, and were much smaller than those of the skewness (±64%) (Figure S7). Thus, the 90th percentile is valuable to characterize the upper portion of the distribution, especially for pollutants with a large fraction of measurements below the MDL. Domain median statistic confidence intervals were much smaller than those for individual road segments and were dominated by instrument or temporal sampling errors.

2.5. Meteorological and Temporal Source Variability Analysis. In order to evaluate the influences of temporally

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Environ. Sci. Technol. 2020, 54, 2133−2142

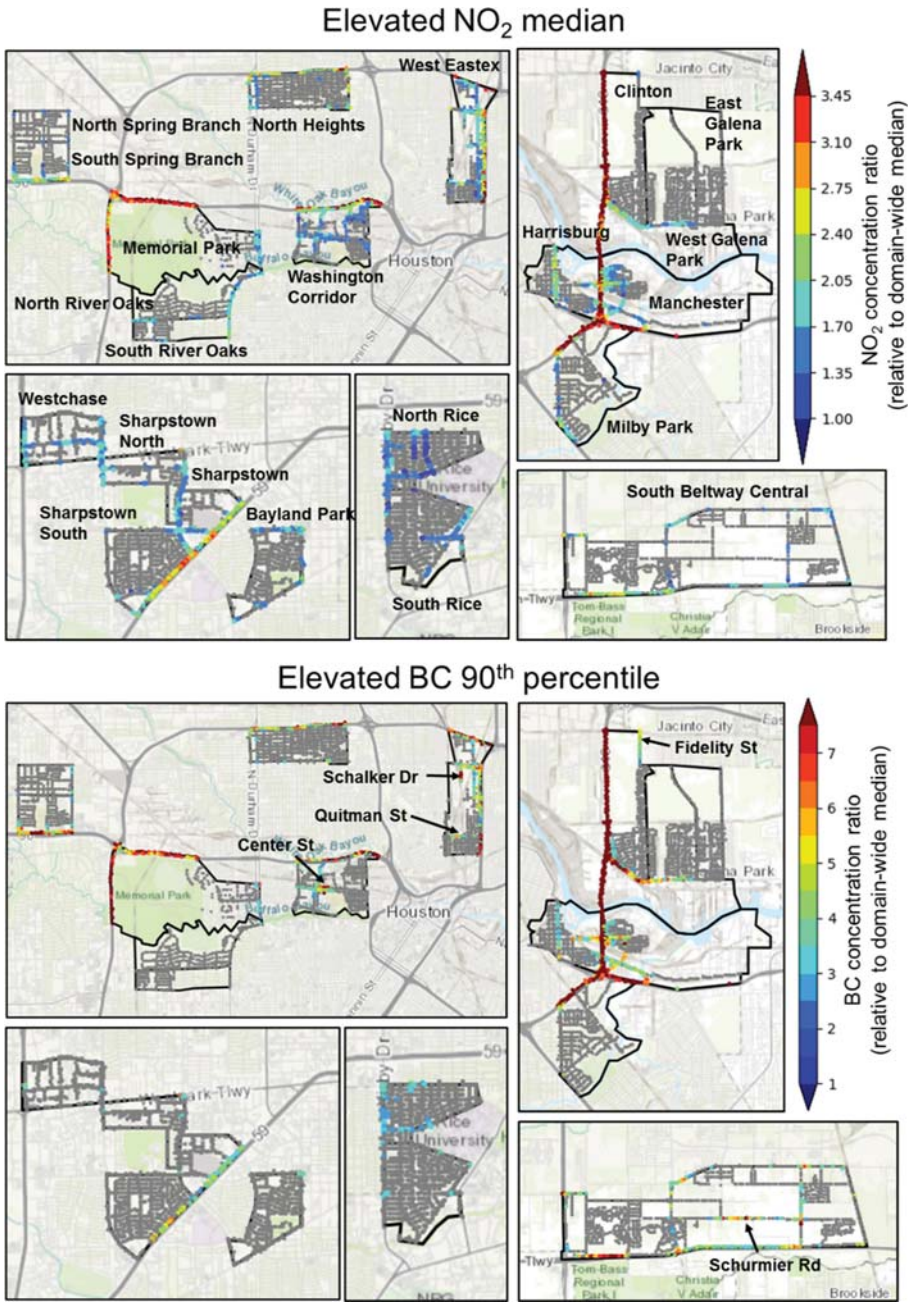

Figure 2. (a) Elevated median NO_2 and (b) elevated 90th percentile BC concentrations normalized by their domain-wide median statistics (9 ppbv NO_2; 1600 ng m^{-3} BC). Census tract names (a) and elevated concentration locations in Table 1 (b) are shown for reference. Grey locations indicate road segments that were measured on more than 15 drive periods, but with a summary statistic confidence interval that overlaps with that of the domain-wide median statistic. The Esri World Topographic Map is shown in the background (sources: Esri, HERE, Garmin, Intermap, INCREMENT P, GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), OpenStreetMap contributors, GIS User Community).

variable emission sources and meteorological conditions on elevated concentration locations, we examined the patterns of road segment concentrations across the ensemble of individual drive periods and their wind speed and direction characteristics. Because plumes from point sources adjacent to roads are diluted and mixed horizontally and vertically in the turbulent daytime boundary layer before reaching a sampled roadway, it is important to consider the effects of wind conditions and strong signals from local vehicle emission plumes on our platform's ability to detect point source plumes. The closest meteorological station measuring wind speed and direction every 5 min during our study period[33] was identified based on its distance from the census tract centroid. The mean wind vector was computed during each 4 h drive period to represent that period's prevailing wind conditions. This measure was used to evaluate upwind and downwind sampling periods and does not necessarily represent the exact wind conditions during each drive pass because wind conditions were not measured on the mobile platform.

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Environ. Sci. Technol. 2020, 54, 2133−2142

Table 1. Median Concentration Ratios (Unit-Less, Rounded to Nearest Integer) for Each Pollutant Relative to Respective Domain-Wide Median Statistics at Select Local Road Sections with Known Commercial/Industrial Facilities[a]

census tract(s)	road(s)	potential nearby source influence(s)	BC[c]	NO	NO_2	PN	number of pollutants with elevated median (90th percentile)
West Eastex	Quitman St	metal recycling facility	3	7	3	2	3 (4)
West Eastex	Schalker Dr	metal recycling facility	8	5	2		2 (4)
Washington Corridor	Center St	metal recycling facility	5	3	2		2 (4)
South Beltway Central	Schurmier Rd	2 metal recycling & 3 concrete batch plant facilities	2	8			1 (3)
South Beltway Central	S. Wayside Dr.	concrete batch plant facility	4	7	2	2	3 (2)
Clinton	Fidelity St	metal recycling facility	4	8			2 (2)
all	all within 200 m of highways[b]	near-highway (≤200 m)	3−5	4 to >9	2	2−3	3−4 (3−4)

[a]Blank rows indicate ratios are ≤1.5× or elevation criteria are not met. [b]Within all sampled census tracts. [c]90th percentile concentration ratio.

3. RESULTS AND DISCUSSION

3.1. Identification of Elevated Concentration Locations. We illustrate the process of identifying road segments with elevated pollutant concentrations by focusing on two census tracts in eastern Houston (Manchester and Harrisburg) with populations of ∼1500 and ∼1600, respectively.[34] These census tracts contain a major interstate highway, arterial roads with commercial diesel-fueled vehicle traffic, recycling facilities, refining and petrochemical facilities, and maritime operations along the Houston Ship Channel.[25,27] All pollutants exhibit elevated concentration patterns along Manchester St relative to domain-wide or census tract median statistics (Figures 1 and S8). For BC in this region, we find spatial structure across road segments in the 90th percentile summary statistic (upper tail of drive period median distributions) that is not evident in the median concentrations, which are often below the MDL (Figure 1a).

Our approach to identify elevated concentration locations in the Harrisburg and Manchester census tracts yields consistent results with previously established near-highway concentration decay functions.[1,35] This case study focuses on two roads, Manchester and Lawndale Streets, which are below and perpendicular to the I-610 highway (Figure 1). Near-highway concentration maxima are associated with a combination of on-highway emissions transported to surface streets and the short tunnel's concentrating effect. On Manchester St to the west of I-610, we find similar NO, NO_2, and PN concentration decay (from maximum concentration to 50%) at ∼200 m from the I-610 highway, consistent with Karner et al.[35] Although some highway measurements may be assigned to the same GPS location as below the highway on Manchester St, this does not impact our estimates at adjacent road segments >50 m from the highway. NO, NO_2, and PN concentration decays are asymmetric, with elevated concentrations extending >400 m east of I-610 (Figures 1b,c, and S8a) and additional spatial structure, especially in BC 90th percentile concentration (Figures 1a and S8a). The Manchester St behavior is fundamentally different from the sharp, symmetric decay profiles at Lawndale St and near-highway surface streets north of Manchester St (Figure 1), and the asymmetry is not linked with wind patterns because both westerly and easterly winds were observed at equal frequencies at the nearby Clinton Drive monitoring site.[33] This suggests that in addition to the highway signal, local NO_x and particulate sources influence Manchester St east of I-610.

Across the entire domain sampled, we find elevated concentrations on highways, on major arterial roadways, on roads below and adjacent to highways, and along discrete sections of local roads (Figures 2 and S9). Median pollutant concentrations are often multiple factors above their corresponding median statistics across all roads sampled. Elevated median concentrations on surface streets range from 2× to 3× the domain-wide median for NO_2, 2× to >9× for NO, and elevated BC 90th percentile concentrations are 2× to > 7× the domain-wide median 90th percentile (Figures 2 and S9a). In contrast, PN exhibits surface street elevated median concentrations of ≤2× the domain-wide median (Figure S9b) and large IQR comparable to the median concentration (Figure S7), consistent with large spatiotemporal variability in ultrafine particle counts reported in previous studies.[4,23] Elevated NO_2 concentrations occur at ∼19% of road segments based on the median and ∼13% based on the 90th percentile, but only ∼6% based on the IQR owing to wide IQR confidence intervals (Table S3). The inclusion of highway and service drive road segments reduces the percent of elevated concentration road segments detected on surface streets by ≪30% (Table S4). The spatial patterns of elevated median PN concentrations differ from those of the other pollutants, with elevated concentrations on residential streets in West and East Galena Park at comparable magnitude to those on the nearby arterial road, Clinton Drive (Figure S9b). Finally, the summary statistics describe combinations of persistent, intermittent and/or extreme concentration behaviors (Figure S10), with further descriptions provided in Supporting Information Section S7.

3.1.1. Domain Sensitivity Analyses. We evaluate the sensitivity of identifying elevated concentration road segments to the choice of the reference domain. For this sensitivity analysis, we examine elevated median NO_2 on surface streets in the Harrisburg, Manchester, and West Eastex census tracts, containing ∼12% of all road segments analyzed (Figure S11). In these census tracts, we find that 42% of road segment median concentrations are elevated relative to their domain-wide median, while only 10 and 3% are elevated relative to their census tract or nearest-neighbor medians, respectively. The nearest-neighbors approach provides limited value for our analysis because it is the most stringent comparison that mainly detects a subset of locations identified by the domain-wide comparison, particularly in isolated elevated concentration locations (Figure S11).

Separately, we evaluate the sensitivity of our results to the pool of road types considered. We find that elevated

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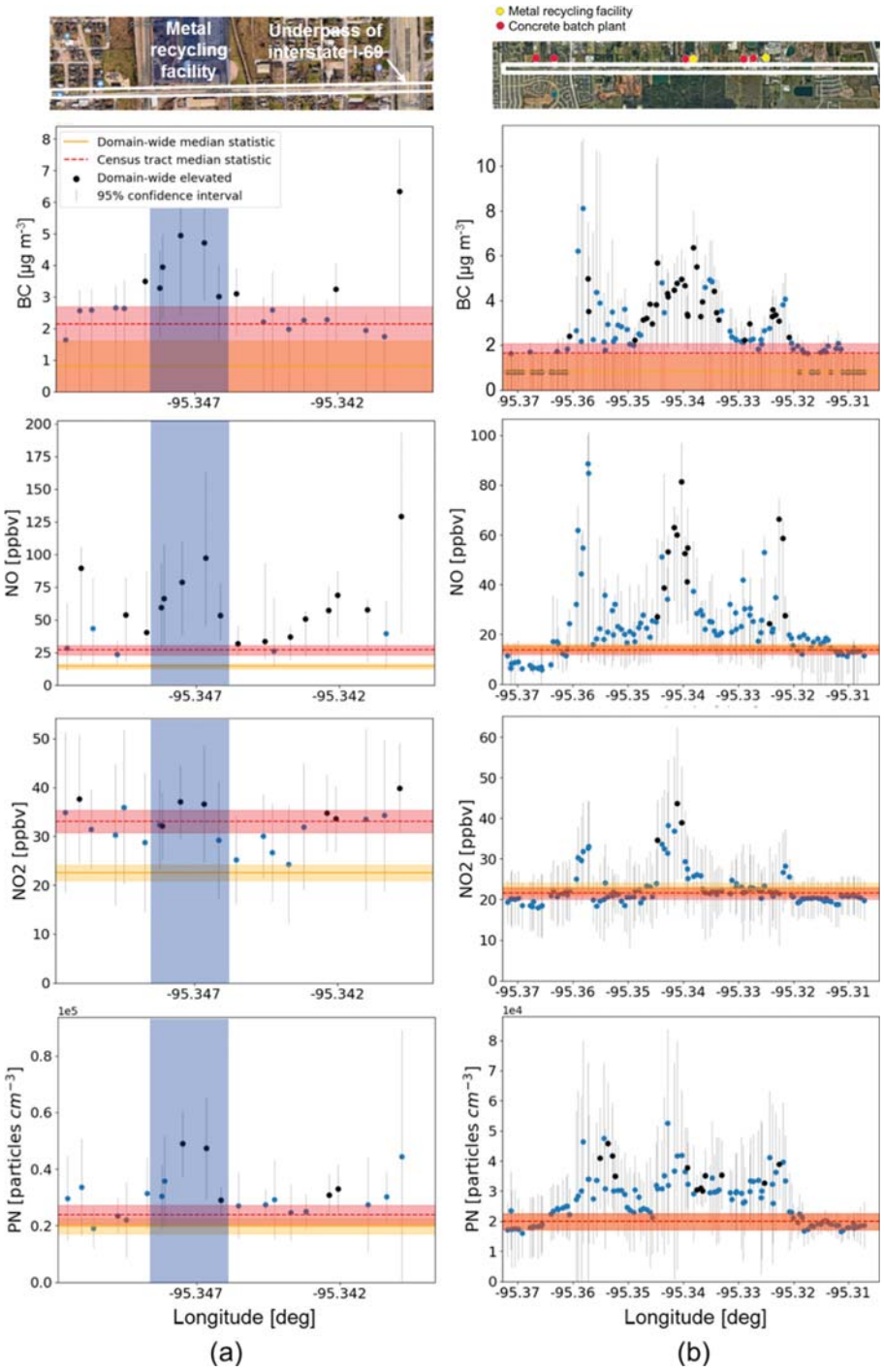

Figure 3. 90th percentile concentrations at (a) Quitman St transect (West Eastex census tract, blue shading represents metal recycling facility boundaries), and (b) Schurmier Rd transect (South Beltway Central census tract). The locations of potential sources influencing the observed patterns are denoted in the Google Earth imagery at top (Imagery 2019 Google, Map data 2019 United States).

concentration detection results are robust to the inclusion of high concentration highway, ramp and service drive road segments, which make up a small (~9%) portion of all sampled road segments. Specifically, we compare median statistic values based on the full population of sampled road segments with those obtained while excluding highway, ramp, and service drive road segments. The former scenario results in ≤8% higher domain-wide median values than the latter scenario, with 12% higher domain-wide median 90th percentile for NO_2 (Table S5).

3.2. Sources of Elevated Concentrations. Our analysis reveals elevated pollutant concentrations along discrete, local road sections (Figures 2 and S9, Table 1). Specifically, we find elevated median concentration in 2−3 pollutants at close proximity to 38% of (6 out of 16) metal recycling facilities and 24% of (4 out of 17) concrete batch plants within our sampled census tracts (Table 1). Elevated concentration magnitudes at

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Environ. Sci. Technol. 2020, 54, 2133−2142

these facility locations span those observed across the domain (Figures 2 and S9) and are of similar magnitude as those ≤200 m of highways within the same census tracts (Table 1). Near these facilities, BC concentration 90th percentiles reach 2−8× the domain-wide median statistic (Figure 2b, Table 1). These elevated concentration features along local roads are important contributors to overall pollutant spatial patterns. An additional 19% of metal recycling plants and 12% of concrete batch plants are adjacent to road segments exhibiting elevated concentrations on a stretch of major roadway with elevated concentrations along many or all of its road segments. However, apportioning the local contribution of an individual facility relative to the vehicle source along the entire roadway's length is beyond the scope of this study.

Next, we evaluate individual drive periods in elevated concentration locations to examine whether sources and/or meteorology influenced the distributions. We choose two regions with elevated characteristics for illustrative case studies (Figure 3). We find elevated features along a discrete ∼300 m section of Quitman St (West Eastex census tract) along the property boundaries and immediately south of a metal recycling plant (Figures 3a and S12a). The 90th percentiles show the greatest sensitivity for localized elevation. Elevated concentrations at the eastern edge are associated with near or on-highway vehicle emissions, with confidence intervals for segments adjacent to this recycling facility overlapping with those at the near-highway road segment (Figure 3a). The locations of high concentrations between drive passes do not exhibit discernible wind dependence (Figure S13). Locations of higher concentration are relatively narrow (50−100 m) and occur at different locations >50 m apart across individual drive periods (Figure S13). These observations suggest that close proximity mobile sources are the main drivers of these elevated features, rather than a constant point or area source plume shifting with the wind direction. However, more work is needed to rule out effects of on-site operation emissions because only ∼30% of drive periods occurred downwind of the facility (typically mornings with light north winds; Figure S13).

We also observed broad, spatially heterogeneous elevated features for BC and NO along the Schurmier Rd transect (South Beltway Central census tract), which is immediately south of a variety of emission sources including five concrete batch plants, two metal recycling facilities, trucking facilities, and intersections (Figure 3b). The elevated 90th percentile concentrations for BC, NO, and NO_2 in the middle of the transect extend up to ∼1 km, with relatively large confidence intervals owing to large variability across drive periods (Figure S12). However, while PN shows high variability and elevated extreme values, PN medians are not elevated (Figures 3b and S12b). Elevated BC and NO_x concentration features are not adjacent to one particular facility or intersection and also do not exhibit wind dependence (Figure S14), suggesting they are associated with an on-road mobile vehicle source (e.g., traffic backed up from a nearby intersection) or one or more nearby facility's emission source footprints extending beyond their immediate boundaries.

Both case studies suggest that the road transect spatial concentration patterns are associated with mobile on-road or on-site diesel-fueled vehicle sources with spatial scales corresponding to intercepting an on-road diesel vehicle plume for ∼10 s while driving at 5−10 m s^{-1}. Although older gasoline-fueled passenger vehicles with faulty emission control technologies may also contribute to the elevated NO and NO_2 concentrations,[36,37] the coincident elevated BC concentrations are more consistent with a diesel engine source.[38] Although BC and NO_x may be emitted from on-site diesel equipment for recycling processes and particulate matter emissions from such facilities have been reported previously,[39] we did not sample during high speed, north wind periods optimal for capturing on-site emission plumes. In addition, the longer distance from these sources to on-road sampling locations means they are subject to vertical dispersion and dilution to levels below that of much closer on-road source plumes.

4. IMPLICATIONS

Our mobile measurements characterized persistently elevated and extreme concentration behaviors on arterial and local roads. We found heterogeneous, elevated concentration spatial patterns that are ubiquitous across a larger spatial domain than previous studies, ∼85 km^2 compared with ∼30 km^2 in Oakland, California.[1,24] Our approach explicitly quantifies the sampling attributes that determine the sensitivity of a mobile monitoring method to detect elevated concentrations, which can inform routine monitoring and future study designs in other urban areas. We found sampling and instrument uncertainties across 24 noncontiguous census tracts are reasonably small to identify elevated concentrations at least 40% above that of the domain-wide median, even when including near and on-highway road segments. This mobile sampling approach offers unique capabilities to both identify and rank locations by their concentrations at specific road sections that facilitate follow-up surveys and prioritize locations for inspection. Our road transect case studies suggest a diesel-fueled mobile emission source influence with discrete areas (≤100 m) of elevated primary emission tracer (BC, NO_x) concentrations near metal recycling and concrete batch plant facilities with potential cumulative effects of multiple closely clustered facilities. These features are an exemplar of urban emission sources that can be identified with mobile monitoring approaches. Metal recycling facilities are ubiquitous in other urban areas and have also been identified as a source of carcinogenic metals in Houston,[39] and a hotspot for diesel vehicle emissions in Oakland, California.[1] Overall, these results have important implications for understanding and tracking advection of near-facility emission plumes into residential neighborhoods.

Our analyses lay the foundation for future studies focusing on source quantification, source attribution, and health impacts. First, future analyses of individual drive period observations focused on identifying concentration patterns upwind and downwind of known point and area sources and distinguishing their source footprints from on-road vehicle plumes under specific atmospheric stability regimes would provide useful insights. Future mobile monitoring opportunities that incorporate more extensive night time and weekend observations would also be valuable to distinguish the relative influence of emissions from light-duty passenger vehicles versus heavy-duty commercial vehicles operating only during weekdays,[40] as well as night time emission sources, on elevated concentration patterns. Second, emission ratios with respect to CO_2 in elevated concentration locations can be used to quantify on-road vehicle emissions. These results can then be compared with fine-scale mobile source emission inventories (e.g., McDonald et al.[41]) to improve their spatial emission allocation estimates. Third, follow-up mobile monitoring

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should include additional urban source tracers (e.g., carbon monoxide, VOCs) to further fingerprint emission sources. Fourth, mobile monitoring observations can be compared with and complement existing stationary monitoring and satellite remote sensing observations, and provide additional measurements where existing monitors do not exist. For example, mobile monitoring observations could serve as an independent test for upcoming geostationary satellite retrievals at kilometer and hourly scales. Finally, an upcoming Health Impact Assessment study utilizing these mobile measurements will complement previous health studies[3] and further evaluate disparities in pollution-related health impacts. Our study demonstrates the value of using city-scale mobile monitoring to inform policy development related to urban air quality and emission source management strategies, and for communicating patterns of near-road exposure to policy stakeholders and the general public.

■ ASSOCIATED CONTENT

Supporting Information

The Supporting Information is available free of charge at https://pubs.acs.org/doi/10.1021/acs.est.9b05523.

Text, figures, and tables with detailed information on geolocation and uncertainty methodologies, spatiotemporal data set coverage, and supplementary statistical and sensitivity analysis results (PDF)

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Author Contributions

The manuscript was written through contributions of all authors.

Notes

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MINNESOTA POLLUTION CONTROL AGENCY

Northern Metal Recycling (Becker)

A major fire broke out at the Northern Metal Recycling facility in Becker early in the morning of Tuesday, Feb. 18. A large plume of dense, black smoke caused concern about air quality among residents in a large area. The fire is out and MPCA has conducted air monitoring.

The MPCA will continue to provide updates on this web page.

March 24

Northern Metal has completed a majority of the requirements in the MPCA's February 21 Administrative Order.

- Northern Metals, LLC: Administrative Order (March 24, 2020)
- Northern Metals, LLC: Administrative Order (Feb. 21, 2020)

In early March, MPCA staff inspected the Becker site and observed burned scrap metal feedstock, slag, significant ash and debris, as well as degradation to the concrete surface.

- MPCA staff and MPCA's contractor collected wastewater samples from both the north and south ponds, as well as samples from a sludge layer in the south pond and ash samples from around the yard.
- The results showed elevated levels of SVOCs and VOCs in the wastewater in both ponds on site, as well as elevated levels of total PCBs and total lead in the sludge in the south pond, and elevated levels of total chromium and total lead in the ash.

Today's amended Administrative Order requires Northern Metal to properly handle and dispose of ash and burned materials.

- Northern Metal is required to ensure the Facility does not release or has an ongoing release of pollutants
- Northern Metal is prohibited from using wastewater form any of the ponds at the Facility until the water has been treated and approved for usage by the MPCA.

The amended Administrative Order also allows Northern Metal to start its shredder in Becker, as long as the company does not shred burned cars or debris.

Background

The MPCA conducted air quality sampling on Thursday, Feb. 20, related to the Becker fire. The testing included volatile organic compounds (VOCs), metals, and particulate matter. Results showed nothing unusual in terms of the types and levels of VOCs found, and no metals were detected. Based on these results, VOC and metals sampling was discontinued.

Real-time particulate monitoring starting Feb. 21 in and around Becker showed no particulate levels of concern, and particulate monitoring was discontinued on Friday March 6. Assessment for potential environmental damage at the Becker site continues under the oversight of MPCA's Compliance and Enforcement section.

The Minnesota Department of Health has information about the Becker fire on their web site: Northern Metals Fire in Becker, Minn.

CS★T

Fire breaks out at General Iron week after company pays settlement to city over explosion

Chicago firefighters were called to the Lincoln Park location Tuesday afternoon to extinguish a large rubbish fire.

By Brett Chase | Updated Nov 10, 2020, 5:47pm CST

Three Chicago Fire Department engines were called to a fire at General Iron's Lincoln Park site Tuesday. | Google

A week after General Iron's owner paid $18,000 to settle a number of violation notices issued by the city for air pollution and other nuisances, a fire broke out in the metal-shredder's yard in Lincoln Park Tuesday afternoon.

General Iron's operations are being moved to the Southeast Side and last week's announcement by the city helped the business' owner Reserve Management Group resolve those past issues as it seeks a final permit to begin operations along the Calumet River.

One of the citations settled last week related to an explosion in May.

The fire Tuesday started in some debris laying in General Iron's yard and didn't appear to be related to equipment, said Chicago Fire Department spokesman Larry Langford.

Three fire engines were called and the large rubbish fire was extinguished "relatively quickly," Langford said. There were no reported injuries.

Initial air sampling showed no toxic materials released in the air, he said.

RMG said in a statement that the metal shredder "was not operating prior to or during the incident due to maintenance. ... We are investigating possible causes and we are fully cooperating with City officials."

As of Tuesday afternoon, RMG had not filed its full application to receive its final permit, a city spokesman said.

Brett Chase's reporting on the environment and public health is made possible by a grant from The Chicago Community Trust.

Waste & Recycling

Feature

Facilities on Fire

Detect and destroy hot spots before the flames take over

Many of North America's 1,800-plus recycling and waste facility fires every year are preventable, with the right technology.

In 2018 371 waste and recycling industry fires were reported in Canada and the U.S., including a major fire at a recycling facility outside Calgary in July.

However, that number is likely low. According to Ryan Fogelman, vice-president of strategic partnerships at Michigan-based Fire Rover, the real number may be over 1,800.

It's no surprise that number of fires at waste and recycling facilities is higher now compared to years past. Increased summer temperatures may be a factor, says Fogelman, but mainly it's larger volumes of material due to growing population rates and China's National Sword policy restricting waste imports.

Increasing numbers of small, hard-to-detect lithium-ion batteries in everything from greeting cards to Christmas sweaters and disposable electronics like Apple earbuds – which each have three – compound the problem. They cause up to half of recycling facility fires.

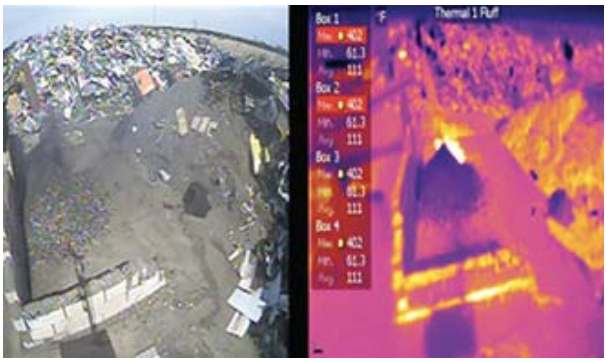
Fire detection basics

There are only a couple proven ways to detect a fire or pre-fire hot spots. Bryan Staley, president and CEO at the California-based Environmental Research & Education Foundation (EREF), says he's heard of some firms posting a 'watchperson' after hours to watch for fire-starts.

Fogelman, however, believes thermal cameras are a necessity, "but you need to use top-of-the-line thermal cameras that can sense temperature differentials." He points out that there are many sources of heat in a waste or recycling facility – equipment running hot for example, and some places use heat in

their processes – and that software programs associated with thermal cameras are not yet at the level where they can definitively ‘decide’ in all cases when a fire is close to starting or has started.

“Each facility is generally a very complex environment in terms of heat, so you need human verification of what the camera is picking up,” Fogelman says. “With our system, we get many, many alerts every day analyzed by our team. There are numerous false alarms but it’s better to be safe than sorry.”



In these side-by-side shots of a recycling yard, the right-hand image shows the bright heat signatures as seen through an infra-red camera.

His company sells fire detection and suppression systems specifically for the waste and recycling sector. They use the FLIR A310F thermal camera that can detect and pinpoint abnormal heat sources down to the size of a pixel. And that means temperature accuracy within two degrees Fahrenheit.

It has installed systems at over 100 facilities in the USA since 2015 with no major fire incidents at any of them since, and is about to sell its first two systems in Canada, in Edmonton.

Facilities do sometimes have sprinklers installed, but if a sprinkler system is set up so that the structural columns of the facility and workers and /firefighters are protected, the amount of heat required to set it off would mean a fire is already well under way.

Even if a sprinkler system is placed to detect the heat of a fire start, Fogelman does not believe currently marketed systems are sufficient. He typically recommends the use of a pre-wetting foam agent, possibly in combination with water spray that employees can manually or remotely apply.

Staley notes that in addition to foam and water sprinklers, he has heard of facilities isolating a hot or burning mass by pulling it away using machinery, or “if the fire is not on a tipping floor and is away from good access to water, some fires are controlled/extinguished by placing soil on them.”

Success story

At Sweden’s Jönköping Energi, which burns waste and biomass to make electricity, spontaneous combustion is a 24/7 threat in its storage areas. “Apart from the environmental consequences and the obvious safety risks for people at the plant, a fire outbreak in a waste bunker can be a very costly affair. If

a fire should break out, we need to shut down the plant immediately," says Magnus Olsson, the company's plant manager. "These shutdowns cost us quite a lot of money, up to half a million Swedish Crowns a day."

The plant was using an aspiration-based smoke detection system. It pulls in air from the environment, which is then analyzed for the presence of smoke.

But the system was not fast enough. In fact, for this system to generate an alarm, smoke actually has to make physical contact with the smoke sensor, which is usually installed high up in the ceiling of the waste bunker. By then, a fire will already have developed into something uncontrollable.

A new tender was put out for fire detection and suppression. A contract was awarded to Termisk Systemteknik, a distributor of FLIR thermal imaging cameras and provider of fire detection systems. They installed two FLIR A615 cameras in protective housings mounted on pan tilt systems, one at each end of the bunker. They are controlled via dedicated TST Fire software from Termisk.

When a hot spot is detected by one of the two cameras, the other camera is directed at the hot spot as well. The TST Fire software then calculates the coordinates of the hot spot, based on the combined thermal images, and an alarm is generated. Upon activation in the waste bunker control room, the water canon is directed at the detected hot spot and the fire is extinguished.

"A critical factor for putting out a fire is to have an early response. And that we can achieve with the FLIR cameras. We can even put out a fire before it starts," says Robert Berger from the fire protection solution company Incendium, which is supplying the fire extinguishing system for Jönköping.

When detection fails

No matter what the cause of a fire, most waste disposal and recycling companies don't focus on detection and what to do during the first ten minutes after that, before the fire fighters arrive.

Employees should be trained to prepare for the arrival of firefighters.

Fogelman says employees should be trained to prepare for the arrival of fire-fighters, part of a larger 'combinational approach' to fire risk that Fogelman created with Jim Emerson, from a firm called Starr Technical Risk Agency. Employees should be ready to connect fire hoses to water, roll out hose and so on.

Insurance angle

Some or all of these actions will not only greatly reduce the chance of major fire, but also may mean better evaluations from insurance firms.

“Insurance companies are running from this industry because of the fire risk, so taking these approaches may keep you insured,” Fogelman says.

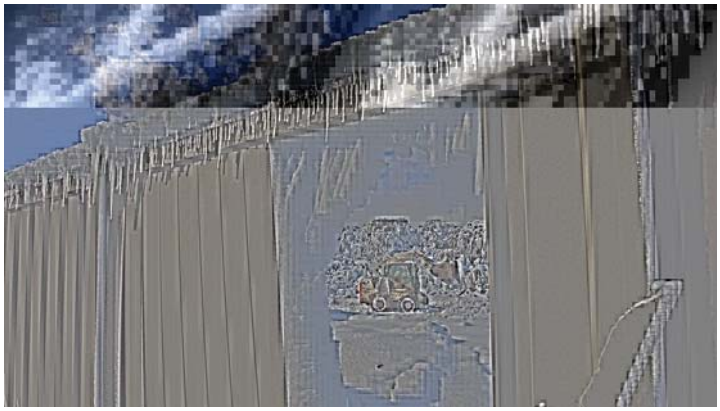
“I highly recommend that you engage your insurance provider early in the process of assessing and developing a fire protection strategy. It puts you in the best place possible for understanding which investments in equipment, training and tactics make the most sense for your operation and will give you the most gain in terms of lower insurance and preventing fires. This is especially true if you have multiple facilities with multiple types of risks.”

MPRnews

Environment

As fire continues, state halts most Northern Metal operations in Becker

Kirsti Marohn Collegeville, Minn. February 21, 2020 9:52 p.m.



By Thursday, firefighters had created an access point to reach the pile of cars that caught fire Tuesday morning at Northern Metal Recycling in Becker. Paul Middlestaedt for MPR News

Update: 9:20 p.m.

The Minnesota Pollution Control Agency on Friday ordered Northern Metal Recycling to stop accepting scrap metal at its Minneapolis and Becker, Minn., sites until it corrects fire code violations and submits a damage assessment and a plan for storing vehicles.

The order effectively halts most of the company's Becker operations before they could begin. It comes as piles of scrapped vehicles at the company's new recycling facility in Becker continue to burn for the fourth straight day, and air pollution specialists monitor for potentially hazardous substances.

A plume of smoke from the fire has raised concerns among local residents about whether the air is safe to breathe.

Northern Metal moved to Becker at the end of 2019 from its former location in north Minneapolis, where it had a fraught relationship with local residents and state pollution officials.

The company faced air quality permit violations and was accused of submitting inaccurate emissions data to the state. It agreed to pay a fine and move its shredding operations out of Minneapolis last year, but continues to store vehicles and other scrap metal at the site.

MPCA spokesperson Darin Broton said the fire at Northern Metals' Becker site prompted city fire officials in Minneapolis to inspect the company's site in their city. They cited Northern Metal for numerous fire code violations related to not having an adequate water supply or access for emergency vehicles.

The agency ordered the company to stop accepting any scrap metal at its Minneapolis site until it submits plans to the MPCA for how to store vehicles and other debris while also protecting human health and safety.

The agency's order said that both the Becker fire and the Minneapolis violations demonstrate that Northern Metal "does not have metal collecting and storage practices in place at either location that protect the health and welfare of Minnesota residents."

The MPCA sent its order to Northern Metal on Friday. In addition to the prohibition on accepting scrap at its Minneapolis location, the company must also make changes at its new facility in Becker:

- The company must stop accepting any scrap metal at the Becker location until it completes an environmental damage assessment of the area affected by the fire, and the MPCA approves it.
- Northern Metal also must submit a cleanup plan to the MPCA for how it will remove all contaminated ash, water, soil and other debris leftover from the fire — not just at the recycling plant, but also in the wider Becker community.
- In addition, the company must submit a plan for how it will store scrap metal and other debris at the Becker site in the future to protect human health and the environment.

The company had not yet begun operations in Becker when the fire began, but had been collecting vehicles onsite and had just received required state and local permits. The MPCA order prohibits Northern Metal from operating its shredder until the fire is fully extinguished and investigators have a chance to determine what likely caused the blaze.

The company also must take action to control “fugitive dust” — tiny particles created by ash and fire debris — from becoming airborne or being tracked off the site by vehicles.

Northern Metal COO Scott Helberg issued a statement protesting the MPCA’s findings released Friday:

“The company worked closely with the MPCA to obtain all necessary permitting approvals. To be clear: the Northern Metals Recycling facility in Becker has never been operational. The shredder has yet to be turned on and its installation is ongoing. Nevertheless, the facility is otherwise in strict compliance with all applicable requirements.”

Water used to fight the fire at Northern Metal Recycling in Becker quickly turned to ice over the crushed metal cars which created a barrier making it more challenging to extinguish the flames. Photographed on Thursday. Paul Middlestaedt for MPR News

Questions about air quality

The order comes as the MPCA and Northern Metal both have had contractors at the Becker site assessing the air quality.

MPCA contractors started sampling the air on Thursday for volatile organic compounds and metals. The agency said initial results it received Friday afternoon showed nothing unusual. Results for lead testing were expected later Friday. In addition, MPCA staff used monitors to test for particulate matter, which showed levels similar to the metro area.

According to Becker police, the fire at the recycling plant flared again late Thursday, sending smoke over the city once more.

Members of the Minnesota Hazardous Materials Emergency Response Team were called to conduct a third round of air testing for chemicals that would likely make people sick, such as carbon monoxide or sulfur dioxide, but did not detect any. The MPCA air samples detect a broader range of chemicals.

Gov. Tim Walz said Friday that Northern Metal should be held accountable for any possible violations.

During a discussion at the University of Minnesota's Humphrey School, Walz said he is often criticized for some of the state's regulations on businesses. But companies that handle potential pollutants, he said, should be closely monitored.

"This is that fine line that we have these things in place,” he said, “the government as a regulator in working with businesses to ensure worker safety and children's safety and ensure public safety."

According to Becker police, firefighting efforts at the recycling plant have been turned over to a private company. The fire has been reduced to a few smoldering spots and could be extinguished by the end of the weekend, police said.

June 15, 2020

Illinois EPA
Attn: Jeff Guy, Hearing Officer
P.O. Box 19276
1021 North Grand Avenue
Springfield, IL 627-94-9276

Submitted Via Email: epa.publichearingcom@illinois.gov

Re: Public Comments on the Draft Permit for General III, LLC, 11600 S. Burley, Chicago, IL 60617, Application No. 19090021, I.D. No. 031600SFX

To Whom It May Concern:

We write to oppose the permitting of yet another heavy industrial facility – in this case of a notorious polluter relocating from the well-off, White Lincoln Park community that has ejected it – in Chicago's Southeast Side environmental justice community, due to a long list of legal and technical failures in the permitting process and Draft Permit for General III, LLC ("Draft Permit" "GIII"), culminating in the likely violation of air quality standards by the proposed new metal shredding facility. As set forth below, these failures provide ample ground for or compel a permit denial. At a minimum – which in itself is not sufficient to rectify the many shortcomings in this proceeding, including the application shortfalls – the agency must postpone its permit decision and/or substantially revise the Draft Permit to create robust and objective requirements that are enforceable as a practical matter.

These comments are submitted on behalf of the Natural Resources Defense Council and our roughly 3 million members and activists, including approximately 10,000 members and activists in the City of Chicago, a number of whom reside on the Southeast Side in close proximity to 11600 S. Burley, the location for the proposed new metal shredding facility. The Southeast Environmental Task Force ("SETF") and the Southeast Side Coalition to Ban Petcoke support these comments as well. SETF's mission is to ensure a healthy and safe environment for its residents, to preserve regional ecological resources and to achieve a sustainable economy that enhances local communities. The Southeast Side Coalition to Ban Petcoke is a community-based organization dedicated to the health, safety and welfare of the people who live, work and recreate in the Calumet region. Because of the scope of the shortcomings in this proceeding and Draft Permit, and due to the local, state and federal COVID-19 emergency and civil unrest occurring as the comment period went forward, it was not feasible for these aligned organizations to coordinate fully on a single set of comments.[1] Consequently, additional comments that are also

[1] The submission of these comments should not be interpreted by IEPA as indicating there was little to no impact of these dual emergencies on the drafters and their ability to meaningfully participate on behalf of their clients. Instead, the emergencies resulted in reduced work hours and otherwise challenging working conditions for multiple members

supported by NRDC will also be submitted by these organizations focusing on other and related aspects of the permitting process and Draft Permit.

I. Introduction

At its core, the proposed permitting of GIII is yet another failure of the Illinois Environmental Protection Agency ("IEPA") to fulfill its duties to protect the health and welfare of the state's residents, in particular to uphold its responsibilities to environmental justice communities like the Southeast Side. IEPA recognizes that

> 'Environmental Justice' is based on the principle that all people should be protected from environmental pollution and have the right to a clean and healthy environment. Environmental justice is the protection of the health of the people of Illinois and its environment, equity in the administration of the State's environmental programs, and the provision of adequate opportunities for meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.[2]

The specific goals of IEPA's environmental justice policy are as follows:

- to ensure that communities are not disproportionately impacted by degradation of the environment or receive a less than equitable share of environmental protection and benefits;
- to strengthen the public's involvement in environmental decision-making, including permitting and regulation, and where practicable, enforcement matters;
- to ensure that Illinois EPA personnel use a common approach to addressing EJ issues; and
- to ensure that the Illinois EPA continues to refine its environmental justice strategy to ensure that it continues to protect the health of the citizens of Illinois and its environment, promotes environmental equity in the administration of its programs, and is responsive to the communities it serves.[3]

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of the team, including experts, due to, e.g., child care obligations and other work-from-home hurdles like limited home-office capacity; increased competing obligations as team members supported community clients with needs made even more pressing by the emergencies; and delays in responses requesting relevant information from several agencies and businesses themselves facing reduced capacity due to the emergencies. As a result, the team had to make difficult decisions about where and how to allocate reduced capacity, and whether and how to move forward without some important information, resulting in comments that are not as comprehensive as they would otherwise have been without these two massive emergencies. These limitations compound the insufficiencies of the public process for this environmental justice community, as discussed elsewhere in our collective comments with respect to participation by community members themselves.

[2] Ex. 1, IEPA, "Environmental Justice," Illinois.gov, https://www2.illinois.gov/epa/topics/environmental-justice/Pages/default.aspx (last visited June 13, 2020).

[3] Ex. 2, IEPA, "Environmental Justice Policy," Illinois.gov, https://www2.illinois.gov/epa/topics/environmental-justice/Pages/ej-policy.aspx (last visited June 13, 2020).

Yet here, IEPA has in fact devalued the community's participation and its health and welfare in numerous ways, exercising its discretion over and over in favor of permitting a demonstrated polluter. This is not the just and equitable process or outcome that IEPA purports to uphold.

Instead, IEPA is proposing to approve a synthetic minor source air construction permit for GIII, a new 1,000,000 tpy metals recycling facility on Chicago's Southeast Side. The Southeast Side is a recognized environmental justice community where heavy industry pushes up against dense residential neighborhoods, situating a myriad of hazards next to low-income communities of color, including their homes, parks, and schools. The waterfront of the Calumet River here – with back-to-back industrial sites and their dilapidated metal buildings, open piles of waste and scrap and crumbling artificially built, poorly-maintained banks – is in stark contrast to Chicago's Riverwalk and the greenery and boathouses on the city's Northside.

Over the past several years, advocate-residents of this community have fought long and hard to clean up the many threats to their health and well-being by taking on mountains of petcoke, clouds of neurotoxic manganese dust and a second disposal facility for contaminated sludge and soil contaminated from years of steel company toxic dumping, among the many threats facing this community. Historically the Southeast Side has faced a much longer list of polluters, including the steel mills that left a legacy of contaminated soil and decades of exposure to a range of carcinogenic and neurotoxic pollutants.

It is against this backdrop that the Illinois EPA is proposing to grant a permit to construct yet another large heavy industrial site at 11600 S. Burley. This site is already the home to at least four other recycling operations affiliated under the Reserve Management Group umbrella ("RMG," doing-business-as South Chicago Property Management, "SCPM," hereinafter collectively referred to as RMG or RMG-SCPM), which themselves have been operating illegally without required local and state approvals for years and have been cited and/or found liable by the City for other environmental violations. The site is directly on the Calumet River, a mere 500 feet from the American Zinc Recycling facility and several bulk material handlers. Other significant polluters in the more immediate area where this relocated facility is planned include PVS Chemicals, Watco, Cargill and KCBX to name a few, along with the Shroud Superfund site.

The site is roughly a third of a mile from Washington High School, Washington Elementary School and Rowan Park, along with one of the few shopping plazas still serving this heavily burdened community. Already yet another recycling facility is being proposed by RMG-SCPM immediately to the East of the proposed GIII, bringing this single source even closer to schools and people's homes. Nearly 7,000 people live within one mile of 11600 S. Burley, of whom 72% are of Hispanic origin, 2% are African-American, and 31% are Other/Multi-racial; roughly 40% of the households within one mile make less than $50,000 per year.[4] According to USEPA's

[4] *See* Ex. 3-4, USEPA, "Detailed Facility Report for Napuck Salvage, 11600 S. Burley Ave.," Enforcement and Compliance History Online, https://echo.epa.gov/detailed-facility-report?fid=110046596750#pane3110046596750

EJSCREEN, the site ranks in the 91st to 99.8th percentiles for all Census Block Group EJ Indexes, with most scores above the 97th percentile.

Moreover, this is not just any "new" facility – Illinois EPA's proposed permit would enable the relocation of General Iron, a notorious scrap metal recycler currently located in the city's well-off, predominantly White Lincoln Park community, to this environmental justice community. General Iron has long been the source of community complaints about noxious, burning metallic odors, explosions, auto shredder "fluff" dispersing into the community, other fugitive dust, operating outside of approved hours, and on and on. Until recently, complaints against this politically-connected business went largely unheeded under Mayor Emanuel's time in office. As public pressure mounted in 2016 to 2019 to get General Iron out of Lincoln Park with the proposed Lincoln Yards development and rezoning of the North Branch of the Chicago River, the Mayor's Office behind closed doors facilitated an agreement whereby General Iron would leave the higher income and largely white Northside Lincoln Park neighborhood by 2020 and relocate to the Southeast Side environmental justice community.

While Mayor Lightfoot's election in 2019 did not change the overall trajectory of this agreement, more proactive inspection and enforcement actions of General Iron at its current Lincoln Park site by the Chicago Department of Public Health ("CDPH") beginning in late 2019 has documented almost to a tee the issues of which the Northside community has complained for years, and resulted in numerous notices of violation, the majority of which await hearing due to a halt in administrative hearings during the COVID-19 pandemic. The most recent violation stems from a massive explosion on May 18, apparently originating in the new pollution control equipment installed by General Iron as a result of a U.S. Environmental Protection Agency ("U.S. EPA") enforcement action, that knocked out the controls, flattened buildings, and left the facility currently unable to operate.

GIII would join at least four other co-located facilities at 11600 S. Burley, itself an allegedly-remediated site contaminated by the LTV Steel Company, and other co-located and/or adjacent related facilities. For years, these metals facilities owned and operated by the RMG-SCPM have been flying under the radar without attention from environmental regulators or enforcers despite a number of community complaints and the environmental justice nature of the location. Even with this relatively low profile and lack of agency attention, these RMG facilities have been shown to have violated local and state environmental laws, including admitted failures to obtain proper local and state air approvals and instances of fugitive dust beyond the facility boundaries. Moreover, CDPH's inspections database contains a disturbing narrative documenting a wider range of problems and likely environmental infractions at these sites and potentially others owned and operated by SCPM over the years, many of which appear ongoing today.

(last visited June 13, 2020). Expanding the radius to three miles sees a shift to a greater percentage of African-American residents and lower percentage of residents of Hispanic origin, while increasing the percentage of households making less than $50,000 to nearly 60%.

The problems documented at General Iron and its business partner RMG-SCPM are not new or unique to their recycling facilities. Communities living with metals recycling facilities have long protested their many impacts, yet the industry has flown under the regulatory and enforcement radar. Of late, other cities and states have stepped up and done important work documenting, describing and addressing the air, water and soil impacts of metals recycling facilities.[5] In at least one instance, in neighboring Minnesota, proactive monitoring and enforcement by the state environmental agency resulted in the shut-down of a problematic facility in a Minneapolis community not unlike the Southeast Side, and a better controlled replacement facility built 45 miles outside of the city and away from a densely-populated, low-income community of color threatened by its hazardous emissions.

The Illinois EPA has the opportunity to join these other agencies as a leader in protecting the public health and welfare of Illinois residents, in particular those living in environmental justice communities like the Southeast Side. Instead, IEPA is proposing a permit that ignores the reality of metals recycling facilities and reflects an outdated, unenforceable approach to controlling air pollution, signaling that the agency has learned nothing from our collective experience with petcoke and manganese and yet again is turning a blind eye to environmental justice issues in Illinois.

II. The Draft Permit Should Not Issue As-Written Given the Long Histories of Environmental Noncompliance by Both Companies

Given General Iron and RMG's long and disturbing history of noncompliance with air and other environmental requirements, including repeat offenses related to the shredder and fugitive dust as recently as this spring, IEPA should deny approval of the permit. At minimum based on this record, IEPA should ask Governor Pritzker to postpone the statutory permit decision deadline and declare the permit application incomplete, require the applicant to submit required additional information, and substantially revise the (otherwise deficient, as taken up elsewhere in our collective comments) Draft Permit. Section 39(a) sets forth the following with respect to IEPA's authority to consider noncompliance in its permitting decisions, as well as its general authority to impose conditions as necessary to accomplish the purposes of the Act:

> In making its determinations on permit applications under this Section the Agency may consider prior adjudications of noncompliance with this Act by the applicant that involved a release of a contaminant into the environment. In granting permits,

[5] For a summary of impacts from metals recycling facilities and efforts in California, Houston and Minneapolis, *see* Ex. 5, Comments on Proposed Rules for Large Recycling Facilities, submitted by Southeast Environmental Task Force, the Chicago South East Side Coalition to Ban Petcoke, Little Village Environmental Justice Organization, and the Natural Resources Defense Council, to the Chicago Department of Public Health on June 21, 2019, available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/Comment_NRDC_SETF_SSCBP_LVEJO_6-21-19.pdf; *see also* Ex. 6, Attachments to June 21, 2019 comments on Proposed Rules for Large Recycling Facilities.

> the Agency may impose reasonable conditions specifically related to the applicant's past compliance history with this Act as necessary to correct, detect, or prevent noncompliance. The Agency may impose such other conditions as may be necessary to accomplish the purposes of this Act, and as are not inconsistent with the regulations promulgated by the Board hereunder.

415 ILCS 5/39(a). As discussed below, this language consists of three separate sentences recognizing and delineating three areas of IEPA authority and discretion to ensure that the agency's permitting actions uphold the Act's express requirements and purpose. Together, they map out significant authority to take into account an applicant's environmental track record and to otherwise issue permits with stringent requirements. Contrary to IEPA staff public statements during the comment period, IEPA is not limited to considering the permit based solely on the application.[6] Nor is IEPA's ability to take noncompliance into account in permitting limited to the "narrow exceptions" claimed and described by the agency. Instead IEPA has ample authority to consider the applicant's history of noncompliance in this permitting action, as set forth below, and to otherwise require controls and compliance measures beyond the minimum expressed in the Act and implementing regulations. Moreover, IEPA should exercise this discretion in this case to protect the Southeast Side, an already overburdened environmental justice community, from yet another polluting facility that well-off Lincoln Park has ejected.

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[6] *See, e.g.*, Ex. 7, Maxwell Evans, "Explosion, City Shutdown Won't Stop State EPA From Letting General Iron Move to East Side," Block Club Chicago, May 26, 2020, available at https://blockclubchicago.org/2020/05/26/explosion-city-shutdown-wont-stop-state-epa-from-letting-general-iron-move-to-the-east-side/ (quoting IEPA spokesperson Kim Biggs that "[p]ast or ongoing compliance issues *must* be addressed through the [IEPA's] compliance and enforcement programs," not the permit review process; that "[t]his stems from past court rulings holding that permitting is no substitute for enforcement"; and that "[t]he Agency *must not* deny or condition a permit decision based upon allegations that a source is violating, or has violated, applicable requirements.") (emphasis added). *See also* Ex. 8, email from Brad Frost, Manager of Community Relations, IEPA, to Nancy Loeb, Counsel for the Southeast Side Coalition to Ban Petcoke, Keith Harley, Counsel for the Southeast Environmental Task Force and Meleah Geertsma, Counsel for NRDC, June 5, 2020 (asserting that "Agency review *does not* look to past practices or conduct at the source (or the same source at another location) but, rather, considers if the applicant's emission units or equipment that are being constructed or operated will comply with such requirements prospectively *based on information contained within the application* for permit.

An applicant's past or on-going compliance issues *must* instead be addressed through the Agency's compliance and enforcement programs. The distinction stems from past court rulings holding that permitting is no substitute for enforcement, and that the Agency must not deny or condition a permit decision based upon allegations that a source is violating, or has violated, applicable requirements.

Narrow exceptions will exist in the case of an applicant that has been previously adjudicated of violations that relate to either an environmental release or to prior experience in waste management operations, clean construction or demolition debris fill operations, or tire storage site management. These exceptions are found in Sections 39(a) and (i) of the Environmental Protection Act," (emphasis added) (citing *IEPA v. PCB*, 252 Ill. App3d 828 (3rd Dist. 1993), *ESG Watts v. PCB*, 286 Ill. App3d 325 (3rd Dist. 1997); *Grigoleit v. EPA*, PCB No. 89-184 (November 29, 1990), and *Martell v. Mauzy*, 511 F. Supp. 729 (N.D. Ill. 1981).").

A. IEPA Should Deny the Permit Based on Admitted and Adjudicated Violations of Environmental Requirements by General Iron and RMG, Part of These Companies' Long Histories of Noncompliance.

IEPA has the authority to deny an air permit based on past adjudications of noncompliance with the Act and should do so in this case, given a history of admitted, uncontroverted noncompliance with state air approval requirements by RMG-SCPM and adjudicated environmental violations by both companies involved in this venture obtained through the City of Chicago's enforcement actions and administrative hearings process. Under 415 ILCS 5/39 (a), "[i]n making its determinations on permit applications" IEPA "may consider prior adjudications of noncompliance with this Act by the applicant that involved a release of a contaminant into the environment." Thus, IEPA has the discretionary authority to deny a permit application on the basis of prior violations that have been adjudicated against a permit applicant. IEPA should do so in this case given the existence of such prior violations and to produce a just outcome for the Southeast Side environmental justice community.

First, RMG-SCPM, an entity involved in the business venture backing the proposed new facility and that operates significant facilities adjacent to the proposed GIII, has admitted to IEPA its noncompliance with the Act with respect to the failure of several of the current facilities at 11600 S. Burley to obtain proper state air approvals.[7] This admission constitutes an uncontroverted instance of noncompliance with the Illinois Environmental Protection Act, the further adjudication of which in front of a court or administrative judge is not necessary to ensure that the company's due process rights have been met. Furthermore, the failure to obtain proper state air approval is no mere paper violation, but instead has resulted in the company in fact releasing unpermitted amounts of pollution to the environment.[8]

Moreover, the noncompliance by these facilities appears to have been going on for years and was only brought forth by the companies during the GIII permitting because it was inevitable that it would be discovered. It was grossly unfair and contrary to the Act to offer these companies enforcement protections related to these uncontroverted instances of noncompliance, as set forth in our prior letter to IEPA.[9] Likewise, it would be grossly unfair and contrary to the Act to now claim that the company cannot be held accountable in this permitting action for its *self-disclosed*, *uncontroverted* noncompliance. This is especially true where the company did not in fact qualify

[7] *See* Ex.9, Letter from Hal Tolin, South Chicago Property Management, Ltd., to IEPA Bureau of Air, November 1, 2019 (stating that during a meeting between IEPA and SCPM, IEPA staffer Eric Jones recommended that "a voluntary self-disclosure be submitted to the compliance unit to address the discovery of the requirement to obtain a Lifetime Operating Permit for the SCPM entities" and that "[t]his letter constitutes the SCPM Entities self-disclosure under Section 42(i) of the [Act]." The letter goes on to erroneously claim that SCPM meets the nine criteria set forth by the Act for penalty reduction.).

[8] This is in contrast to, e.g., a failure to submit a required report where the report itself demonstrates compliance with pollution limits and control obligations, which may not constitute noncompliance involving a release of a contaminant into the environment for purposes of Section 39(a).

[9] *See* Ex. 10-15, email and attachments from Meleah Geertsma, NRDC, to Bob Bernoteit and Chris Pressnall, IEPA, December 18, 2019.

for a penalty reduction under 415 ILCS 5/42(i) because of existing community complaints and evidence that the facilities also had violated other air requirements in the past several years as a result of its failure to obtain approvals. On this basis alone, the IEPA has the authority to deny a permit for the proposed GIII facility.

Second, both General Iron and RMG have been held liable by the City of Chicago, through its enforcement process including adversarial administrative hearings, for, *inter alia*, the following air quality-related violations: releasing prohibited air pollution, unlawful fugitive dust emissions, violating permit conditions, operating without a permit and nuisance – as well as other violations involving releases of contaminants to the environment. The text of Section 5/39(a), the overall structure of the air regulatory and enforcement scheme set forth in the Illinois Environmental Protection Act, and the federal Clean Air Act, support if not compel recognizing such adjudicated violations stemming from enforcement by a local environmental agency as a basis for IEPA denying a permit.[10] This is especially true where, as here, the local agency in fact has deep experience and expertise in air regulation and enforcement; the local agency in fact holds

[10] In the past, IEPA has taken the position, citing no authority and without further analysis, that it may only deny a permit under 415 ILCS 5/39 (a) if there is an adjudicated liability finding by the Illinois Pollution Control Board or a court. *See* Ex. 16, IEPA, Responsiveness Summary, Issuance of a Construction Permit Sterigenics U.S. LLC – Willowbrook I, September 20, 2019, at pp. 68-69, fnt 6, available at https://www2.illinois.gov/epa/topics/community-relations/sites/ethylene-oxide/Documents/Responsiveness%20Summary%20Final.pdf. There is nothing in the statute or in the case law to support this limited reading of IEPA's authority under Section 39(a). Indeed, such a narrow reading would lead to a self-perpetuating cycle – where IEPA fails to exercise its enforcement discretion, it would also tie its hands in the permitting process. This appears to be exactly what is occurring here: to our knowledge, IEPA has chosen not to conduct inspections or commence enforcement proceedings against General Iron or RMG over the past decade or has at most conducted limited investigations that have failed to remedy the ongoing problems, despite the facilities' long history of explosions and fires, chronic air quality violations, City reports demonstrating problems with equipment and operations at the facilities, decades of citizen complaints, and history of illegally operating without a permit. Further, if IEPA now claims that it is unable to deny the permit based on lack of violations adjudicated by the Pollution Control Board or a court, this is symptomatic of IEPA's choice not to invest its resources in inspecting and enforcing the law against these companies. It would be absurd and a violation of IEPA's responsibility to act equitably in its activities for an environmental justice community to be denied fair application of the law simply because the Agency chooses not to enforce the laws it is charged with enforcing.

Nor is this gap in enforcement unique to these companies, though General Iron presents a particularly egregious case. IEPA has dramatically downsized its staff in recent years, causing reductions in inspection and enforcement activities. *See* Ex. 17, Mark Templeton, Robert Weinstock, Elizabeth Lindberg, Mary Gade, and Doug Scott, Policy Analysis: Protecting the Illinois EPA's Health, so that It Can Protect Ours (Nov. 2019), *available at* https://www.law.uchicago.edu/files/IEPA%20Report%20FINAL%2011.21.19.pdf. IEPA inspections of air-polluting facilities have declined 81 percent since 2003. *Id*. at 2. The number of enforcement cases referred to the Attorney General have also significantly declined in recent years. *Id.* Given the number and intensity of air pollution sources located in environmental justice communities in Chicago and Illinois more generally relative to better-off communities, this burden falls particularly heavily on EJ communities and failure to recognize adjudicated enforcement actions by local government authorities would deny these communities the protections to which they are entitled by the law. Indeed, in the past several years, the community, City and USEPA have been left to police pollution on the Southeast Side, addressing petcoke and manganese and identifying multiple facilities operating without state permits, due to IEPA's absence in its role of primary environmental regulator and enforcer.

an air enforcement delegation agreement with IEPA; the local agency has in fact been acting as the responsible, primary air enforcer in IEPA's absence; the adversarial process in fact provided the alleged violator a number of ways to present its case to an impartial arbiter; and the adjudicated instances of noncompliance are in fact for violations that are in substance virtually identical to parallel provisions of the Act itself and implementing state air regulations, and on subjects directly relevant to the permitting at hand. To hold the contrary would devalue a critical partner in air pollution regulation and enforcement recognized by the Act, while prioritizing polluters over the Act's purpose "to restore, protect and enhance the quality of the environment, and to assure that adverse effects upon the environment are fully considered and borne by those who cause them." *See* 415 ILCS 5/1(b); *see also id.* at 5/1(c) ("The terms and provisions of this Act shall be *liberally construed* so as to effectuate the purposes of this Act as set forth in subsection (b) of this Section," (emphasis added)).

One of the central purposes of the Illinois Environmental Protection Act is to ensure coordination and aggressive control of pollutants across multiple levels of government. The statute provides that IEPA is "to encourage and assist local governments to adopt and implement environmental protection programs consistent with this Act." 415 ILCS 5/2 (a)(iv). Chicago has adopted provisions in its municipal code and agency regulations that regulate air pollution and fugitive dust, along with other environmental issues.[11] Indeed, air quality regulation in the United States *originated* in local Chicago legislation back in 1881, pre-dating the state's scheme by many years.[12] The importance of local government in the regulation of air quality is not only explicitly recognized by the Illinois Environmental Protection Act, but is also set forth in the Congressional findings and declaration of purposes in the federal Clean Air Act: "The Congress finds… that air pollution prevention… and air pollution control at its source is the primary responsibility of State and *local* governments…". *See* 42 U.S.C. § 7401(a)(3) (emphasis added).

Thus, it is entirely consistent with the Act to recognize that IEPA may exercise its discretionary authority to deny permits on the basis of adjudicated noncompliance with local air regulations, because those local air regulations are recognized and encouraged by the Act itself, thus rendering adjudicated local violations "noncompliance with this Act" under Section 39(a).[13]

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[11] *See* Title 11 of the Chicago Municipal Code, available at https://codelibrary.amlegal.com/codes/chicago/latest/chicago_il/0-0-0-2495150; *see also* various environmental rules and regulations available on CDPH's website, available at https://www.chicago.gov/city/en/depts/cdph/supp_info/healthy-communities/doe_ordinances_rulesandregulationsandsupportingdocuments.html.

[12] *See* Ex. 18, Stern, Arthur (1982), History of Air Pollution Legislation in the United States, Journal of the Air Pollution Control Association, 32:1, 44-61, DOI: 10.1080/00022470.1982.10465369, available at https://www.tandfonline.com/doi/pdf/10.1080/00022470.1982.10465369.

[13] This interpretation of Section 39(a) is consistent with the Act's emphasis on local agency implementation of the environmental protection program, as well as the structure of Section 39 and the Act's specific provision in Section 39(i) allowing for consideration of adjudicated violations of local laws in the context of permitting for waste facilities. Sections 39(a) and 39(i) each allow for permits to be denied based on adjudicated noncompliance. Section 39(i) specifically calls out federal, state and local regulations, making clear that the Act does consider noncompliance with local regulations as proper for IEPA's consideration in permitting decisions. Section 39(a), in turn, refers to adjudicated violations of the Act broadly, without specifying the level of government that must

Such an interpretation also is not in conflict with case law (predating the current Section 39(a) language) that adjudicated findings of liability may form the basis of a permit denial, and which do not otherwise discuss local ordinance violations or constrain the venue for providing due process that applicants must receive on the enforcement side. *ESG Watts, Inc. v. Pollution Control Bd.*, 286 Ill.App.3d 325, 335 (3rd Dist. Ill. 1997) (upholding an agency's denial of a permit for adjudicated violations of the law, and where agency did not rely on unadjudicated violations in denying the permit); *Environmental Protection Agency v. Pollution Control Bd.*, 252 Ill.App.3d 828, 830 (3rd Dist. Ill. 1993) (agency improperly used permit denial process in place of enforcement procedure when it denied permits solely on the basis of alleged violations). In contrast, nowhere does the Act expressly state that IEPA cannot consider adjudications of local air ordinances as a basis for denying a permit under Section 39(a), as we understand IEPA has claimed.

Moreover, here IEPA has entered into an air delegation agreement with the City of Chicago, formalizing CDPH's role as an enforcement partner in carrying out the Act. The delegation agreement enumerates CDPH's responsibilities, requiring them to assist IEPA with the state agency's enforcement actions, conduct inspections, note violations of state law (including fugitive dust provisions), respond to citizen complaints, and keep records of inspections and violations.[14] This delegation to local authority is in keeping with the Illinois Environmental Protection Act, which provides that IEPA may enter into written delegation agreements with local governments for administering the Act, delegating all or portions of its inspecting, investigating and enforcement functions, subject to IEPA review. 415 ILCS 5/4 (g), (r). Thus, IEPA has in effect "deputized" CDPH to act in its stead in a number of activities related to

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adjudicate the violation. This broader statutory language should be read to encompass local adjudicated violations of air regulations as well, given the statutory scheme for air regulation set forth in the Act and the Clean Air Act. *See Michigan v. Envt'l Protection Agency*, 135 S.Ct. 2699, (2015) (where the Supreme Court found it was unreasonable for U.S. EPA to conclude that "cost" was irrelevant to its analysis of whether it was "necessary and appropriate" to regulate power plants – even though the statutory language did not include the word "cost," it was found unreasonable for EPA not to consider cost because "appropriate" was broad enough to encompass cost, and cost was enumerated as a factor in other parts of the statute). It would be improper to read limiting language into Section 39(a), because 39(a) is a catchall provision encompassing permitting broadly, including permitting where local government may not play a recognized significant role as regulator and enforcer (in contrast to the Illinois Environmental Protection Act's and the Clean Air Act's schemes for addressing air pollution). Such addition of language that the legislature omitted in this broad provision would also go against the legislature's clear directive to liberally construe the Act to effect its purpose of environmental protection and ensuring that "adverse effects upon the environment are fully considered and borne by those who cause them." *See* 415 ILCS § 5/1(b) and (c).

[14] Ex. 19, Two Year Intergovernmental Agency Agreement Between Illinois Environmental Protection Agency (Agency) and City of Chicago, Department of Public Health (Contractor), Revised Agency Procurement No. FA-19202 (Mar. 20, 2019). We note that while the numbered paragraphs spelling out these enforcement roles fall under Section B in the agreement, where Section B includes language pertaining to three specific source categories, CDPH has weighed in that the intent of the agreement is for CDPH to carry out the numbered activities more generally and not solely with respect to those three categories. In the words of a CDPH attorney, "The numbered paragraphs list source investigations we are obligated to assist IEPA with to support their enforcement actions, whereas the categories in the preceding paragraphs refer to routine inspections." *See* Ex. 20, Email from Jennifer Hesse, Staff Attorney, CDPH, to Meleah Geertsma, NRDC, June 9, 2019.

enforcement, further solidifying the local agency's importance in the Act's statutory scheme for ensuring protection of air quality.

In addition, in all instances where General Iron and RMG were found liable for violations, they had an opportunity to contest these violations at a hearing, with ample due process protections. Chicago's Department of Administrative Hearings provides an opportunity for parties to present their case at a hearing, including presentation of testimony and witnesses, before an impartial administrative law officer that issued findings; in addition, this process affords a right to seek judicial review in response to the liability findings. Chicago Municipal Code, §§ 2-14-010, 2-14-070, 2-14-076. These findings that General Iron and RMG have violated environmental laws come after the companies have had ample opportunity to contest these findings in accordance with due process. *Martell v. Mauzy*, 511 F.Supp. 729, 744 (N.D. Ill. 1981) (due process requires permit applicants be afforded with a hearing before a permit can be denied based on unadjudicated violations, to give an opportunity to contest the alleged violations); *Wells Mftg. Co. v. IL EPA*, 195 Ill.App.3d 593, 597 (1st Dist. Ill. 1990) (permit applicant must be allowed to submit evidence during the application process to contest alleged violations).

In sum, CDPH's enforcement activities are a critical part of the state-local partnership expressed in the Illinois Environmental Protection Act (as well as the local-state-federal partnership expressed in the Clean Air Act), and recognition of this important role warrants treating the violations of local ordinances and rules in this case as constituting "noncompliance with [the Illinois Environmental Protection Act]," consistent with the legislature's clear directive to construe the Act broadly to protect the environment and make polluters bear the cost of their pollution.[15] Given the expertise and experience in environmental regulation and enforcement held by CDPH; CDPH's actions as the primary air regulator and enforcer in Chicago, including under an express delegation agreement with IEPA; and the process afforded to alleged violators by the Chicago Department of Administrative Hearings, liability findings adjudicated through the City's process thus may and should be relied upon by IEPA when it is determining whether to deny a permit under Section 5/39(a).

The nine liability findings adjudicated by the City over the past 18 years demonstrate that General Iron and RMG have a history of failing to comply with the Act. Their permit should be denied on that basis alone. Table 1 below describes RMG and General Iron's past adjudicated noncompliance history according to the City's enforcement database and CDPH inspection reports.[16]

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[15] Further support for this interpretation comes from Section 5/39(a)(v), which recognizes that the task of protecting the environment is a shared one necessitating participation in enforcement by multiple stakeholders, and that such shared responsibility can help alleviate burdens on enforcement agencies (and so by extension any one enforcement agency such as IEPA) ("The General Assembly finds… that in order to alleviate the burden on enforcement agencies, to assure that all interests are given a full hearing, and to increase public participation in the task of protecting the environment, private as well as governmental remedies must be provided…").

[16] Many of the citations where the facilities were found liable involved additional citations that further illustrate the effect of the illegal conduct, but were dropped as "nonsuits" through the City's adjudication process. *See* Exhibit 21,

Table 1. Adjudicated Findings of Liability Against RMG and General Iron.

Date of Violation	Address & Company	Ticket No.	Code Violation	Disposition	Summary of problem based on inspection report notes	Inspection ID
6/27/2019[17]	11600 S Burley - Reserve Marine Terminals	E0000 35474	11-4-2520 Recycling fac permit req'd, permit violation of special condition #32	LIABP LEA	Fugitive dust emissions and failure to control dust	678670
1/26/2012	1909 N Clifton – General Iron	E0000 26603-10	11-4-030 Failure to comply with permit	LIABP LEA	n/a	not included in inspection database[18]

spreadsheet compiled from CDPH's Environmental Enforcement Database, generated by searching for "1909 N Clifton," downloaded on June 12, 2020, database available at https://data.cityofchicago.org/Environment-Sustainable-Development/CDPH-Environmental-Enforcement/yqn4-3th2/data.(hereinafter "City Enforcement Data for 1909 N Clifton Ave"); Exhibit 22, spreadsheet compiled from CDPH's Environmental Enforcement database, generated by searching for "11600 S Burley," downloaded on June 12, 2020, database available at https://data.cityofchicago.org/Environment-Sustainable-Development/CDPH-Environmental-Enforcement/yqn4-3th2/data.(hereinafter "City Enforcement Data for 11600 S Burley Ave"); Exhibit 23, spreadsheet compiled from CDPH's inspection report database, generated by searching for "1909 N Clifton," downloaded on June 12, 2020, database available at https://data.cityofchicago.org/Environment-Sustainable-Development/CDPH-Environmental-Inspections/i9rk-duva/data (hereinafter "CDPH Inspection Reports for 1909 N Clifton Ave"); Exhibit 24, spreadsheet compiled from CDPH's inspection report database, generated by searching for "11600 S Burley," downloaded on June 12, 2020, from https://data.cityofchicago.org/Environment-Sustainable-Development/CDPH-Environmental-Inspections/i9rk-duva/data (hereinafter "CDPH Inspection Reports for 11600 S Burley Ave")..

[17] There is a notable gap in City enforcement against the General Iron facility, coinciding with Mayor Emanuel's time in office. This gap should not be interpreted as seven years during which the facility operated without issues; instead, it should be read in light of the significant shortfalls in even City environmental enforcement during the Emanuel years. A September 2019 audit by the City's Office of Inspector General found deficient City air pollution inspections during a portion of the Emanuel administration. *See* Ex. 25, City of Chicago, Office of Inspector General, Chicago Department of Public Health Air Pollution Enforcement Audit (Sept. 2019), *available at* https://igchicago.org/wp-content/uploads/2019/09/CDPH-Air-Pollution-Enforcement-Audit.pdf. The report found that CDPH fails to ensure that violations identified by inspectors are resolved. *Id*. at 4. It also found that inspections are infrequent, making it likely that undiscovered violations are occurring. *Id. See also* Ex. 26, Brett Chase, "Emanuel Soft on Chicago Polluters Despite Tough Talk, Better Government Association, February 22, 2019, available at https://www.bettergov.org/news/emanuel-soft-on-chicago-polluters-despite-tough-talk/.

With respect to General Iron, a search of the CDPH database for complaints turns up a number of community complaints about odors ("an awful burning smell," "very strong chemical odors"), having to close windows and having trouble breathing due to facility impacts, dust/smoke, loud crashing noises and vibrations that shake homes, operation outside of permitted hours and so on, from roughly 2012 through CDPH's more aggressive enforcement starting in December 2019. *See* Ex. 27, Spreadsheet compiled from CDPH's Environmental Complaints database, generated by searching for "1909 N Clifton" and selecting entries for complaints that occurred between 2012-2019, data last downloaded on June 8, 2020, database available at https://data.cityofchicago.org/Environment-Sustainable-Development/CDPH-Environmental-Complaints/fypr-ksnz/data.

[18] Based on the timing of this liability finding in relation to the enforcement action brought against General Iron by U.S. EPA in 2011-2012, we presume that this finding is related to the uncontrolled shredder emissions and visible emissions beyond the fenceline that were at the core of that action. *See* Ex. 28, *In the Matter of General Iron Industries*, Administrative Order, EPA-5-12-113(d)-IL-04 (June 29, 2012), at par. 19-22.

6/21/2010	1909 N Clifton – General Iron	24036	7-28-080 Nuisance in connection with a business	Liable	Blue smoke escaping from shredder, blowing offsite	DOEINS41711
9/28/2009	1909 N Clifton – General Iron	23915	7-28-080 Nuisance in connection with a business	Liable	Failure to control dust	DOEINS41689
5/27/2009	1909 N Clifton – General Iron	20386	7-28-080 Nuisance in connection with a business	Liable	Shredded material falling into the river	DOEINS41680
4/24/2009	11600 S Burley - Scrap Metal Services	10879	11-4-2520.	Liable	Operating without a permit	DOEINS11638
7/22/2008	1909 N Clifton – General Iron	10950	11-4-030B Failure to comply with permit stipulation #24	Liable	No control measures had been taken to control debris from falling into sewer, as evidenced by manholes over sewer basins caked with mud and other debris	DOEINS41658
10/4/2005	1909 N Clifton – General Iron	7981	11-4-2410B Failure to comply with permit special condition #25	Liable	Failure to repair hole in pavement	DOEINS41587
1/2/2002	1909 N Clifton – General Iron	261	(former code section) 11-4-630 Air Pollution Prohibited	Liable	Open fire released smoke into the atmosphere	DOEINS41514

As laid out above, the Act provides for recognition of adjudicated violations of local air ordinances and regulations in denying permits under Section 5/39(a) generally speaking. That the specific local violations at issue here are directly analogous to substantive provisions in the Illinois Environmental Protection Act lends further support that these are "adjudications of noncompliance with this Act" and thus a basis for IEPA exercising its discretion to deny this permit. Past adjudicated city code violations by both General Iron and RMG correspond to analogous provisions of the Illinois Environmental Protection Act as follows:

General Iron

- 2010 liability finding for violating Chicago Municipal Code section 7-28-080, Nuisance in connection with a business, was due to blue smoke being emitted from the shredder and blowing offsite.[19] The finding corresponds to the IL Environmental Protection Act's prohibition on unauthorized air pollution (415 ILCS 5/9(a)) and visible emissions beyond the fenceline (35 IAC 212.301), as well as potentially the 30% opacity limit.

[19] *See* Ex. 23. Inspection Reports for 1909 N Clifton, Inspection ID DOEINS41711 (June 21, 2010).

- 2009 liability finding for violating Chicago Municipal Code section 7-28-080, Nuisance in connection with a business, was based on fugitive dust and failure to operate dust controls, as well as plumes of blue smoke coming from the shredder creating a haze in the yard and migrating off-site.[20] These violations again correspond to the Illinois Environmental Protection Act's prohibition on unauthorized air pollution (415 ILCS 5/9(a)) and the prohibition on visible emissions beyond the fenceline of the facility (35 IAC 212.301), as well as potentially the 30% opacity limit.
- Liability finding for failure to comply with permit condition #24 for May 2009 incident where shredded material was falling in the river from barge loading, again corresponding to the prohibition on visible emissions beyond the fenceline. This local violation also aligns with prohibitions on unpermitted discharges to water and on open dumping.
- 2008 liability finding for failure to comply with permit condition #24 re material in sewer. This violation potentially corresponds to the Part 212 Visible and Particulate Matter Emissions to the extent that the accumulated material deposited in the sewer from the air and/or was the result of deposited air emissions washing into the sewer via facility water use or stormwater.
- 2005 liability finding for failure to comply with permit condition #25 re pavement issue. This violation corresponds to the Part 212 Visible and Particulate Matter Emissions requirements, given that maintenance of paved roads is a control measure for fugitive dust.
- 2002 liability finding for air pollution prohibited under former Chicago Municipal Code section 11-4-630 corresponds to the IL Act's prohibition on unauthorized air pollution (415 ILCS 5/9(a)) and possibly on visible emissions beyond the fenceline (35 IAC 212.301). There, the inspection report indicated release of smoke into the atmosphere from an open fire.[21]

RMG

- In 2019, RMG's Reserve Marine Terminals ("RMT") facility was found liable under Chicago Municipal Code section 11-4-2520 for violating its permit condition #32.[22] That permit condition states that RMT "shall control and suppress dust and other air-borne materials created by Facility activities so that the off-site migration of these materials does not occur."[23] The condition further provides that dust control measures may include, but are not limited to, water suppression, sheltering dust-creating activities from the wind or suspending such activities during high wind periods, and enclosing/containerizing

[20] *See id.*, Inspection ID DOEINS41689 (Sept. 28, 2009).
[21] *Id.*, Inspection ID DOEINS41514 (Jan. 2, 2002).
[22] Ex. 22, City enforcement data for 11600 S Burley, violation dated June 27, 2019.
[23] Ex. 29, City of Chicago Department of Administrative Hearings, City of Chicago v. Reserve Ftl, LLLC, Findings, Decisions & Order, Docket #19DE000186 (September 6, 2019), attachment consisting of City of Chicago Class II-B Recycling Facility Permit (ENVREC102879) for Reserve Marine Terminals, dated June 7, 2016, at page 7 of 10, Cond. 32.

materials that are susceptible to becoming windborne. A June 2019 inspection revealed fugitive dust *migrating off the site* from the barge loading operations, and additional windborne particulate matter from a pile of metal scrap.[24] During the inspection, dust control measures were not being utilized. The fugitive dust emissions and failure to utilize dust control correspond to violations of the Illinois Environmental Protection Act's prohibition on unauthorized air pollution, as well as the prohibition on visible emissions beyond the fenceline and potentially the 30% opacity limit.

- The Scrap Metal Services facility, which appears to have been an owner of operations at 11600 S. Burley prior to RMG (and whose liability finding we cite to the extent it indicates RMG took on operations of an unpermitted facility), was found liable for operating without a permit in 2009. This failure is analogous to a failure to obtain proper air approvals under the Act, 415 ILCS 5/9, an infraction which was in fact the basis for RMG-SCPM's admission of noncompliance and an IEPA Notice of Violation ("NOV") issued to RMG as part of the South Chicago Property Management facilities at 11600 S. Burley a decade later in December 2019.[25]

IEPA should deny the GIII permit application based on these adjudications of noncompliance finding that General Iron and RMG have previously been responsible for numerous prohibited releases of air pollution and other environmental infractions over a pro-longed period, demonstrating an inability and/or unwillingness to comply with laws intended to protect communities from environmental harms.

B. Given the COVID-19 Federal, State and Local Emergency, IEPA Should Postpone Making Its Determination on the Permit Until the 33+ Violations Alleged by CDPH in the Last 6 Months Have Gone Through the Administrative Hearings Process.

Even if IEPA declines to recognize the above long list of adjudicated violations as a basis for denying the current permit application, IEPA should work with the Governor's office to postpone a permit decision until the 33+ violations alleged by CDPH in the last six months have gone through the City's administrative hearing process, given delays in those hearings due to COVID-19. CDPH has issued a slew of Notices of Violation to General Iron in recent months, covering unauthorized emissions, smoke, explosions, fugitive dust from material handling and the shredder, and auto fluff escaping from the bounds of the facility and entering neighboring communities. CDPH cited General Iron with at least 33 municipal code violations between December 2019 and March 2020.

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[24] Ex. 24, Inspection Reports for 11600 S Burley, Inspection ID 678670.

[25] *See* Ex. 30, IEPA Violation Notice A-2019-00200, issued to South Chicago Property Management regarding sources at 11600 S. Burley Avenue, December 20, 2019. We note that IEPA appears to have been poised to provide enforcement protections to RMT prior to our flagging that such leniency was inappropriate under the Act. *See* Ex. 10-15, email of Meleah Geertsma, NRDC, to Bob Bernoteit, IEPA, December 18, 2010, and attachments (including explanation of why the Section 42(i) factors for granting enforcement protection were not met).

Given the standard timeline for a Chicago administrative hearing, but for the COVID-19 Emergency, the vast majority of these NOVs likely would have gone through the hearing process to a decision by now. However, enforcement procedures for these alleged violations have been on hold due to COVID-19 since March, resulting in rescheduling of the hearing dates for these NOVs from this spring to future dates to be determined as Chicago's Department of Administrative Hearings reopens.[26] Given the magnitude, repeated nature and severity of the recent citations against General Iron, and their direct relationship to past infractions and the sources, emissions and controls at issue in this permitting, IEPA should delay permitting of General III until liability findings are resolved for alleged violations. Table 2 below illustrates the numerous recent citations against General Iron, which generally align with the state prohibitions on air pollution and on visible emissions beyond the fenceline, as well as other environmental infractions, as described regarding the older violations. Moreover, the NOVs pertain to emission sources that the applicant is proposing to operate in largely the same fashion at the new facility, down to the regenerative thermal oxidizer ("RTO") that it intended to move directly to the new site.[27]

Table 2. Notices of Violation Issued Against General II since December 2019.

Date of Violation	Ticket No.	Code Violation	Disposition	Summary of problem based on inspection report notes	Inspection report ID
3/19/2020	E000034390	11-4-730[28] Air Pollution Prohibited	Unresolved	Untreated emissions escaping the shredder, black smoke escaping the shredder. Auto fluff observed offsite. Odors.	11124169
3/19/2020	E000034390	11-4-760(a) Handling of material susceptible to becoming windborne	Unresolved	Auto fluff observed offsite.	11124169

[26] Several of the NOVs listed 3/26/2020 as a hearing date, one listed 4/30/2020, and several list 7/9/2020 as a hearing date. *See also* Ex. 31, Emails among Meleah Geertsma and David Graham, CDPH Deputy Commissioner, and Jennifer Hesse, CDPH Staff Attorney, April 40 to May 12, 2020 (noting that administrative hearing dates have been postponed to be responsive to COVID-19 and that hearing officer decisions typically issue "immediately" after the hearing).

[27] With respect to the RTO, as discussed elsewhere in our comments and in addition to the uncontrolled emissions described in the late 2019 and early 2020 CDPH NOVs, General Iron on May 18 experienced a massive explosion originating from the RTO that rendered the control equipment and other portions of the facility inoperable. Also as set forth elsewhere in our comments, that explosion renders the current permit application incomplete. In addition, to the extent that the City's enforcement proceedings related to the May explosion are also delayed due to COVID-19, IEPA should again postpone a permit decision to allow for completion of these proceedings.

[28] Note that the City's enforcement database lists violations of Municipal Code section 11-4-730 as "Surfacing of lofs and roadways," whereas the CDPH inspection reports cite "Air pollution prohibited." Municipal Code section 11-4-730 states: "It shall be unlawful within the City of Chicago for any person to cause, suffer or allow the emission of air pollution; provided, however, emissions in compliance with state or federal law or regulations shall not constitute air pollution." In summarizing cited violations in this comment letter, we've described violations of Municipal Code section 11-4-730 as "Air pollution prohibited" in contrast to the enforcement database's description that mischaracterizes these violations as related to surfacing.

3/19/2020	E000034391	11-4-030(b) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	Misting cannons were not in operation.	11124169
3/19/2020	E000034391	7-28-080 Nuisance in connection with a business	Unresolved	Odors & emissions, see above	11124169
3/9/2020	E000034395	11-4-730 Air Pollution Prohibited	Unresolved	Untreated emissions escaping the top of shredder. Odors.	11152408
3/12/2020	E00003438	11-4-030(b) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	Strong odors. Particulates in the air. Auto fluff observed offsite. Misting cannons not in operation.	11208389
3/12/2020	E000034397	11-4-730 Air Pollution Prohibited	Unresolved	See above.	11208389
3/12/2020	E000034397	7-28-080 Nuisance in connection with a business	Unresolved	See above.	11208389
3/12/2020	E00003438	11-4-760 Handling of windborne material	Unresolved	See above.	11208389
3/9/2020	E000034395	7-28-080 Nuisance in connection with a business	Unresolved	Emissions & odors, see above	11152408
2/10/2020	E000034400	11-4-730 Air Pollution Prohibited	Unresolved	Explosion in shredder. Untreated emissions escaping top and side of shredder, and smoke from shredder. Odors. Auto fluff observed offsite. Fugitive dust observed onsite when workers disturbed material piles and moved materials to and from truck trailers.	10929879
2/10/2020	E000034400	11-4-760(a) Handling of material susceptible to becoming windborne	Unresolved	Auto fluff observed offsite. Fugitive dust observed onsite when workers disturbed material piles and moved materials to and from truck trailers.	10929879

2/10/2020	E000034577	11-4-030(b) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	See above. Misting cannons were not being operated.	10929879
2/10/2020	E000034577	7-28-080 Nuisance in connection with a business	Unresolved	Odors & emissions, see above	10929879
1/27/2020	n/a	11-4-030 Violation Penalty	Unresolved	No corresponding inspection report	
1/27/2020	n/a	7-28-080 Nuisance connect w/ business	Unresolved	No corresponding inspection report	
1/27/2020	n/a	11-4-760 Handling of windborne material	Unresolved	No corresponding inspection report	
1/27/2020	n/a	11-4-730 Air Pollution Prohibited	Unresolved	No corresponding inspection report	
1/23/2020	E000035590	7-28-080 Nuisance in connection with a business	Unresolved	Untreated emissions escaping top and side of shredder. Odors.	10881195
1/23/2020	E000035590	11-4-730 Air Pollution Prohibited	Unresolved	Untreated emissions escaping top and side of shredder. Odors.	10881195
1/13/2020	E000035587	11-4-730 Air Pollution Prohibited	Unresolved	Untreated emissions escaping top and side of shredder. Odors.	10836335
12/23/2019	E000035577	11-4-760(a) Handling of material susceptible to becoming windborne	Unresolved	Auto fluff observed offsite. Fugitive dust observed onsite when workers disturbed material piles and moved materials to and from truck trailers.	10767158
12/23/2019	E000035577	11-4-730 Air Pollution Prohibited	Unresolved	Untreated emissions escaping top and side of shredder and migrating offsite. Odors. Also see above.	10767158
12/23/2019	E000035578	11-4-030(b) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	See above. Misting cannons were not being operated.	10767158

12/18/2019	E000034125	11-4-760(a) Handling of material susceptible to becoming windborne	Unresolved	Auto fluff observed offsite. Fugitive dust observed onsite when workers disturbed material piles and moved materials to and from truck trailers, and dust observed on vehicles parked offsite.	1494955
12/18/2019	E000034125	11-4-730 Air Pollution Prohibited	Unresolved	Untreated emissions escaping top and side of shredder. Also see above.	1494955
12/18/2019	E000035576	11-4-030(b) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	See above. Misting cannons were not being operated, leading inspector to believe reasonable measures to control dust from blowing offsite were not being taken	1494955
12/16/2019	E000034122	11-4-760(a) Handling of material susceptible to becoming windborne	Unresolved	Auto fluff observed offsite. Fugitive dust observed onsite when workers disturbed material piles and moved materials to and from truck trailers.	10716916
12/16/2019	E000034123	11-4-030(b) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	See above. Misting cannons were not being operated, leading inspector to believe reasonable measures to control dust from blowing offsite were not being taken	10716916
12/16/2019	E000034122	11-4-730 Air Pollution Prohibited	Unresolved	Untreated emissions escaping top and side of shredder. Also see above.	10716916
12/10/2019[29]	E000034116	11-4-760(a) Handling of material susceptible to becoming windborne	Unresolved	Untreated emissions escaping top and side of shredder and migrating offsite. Odors.	10708652
12/10/2019	E000034116	11-4-730 Air Pollution Prohibited	Unresolved	Dust observed onsite and migrating offsite when workers disturbed material piles and moved materials to and from truck trailers	10708652

[29] Chicago's Enforcement Database lists 3 violations occurring on December 10, 2019. However, the CDPH Inspection Report database lists 6 violations occurring. If all 6 violations are accounted for, the number of violations cited by CDPH between December 2019 and March 2020 would total 36.

12/10/2019	E000034117	11-4-030(b)(2) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	Misting cannons were not in operation.	10708652
12/10/2019	E000034120	11-4-730 Air Pollution Prohibited	Unresolved	Untreated emissions escaping top and side of shredder and migrating offsite. Odors.	10706274
12/10/2019	E000034120	11-4-760(a) Handling of material susceptible to becoming windborne	Unresolved	Dust observed onsite and migrating offsite when workers disturbed material piles and moved materials to and from truck trailers	10706274
12/10/2019	E000034121	11-4-030(b)(2) Violating any condition imposed by the permit, special condition 46 which requires the permittee to control and suppress dust and other materials to prevent off-site migration	Unresolved	See above. Misting cannons were not being operated, leading inspector to believe reasonable measures to control dust from blowing offsite were not being taken	10706274

If adjudicated against the facility, these violations would demonstrate an even stronger basis for IEPA to deny the GIII permit. Because the hearings on them have been delayed by the COVID-19 emergency, IEPA should delay its permitting decision until CDPH resolves the pending citations against General Iron, and to the extent it has not already done so, initiate a state investigation of all these instances.

C. If IEPA Fails to Deny the Permit or Postpone Its Decision, It Must Substantially Revise and Strengthen the Draft Permit to Ensure Compliance with the Act in Light of the Companies' History of Noncompliance.

If IEPA refuses to exercise its discretion to deny the permit based on admitted environmental violations and those adjudicated by the City of Chicago or postpone its decision until the pending CDPH NOVs have been resolved, it should at the very least substantially strengthen the permit based on the City actions and additional evidence establishing the companies' history of noncompliance with the Act, as set forth below and elsewhere in these and partners' comments. IEPA has broad authority and indeed a duty to impose permit conditions related to General Iron's and RMG's past compliance history to prevent noncompliance at the GIII facility. As noted above, in granting permits, IEPA "may impose reasonable conditions specifically related to the applicant's past compliance history with this Act as necessary to correct, detect, or prevent noncompliance." 415 ILCS 5/39 (a). The plain language of this portion of Section 5/39(a) clearly

states the authority of IEPA to consider past violations in imposing permit conditions without reference to "adjudication" of the past violations.[30] Again, IEPA should not read limitations into this broad language that the legislature deemed not to include. Thus, IEPA may consider evidence of noncompliance short of adjudicated violations in *granting* a permit.[31] Such strengthening of the permit is "necessary to… prevent noncompliance" here, given the long history of both companies' noncompliance consisting of numerous NOVs, settlement agreements, inspection reports and other evidence of noncompliance, including potentially ongoing violations, and the environmental justice implications of the facility's relocation to Chicago's Southeast Side from Lincoln Park.

Specifically, should it proceed with granting the permit, IEPA should deem the following history of noncompliance grounds for substantially strengthening the Draft Permit:

- RMG-SCPM's admission of noncompliance for failing to obtain required air approvals;
- The City liability findings against General Iron and RMG described above;
- The 33+ NOVs issued by CDPH against General Iron in the last 6 months, as discussed above;
- CDPH's inspection reports;
- U.S. EPA's multiple enforcement actions against General Iron dating back to at least 2006 and resulting in several consent decrees/orders, including those related to knowingly disposing of appliances containing Class I and Class II refrigerant substances, uncontrolled shredder emissions that traveled beyond the fenceline, and VOC and PM emissions from the shredder[32];
- U.S. EPA's enforcement action against Chicago Rail and Port (located just North of 11600 S. Burley at 106th St. and the Calumet River) for fugitive dust violations resulting in exceedances of the PM_{10} NAAQS, to the extent that Chicago Rail and Port is also an

[30] Indeed, in denying the KCBX Terminals construction permit several years ago, IEPA relied on observations made by field staff and citizen pollution complaints in determining that the permit application did not show compliance with Illinois fugitive particulate matter requirements. Ex. 32, Ill. Envtl. Protection Agency, Permit Denial for Application No. 07050082, KCBX Terminals Company (Jan. 17, 2014). Evidence of noncompliance short of adjudicated violations is similarly relevant in this permitting context.

[31] This is consistent with, for example, the Title V permitting context, where the 7th Circuit has recognized the discretion of IEPA to consider unadjudicated noncompliance when determining permit conditions. *See Citizens Against Ruining the Environment v. Envt'l Protection Agency*, 535 F.3d 670, 679 (7th Cir. 2008). As such, IEPA can and should consider evidence of noncompliance in various forms in formulating additional permit conditions to prevent future noncompliance.

[32] *See, e.g.*, Ex. 34, *United States v. General Iron Industries, Inc*., Consent Decree, No. 04 C 6820 (N.D. Ill. July 24, 2006), available at https://assets.documentcloud.org/documents/4329917/General-Iron-2006-CD.pdf; Ex. 35, U.S. EPA, *In the Matter of General Iron Industries, Inc*., Administrative Order, EPA-5-12-113(a)-IL-04, June 28, 2012, available at https://assets.documentcloud.org/documents/4329919/General-Iron-2012-AO.pdf; Ex. 36, U.S. EPA, *In the Matter of General Iron Industries, Inc.*, Administrative Order, EPA-5-19-113(a)-IL-08, August 20, 2019, available at https://www.epa.gov/sites/production/files/2019-08/documents/general_iron_industries_inc_aco.pdf.

SCPM company.[33] We note that U.S. EPA's NOV is based on fugitive dust events in December 2017 that occurred while Chicago Rail and Port was supposedly complying with a fugitive particulate operating program dated August 2017, an FPOP that is in many ways more robust and enforceable than the one proposed here (as discussed elsewhere in these comments[34];

- Any instances of noncompliance being investigated by IEPA itself; and
- Any other evidence of noncompliance available to agencies but not identified here or otherwise made available to the general public.

With respect to CDPH's inspection reports, Exhibit 33 provides a description of noncompliance noted by CDPH inspectors over the years, categorized by type of equipment. We include here excerpts from the deeply concerning operations of the General Iron and RMG facilities, highlighting a few of the more recent inspection reports organized in reverse chronological order[35]:

General Iron

- ". . . odors were observed on Throop St and Wabansia Ave. It is a pungent and unpleasant odor of burning, sweet metal with waves of an unfamiliar odor similar to men's cologne. The same odors were observed onsite at GII LLC. Smoke and untreated emissions were observed escaping the shredder. Two misting cannons (West side of the shredder and East side of the shredder) were deployed during this inspection but with the wind direction, it did not seem to completely control windborne particulate and the untreated emissions that migrated offsite. An enforcement action is already pending for these issues."[36] (April 28, 2020, post-RTO installation) (MDW temperature high 75 and ave. 64.2; wind speed max. 18 mph and ave. 9.9 mph)
- "While canvassing the area surrounding GII, LLC on March 12, 2020, strong odors were observed at the following intersections: Kingsbury St, Cortland St and Clybourn Ave, Racine Ave, Cortland St. It is a pungent odor of sweet, burning metal. When observing GII LLC from Kingsbury St [and] Cortland St, the odors were very strong and particulate was blowing directly at me since the wind was coming from the Southeast. I could not

[33] *See* Ex. 37, U.S. EPA, *In the Matter of Chicago Rail and Port , LLC*, Notice of Violation, EPA-5-18-IL-10, April 20, 2018, available at https://www.epa.gov/sites/production/files/2018-06/documents/chicago_rail_and_port_llc_nov.pdf.

[34] *See* Ex. 38, Chicago Port and Rail, LLC, Operating Program for Fugitive Particulate Matter Control, August 2017 (see enforceability section for further discussion of this FPOP). The FPOP lists "South Chicago Property Development" as the owner/operator of this facility, and we raise the issue here due to the similarity in name to South Chicago Property Management. We were not able to otherwise verify whether Chicago Port and Rail is in fact part of South Chicago Property Management, an issue which we are asking IEPA to resolve. Regardless of ownership, Chicago Rail and Port's experience with failure to control fugitive dust and NAAQS exceedances while under a fugitive particulate operating program should be considered as general engineering information on the effectiveness of control measures proposed in this permitting, as discussed below.

[35] Temperatures and wind speeds provided in this section were obtained from Weather Underground, wunderground.com, for Midway Airport.

[36] Ex. 23, Inspection Report for 1909 N Clifton, Inspection ID 11491696.

fully inhale nor could I keep my eyes open at this location. When leaving the area after the inspection, I could feel my nose throbbing and chest discomfort. Auto fluff/auto shredder residue was also observed in the public way . . . . Misting cannons were observed to not be in operation at the time of the inspection."[37] (March 12, 2020, post-RTO installation) (MDW temperature high 56 and ave. 46.8; wind speed max. 21 mph and ave. 11.2 mph)

- "While canvassing the area surrounding GII, LLC on March 19, 2020, odors were observed on Cortland St between Elston Ave [and] Clybourn Ave. It is a pungent odor of sweet, burning metal that burns my nostrils and makes it uncomfortable for me breathe in. When observing the shredder from across the North Branch Chicago River on Throop St and the Home Depot parking lot (1232 W North Ave), untreated emissions were observed escaping the shredder. Black smoke was also observed periodically escaping the shredder. Auto fluff/auto shredder residue was observed at the intersection of Clifton Ave and Marcey St, on both the PAWS Chicago training center property (1933 N Marcey St) and the Lock Up Self Storage property (1930 North Clybourn Ave)."[38] (March 19, 2020, post-RTO installation)
- "Untreated emissions were observed escaping the top and the sides of the shredder. I also observed smoke leaving the shredder and traveling through the property across from the North Branch Chicago River. Auto fluff/auto shredder residue was observed on the property directly Southwest and across the North Branch Chicago River . . . Fugitive dust was also observed onsite when workers disturbed material piles and moved materials to and from truck trailers. Misting cannons were observed to not be in operation to control airborne particles at the time of the inspection." [39] (February 10, 2020, post-RTO installation) (MDW temperature high 36, ave. 30.65 and low 27; wind speed max. 14 mph and ave. 7.8 mph)
- "During the entire time of my inspection, untreated emissions were observed escaping the top and side of the shredder"[40] (January 23, 2020, post-RTO installation)
- "Untreated emissions were observed escaping the top and side of the shredder. It looked like smoke was leaving the shredder too. The shredder is not an enclosed piece of equipment. It does contain a hood to capture the emissions and process them through a regenerative thermal oxidizer (RTO) and a wet scrubber to remove volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and other airborne solvents. Being able to observe emissions escaping the shredder leads me to believe that the equipment capturing the emissions is insufficient. Consequently, this does not allow the recently installed air pollution control equipment to remove the emissions since they are escaping at the shredder before the treatment process." [41] (January 13, 2020, post-RTO installation)

[37] *Id.*, Inspection ID 11208389.
[38] *Id.*, Inspection ID 11124169.
[39] *Id.*, Inspection ID 10929879 (NOVs issued).
[40] *Id.*, Inspection ID 10881195 (NOV issued).
[41] *Id.*, Inspection ID 10836335.

- “Observing auto fluff in the public way and fugitive dust without operating misting cannons leads me to believe that reasonable measurements were not and are not being taken to ensure dust, debris, and dirt won't migrate off site and into the public way.”[42] (December 23, 2019) (MDW temperature high 53 and low 36; wind speed max. 15 mph)
- "Fugitive dust without operating misting cannons leads me to believe that reasonable measurements are not being taken to ensure dust, debris, and dirt won't migrate off site and into the public way."[43] (December 10, 2019) (MDW temperature high 24 and low 16; wind speed max. 17 mph and ave. 14 mph)
- "Dust was also observed on the vehicles parked on the Southeast side of Clifton Ave between Marcey St Kingsbury St, which is diagonally across from GII, LLC. Misting cannons were observed to not be in operation to control airborne particles at the time of the inspection. Observing auto fluff in the public way and dust on the vehicles diagonally across from GII LLC without operating misting cannons leads me to believe that reasonable measurements were not and are not being taken to ensure dust, debris, and dirt won't migrate off site and into the public way."[44] (December 18, 2019) (MDW temperature high 27 and low 14; wind speed max. 17 mph and ave. 9.8 mph)
- "Fugitive dust observed onsite when disturbing material piles . . . Misting cannons were observed to not be operated at the time of inspection nor was a water truck wetting the streets. Dust was observed on Kingsbury and Wisconsin being kicked up from the trucks from General Iron."[45] (October 8, 2019) (MDW temperature high 71 and low 50; wind speed max. 9 mph) "I spoke to the facility manager at the PAWS facility directly across the General Iron at the intersection at Clifton Marcey. He informed me that they have to change the HVAC filters weekly since the debris caused by General Iron's shredder and material piles. Misting cannons were observed to not be operated at the time of inspection nor was a water truck wetting the streets."[46] (September 25, 2019) (MDW temperature high 79 and ave. 66; wind speed max. 17 mph and ave. 13.2 mph)
- “I spoke to Jim and he informed me that there was an explosion in the shredder during the morning hours between 7:30 AM [and] 7:40 AM. He said this is a common occurrence.”[47] (February 10, 2020)
- “Odors of a sweet smelling chemicals and metals were observed. It burned and inflamed my nostrils to the point of throbbing inside my nostrils.”[48] (July 30, 2019, pre-RTO installation)
- "The inspectors met with General Iron safety manager Jeff Jones, and a discussion was held concerning airborne emissions and health and safety surrounding the plant. Jones

[42] *Id*., Inspection ID 10746578.
[43] *Id*., Inspection ID 10706274 (NOV issued).
[44] *Id*., Inspection ID 1494955 (NOV issued).
[45] *Id*., Inspection ID 10208629.
[46] *Id*., Inspection ID 10039135.
[47] *Id*., Inspection ID 10929879.
[48] *Id*., Inspection ID 9495131.

stated that air monitoring, wetting, sweeping and all of the safety and cleanliness actions for the plant are in use. The facility operates almost continuously and some debris will migrate despite best efforts, according to Jones."[49] (June 26, 2019)

- "While there, a truck arrived and was still parked on the street when smoke began to come from some of the scrap on the truck and continued as it entered the site gate . . . General Iron personnel unloaded the smoking scrap and used extinguishers to put out the fire. Their yard manager rejected the truck and did not allow them to leave any scrap."[50] (April 1, 2019)
- Inspector observed exhaust emissions "due to the constant in/out truck traffic."[51] (February 10, 2017)
- Inspector "met JK to follow up due to an explosion incident on the previous day. he stated that they did have an explosion while feeding materials into the shredder. The operator cannot see that part of the shredder because it is covered by a hood so does not know what exploded. the operator heard and saw the explosion and responded by hitting the switch that dumps 90+ gallons of water under the hood."[52] (September 13, 2017)

RMG

- "The pavements are in need of attention, potholes and pooled water are evident."[53] South Shore Recycling (March 13, 2020)
- "The pavement in the outdoor storage area needed improvement due to potholes and standing water."[54] Regency Technologies (March 13, 2020)
- "Fugitive dust was observed when personnel would drive motor vehicles on the dry roadways and open areas, and when material piles were disturbed. Fugitive dust created was not above opacity limitations and it did not leave the site. It was concluded that they will repair the roadways since they were completely covered in dirt/debris and they will need to spray material piles to control fugitive dust when they are moving the material piles."[55] Southshore Recycling (October 23, 2019) (MDW temperature ave. 50.3; wind speed max 15 mph and ave. 9.2 mph)
- Inspector observed "plume of windborne particulate matter from barge loading, across the Calumet River." When inspector arrived at Reserve Marine Terminals, "I observed plume of windborne particulate matter from barge loading operations of metal scrap, with heavy duty loading machine. There was no dust control and suppression measure observed; for dust and air-borne materials, during this loading operation . . . I observed the plume of windborne particulate matter from the barge loading operations of metal

[49] *Id*., Inspection ID 9203598.
[50] *Id*., Inspection ID 8429665.
[51] *Id*., Inspection ID 2380409.
[52] *Id*., Inspection ID 1140048.
[53] Ex. 24, Inspection Reports for 11600 S. Burley, Inspection ID 1480496.
[54] *Id*., Regency Technologies, Inspection ID 1481242.
[55] *Id*., Southshore Recycling, Inspection ID 1348397.

scrap migrating off-site . . . I observed plume of windborne particulate matter from pile of metal scrap processing"[56] Reserve Marine Terminals (June 27, 2019) (MDW temperature high 90, ave. 77.9; wind speed ave. 9 mph and max. 21 mph)

- "There were 2 drums of oil stored in the open air with no secondary containment . . . There was a trailer with oil in it and the ground outside the trailer was oil-stained . . . There was a generator in use that apparently was leaking because there was absorbent material on the ground around it."[57] Reserve Marine Terminals (April 11, 2019)
- "The main issue is the potholes that span the length of the road through the middle of the site."[58] Reserve Marine Terminals (February 11, 2019)
- "The exterior portion was full of materials and previous[l]y-noted waste (piles of dirt with metal intermingled, wood) remained and weeds were still growing among the scrap. JH was to have addressed these by reinspection but improvement had not gotten to a very noticeable point."[59] South Shore Recycling (September 17, 2018)
- "They had a fire a few months ago in the plastics bay. RT said that the cause of the fire had not been determined but that it had probably been from a battery that was supposed to have been removed inside of the building."[60] Regency Technologies (July 12, 2018)
- "In the interior, batteries were stored without the protective layer as required in special permit condition #17. The cardboard used was not long enough to cover the edge of one layer of batteries . . . The exterior portion was full of materials but also waste. A pile of CD debris (dirt, broken concrete) was among the metal scrap . . . The material storage/processing areas needed to be cleaned up, with metal removed from the ground and pavement leveled."[61] Regency Technologies (May 11, 2018)
- "OEMC first notified CDPH via SMS at 12:01 about the fire in Regency Technologies . . . At 15:30 CDPH engineer arrived to the scene, where CFD was still ceasing the fire of recyclable plastic material . . . stored outside . . . . HCN was 30 ppm, VOC was 40 ppm, CO was 17-25, O2 was 20.7 . . . Fire was completely secured around 16:45."[62] Regency Technologies (May 7, 2018)
- "Some of the materials? Piles are confined by concrete blocks but some not. Some of the pavement is more dirt than anything else, caused by continuous traffic by trucks and the machines used onsite for processing."[63] Reserve Marine Terminals (August 18, 2017)

[56] *Id.*, RMT, Inspection ID 678670. We also note that in late June of 2019, between June 26 and 28, David Graham, CDPH Deputy Commissioner, called Meleah Geertsma to discuss high intensity torch cutting occurring at 11600 S. Burley. Deputy Commissioner Graham described large stationary torches being used to disassemble rail cars, resulting in large plumes of black smoke.
[57] *Id.*, RMT, Inspection ID 1356396.
[58] *Id.*, RMT, Inspection ID 1323300.
[59] *Id.*, South Shore Recycling, Inspection ID 1273325.
[60] *Id.*, Regency Technologies, Inspection ID 1247508.
[61] *Id.*, Regency Technologies, Inspection ID 1228033.
[62] *Id.*, Regency Technologies, Inspection ID 5647187.
[63] *Id.*, Reserve Marine Terminals, Inspection ID 1111122.

- "Upon arrival, I noted the damaged asphalt at the gate was even more damaged than previously noted, with a huge pool of water collected that must be inches deep at the center . . . . There were potholes evident along the interior haul road. ?RT was supposed to have written a pavement repair/maintenance plan but had not."[64] Reserve Marine Terminals (May 1, 2017)
- "Upon arrival, I noted that the entry road had been partially wet (for dust control) but the center was dry and the wetting did not extend close to the street where trucks exited. At the entry gate, I noted very large potholes holding water . . . . He stated that they had recently gotten bids from pavement contractors to replace the damaged asphalt at the gate with asphalt. he will have a plan to either repair or replace the pavements by next inspection . . . . There were potholes evident along the interior haul road . . . ."[65] Reserve Marine Terminals (March 22, 2017) (MDW temperature high 45 and ave. 39; wind speed ave. 11.7 mph and max. 21 mph)
- "The pavement stills shows potholes and ponding throughout the site. RT showed me a large pile of asphalt grindings, told me that they were using it to make repairs to the road every day because their activity (shearing, breaking, hammering) combined with the truck traffic causes damage to all pavements – maintenance is a never-ending cycle."[66] Reserve Marine Terminals (July 28, 2016)
- "There is no clear separation between the road and the materials storage/processing area. RT has yet to provide a pavement plan, this is also detailed in the permit. There is standing water in large pools along the road and among the piles, prevention of this is also detailed in the permit."[67] Reserve Marine Terminals (March 11, 2016)
- "Defect notice[s] w[ere] issued for equipment without air pollution control permits" at Napuck Salvage, Reserve Marine Terminals, Regency Technologies, and South Shore Recycling.[68] (August 25, 2014)
- "On 12/20/12, Regency experienced a fire that damaged the roof. A part of the building had to be demolished and how has been completed. The facility is involved in cleanup and re-building and intends to re-open next week."[69] Regency Technologies (February 6, 2013)
- "Inspector Lipman responded to a complaint regarding the non-permitted recycling facility located at 11600 S Burley. Upon arrival workers on the site were observed dismantling semi trailers using propane torches and saws . . . Corcoran stated that SMS planned on temporarily using the site for approximately 90 days for the purpose of dismantling the trailers and shipping different components to various recyclers. I

[64] *Id*., Reserve Marine Terminals, Inspection ID 1065865.
[65] *Id.*, Reserve Marine Terminals, Inspection ID 1042897.
[66] *Id.*, RMT, Inspection ID 884332.
[67] *Id*., RMT, Inspection ID 819289.
[68] *Id.*, Inspection ID 678745, 678669, 678675, 678673.
[69] *Id*., Inspection ID 484287.

informed Corcoran that without a permit all processing operations would have to cease until proper permitting was attained.[70] Scrap Metal Services (April 24, 2009)

IEPA should craft permit conditions to prevent these types of violations from occurring or continuing at the S. Burley site, as set forth throughout these and our partners' comments.

Because many of General Iron's operations, pieces of equipment, and personnel will stay virtually the same when it moves over to the GIII site, it is imperative that IEPA impose new permit conditions to control emissions and address General Iron's long history of noncompliance. Likewise, as RMG is the named entity responsible for GIII, and given the evidence that RMG staff associated with poor operations in Chicago and in other states like Ohio will have significant responsibilities at GIII[71], IEPA must impose new and stronger permit conditions to ensure compliance with the Act.

We note that, as laid out in our following comments on enforceability issues with the Draft Permit, the lack of practical enforceability on its own warrants significant revision and strengthening of the Draft Permit. Similarly, our comments lay out additional and independent bases for strengthening the Draft Permit in numerous ways, based on experience with other metals facilities as well as the experience here as evidence of general issues with metals facility operations that should be addressed in revised and improved permit provisions.

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[70] *Id.,* Inspection ID DOEINS11638. Scrap Metal Services appears to be a prior business operating at the same address as the current RMG facilities. It is unclear to us whether any RMG agents were also involved in SMS; we are providing this report to the extent that it is indicative of operations that RMG later assumed from Scrap Metal Services at 11600 S. Burley.

[71] Dennis Stropko's name appears on permit application materials for RMG-SCPM. According to CDPH's database, Mr. Stropko has a management role in at least Reserve Marine Terminals, which as described above was found liable by the City for dust infractions and to which IEPA has issued an NOV for failure to obtain required permits, and Regency Technologies, which CDPH inspection reports identify as having experienced a significant fire. *See, e.g.,* Ex. 24, CDPH Inspection Reports for 11600 S. Burley: Inspection ID 1228473 (May 11, 2018) (Reserve Marine Terminals); ID 1227642 (May 11, 2018) (Regency Technologies). Mr. Stropko was also called out by the plaintiffs in an Ohio workplace injury lawsuit involving an explosion at an RMG recycling facility that left a worker permanently disfigured, where Mr. Stropko served as safety manager. *See* Brief of Plaintiff-Appellants, Darrell and Pam Hornyak, *Hornyak v. Reserve Alloys, LLC*, 2016 WL 7626325 (Ohio App. 8 Dist.) (no. CV–14–829052), 2016 WL 6206637 (describing multiple failures to post and train workers in safety protocols related to shredder operation; citing to Mr. Stropko's deposition in stating "Despite their purported investigation, no one at Reserve Alloys was able to explain why the shredder had exploded leaving a worker permanently scarred and disfigured" and finding that "Seemingly unconcerned with their inability to identify the cause of the catastrophe, the machine was promptly returned to operation without any meaningful changes"; and relying on expert testimony setting forth that "Defendant Reserve Alloys was aware of the shredding machine's propensity for explosions, and has identified a warning attached to the machine that the plant was routinely violating… [the expert] has concluded that the companies knew to a substantial certainty within the meaning of [relevant state law] that an injury would 'occur sooner or later.' … He has explained that: 'This specific intent is established based upon numerous prior fires and incidents related to the operation of the equipment, knowledge of the likelihood of another fire and/or explosion, knowledge of the extreme danger posed to Mr. Hornyak and other employees, and instructions by management to Mr. Hornyak and other employees to directly violate the written warnings and instructions contained both on the equipment and in the manual.'")

III. The Draft Permit Cannot Issue As-Written Because Numerous Provisions Are Practicably Unenforceable.

The Draft Permit cannot issue as proposed because numerous terms and conditions are not practicably enforceable due to vagueness, inadequate testing/monitoring to ensure continuous compliance, and other related shortcomings. We focus here in particular on the Draft Permit's many shortcomings in ensuring continuous compliance with the Part 201.141 prohibition on air pollution and the Part 212 requirements for Visible and Particulate Matter Emissions. Additional enforceability issues are taken up in the following section on needed permit revisions.

More specifically:

- the fugitive dust provisions that the Draft Permit does include are insufficient in scope and unenforceably vague and lacking in sufficient monitoring, recordkeeping and reporting requirements to ensure continuous compliance;
- the Draft Permit relies heavily on a fugitive particulate operating program for which it establishes no objective standards of sufficiency, and also provides for the automatic updating of such operating program without public review, as well as the post-hoc submission of the required Contingency Plan, the contents of which are intended to become federally enforceable permit conditions; and
- the March 2020 fugitive particulate operating program that was made available for public comment, and so is presumably the current program for purposes of the Draft Permit based on the problematic automatic-update provision (despite the Draft Permit's reference to a December 2019 operating program that is not in the record made available to the public), is also insufficient in scope and unenforceably vague and lacking in sufficient monitoring, recordkeeping and reporting requirements to ensure continuous compliance.

To the extent that the Applicant has failed to provide IEPA with sufficient information to amend these shortcomings, IEPA must declare the application incomplete. Otherwise, IEPA must cure these issues before making a final permit decision as well as include the currently lacking requirements and specificity in any final permit.

The inadequacies of the Draft Permit's fugitive dust provisions that we lay out here stand on their own, warranting a substantial revision of the Draft Permit. However, we also call attention to the companies' records of noncompliance in controlling visible and particulate emissions as set forth above, which provide grounds for denying the permit on the basis that the companies have demonstrated that they cannot and will not sufficiently control their fugitive dust, including metallic fines and potentially hazardous auto shredder residue.[72] As taken up elsewhere in these

[72] See discussion of noncompliance above. The General Iron facility faces 33+ NOVs from CDPH over emissions from the very sources that are at issue in this permitting. The CDPH inspection record demonstrates that these problems – including failures to use spray systems for dust suppression at piles and vehicle loading, to sweep roadways, and to maintain paved conditions, among others, the very sources and controls proposed here – have been ongoing for years and appear to be unresolved at this time. At minimum, the companies' records of noncompliance provide additional grounds for greatly enhancing the stringency and enforceability of the Draft Permit's fugitive dust terms.

comments, PM_{10} modeling (which the applicant and IEPA omitted without explanation) – using assumptions that account for some of the Draft Permit's emission estimate and enforceability issues and reflect the industry's and the companies' demonstrated problems with continuously controlling fugitive dust – shows potential violations of the 24-hour PM_{10} NAAQS from the proposed GIII.

A. A Permit Must be Practicably Enforceable – the Draft Permit is Not.

U.S. EPA has long been clear that practical enforceability is a critical requirement of control strategies under the Clean Air Act, including those implemented via State Implementation Plans. As it set forth back in 1992,

> [t]he fundamental principles for SIPs/Control Strategy include: (1) baseline emissions from the source and the control measures must be quantified (specific amount of reductions can be ascribed to measures) (2) *measures must be enforceable (specify clear, unambiguous, and measurable requirements)* (3) source-specific limits must be permanent and reflect assumptions used in SIP demonstrations and contain means to track emission changes at sources and provide for corrective action.

57 F.R. 13498, 13567-13568 (April 16, 1992) (emphasis added). To be "federally enforceable," the Draft Permit must "provide for limits that are enforceable as a practical matter."[73] U.S. EPA has further explained that "Practicable enforceability" means that a permit's provisions must specify:

> A technically-accurate limitation and the source subject to the limitation; (2) the time period for the limitation (hourly, daily, monthly, and annual limits such as rolling annual limits); and (3) the method to determine compliance including appropriate monitoring, recordkeeping, and reporting.

73 Fed. Reg. 1570, 1573 (Jan. 9, 2008). Further, courts have held that to be practicably enforceable, a permit condition must: (1) provide a clear explanation of how the actual limitation or requirement applies to the facility; and (2) make it possible for the Cabinet, the U.S. EPA, *and citizens* to determine whether the facility is complying with the condition. *See, e.g., Sierra Club v. Ga. Power Co.*, 365 F. Supp. 2d 1297, 1308 (D. Ga. 2004) (citing *Sierra Club v. Public Serv. Co.*, 894 F. Supp. 1455, 1460 (D. Colo. 1995). Consistent with these requirements, U.S. EPA has further explained that, "In addition to implementing appropriate compliance methods, the monitoring, recordkeeping, and reporting requirements must be *written in sufficient detail to*

[73] *See* Ex. 39, Memorandum from John Seitz, U.S. EPA, Dir. of Air Quality Planning and Standards, and Robert Ven Heuvelen, Office of Regulatory Enforcement, "Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act," January 25, 1995, at p3, available at https://www.epa.gov/sites/production/files/documents/limit-pte-rpt.pdf. We note that the fact that the primary pollutant of concern with the unenforceable fugitive provisions – particulate matter – is not the same pollutant as the one otherwise exceeding the federal major source thresholds absent federally enforceable limits on PTE (VOCs) is immaterial with regards to the need to ensure that all provisions of the Draft Permit are practicably enforceable, given the Clean Air Act's in-for-one-in-for-all approach to applicability.

allow no room for interpretation or ambiguity in meaning. Requirements that are imprecise or unclear make compliance assurance impossible."[74] Terms that are ambiguous on their face include "if necessary."[75] Along these lines, U.S. EPA has made clear that simply citing to use of "reasonable precautions" for control of fugitive dust is insufficient.[76] Finally, as these authorities lay out, a permit limit without sufficient monitoring, recordkeeping and reporting to ensure continuous compliance with that limit is also practicably unenforceable.

As set forth below, the Draft Permit falls far short of establishing practicably enforceable limits in numerous ways.

B. Summary of the Draft Permit's Inadequate Treatment of Fugitive Sources of Emissions.

The Draft Permit describes the Hammermill Shredder System, Ferrous Material Separate System, and Non-Ferrous Material Separation Systems as subject to 35 IAC Part 212 Subpart B for Visible Emissions. More specifically, the Draft Permit lists the following as applicable SIP requirements:

- 30% opacity limit under Section 212.123(a), with an exception for opacity of greater than 30 percent but less than 60% for a period or periods aggregating 8 minutes in any 60-minute period under Section 212.123(b); and
- a prohibition on visible emissions beyond the fenceline from any process, including material handling or storage activity, under Section 212.301[77], except when wind speed is greater than 25 mph pursuant to Section 212.314[78].

The Draft Permit also indicates that the source is subject to 35 IAC Part 212 Subpart U for Additional Control Measures. Also, while not explicitly stated in the Draft Permit or permitting materials, IEPA functionally applied the prohibition on air pollution contained in the Act and IEPA's regulations to the facility through the air quality modeling analysis, the results of which are a stated basis for issuance of the Draft Permit.[79] IEPA should make explicit in the Draft Permit that the prohibition on air pollution applies to this facility, that the air quality modeling demonstration is the analysis that IEPA undertook to assess compliance with this provision, and

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[74] Ex. 40, Attachment to Letter from Bharat Mathur, U.S. EPA Region 5, to Robert F. Hodanbosi, Ohio EPA, dated November 21, 2001 (emphasis added), available at https://books.google.com/books?id=UCZIx8GagzwC&pg=PA19&lpg=PA19&dq=Mathur+Hodanbosi+letter+November+21,+2001+Ohio+Title+V&source=bl&ots=hqoKoMIbVp&sig=ACfU3U18m5tNWeKvDQ3mGzQYbD8ayah9fA&hl=en&sa=X&ved=2ahUKEwiiwaDtveXpAhWQm-AKHS3DDXwQ6AEwAHoECAoQAg#v=onepage&q=Mathur%20Hodanbosi%20letter%20November%2021%2C%202001%20Ohio%20Title%20V&f=false (pdf exhibit also provided).

[75] *See Id*.

[76] Ex. 41, *In re Scherer Steam-Electric Generating Plant, et al*., Order on Petition Nos. IV-2012-1–IV-2012-5 (April 14, 2014), at pp. 18-19, available at https://www.epa.gov/sites/production/files/2015-08/documents/ga_power_plants_response2012.pdf.

[77] *See* Draft Permit at 3, Cond. 3(b) and (c).

[78] *See* Draft Permit at 7, Cond. 8(a).

[79] *See* Draft Permit at 2, Cond. 1(e).

as set forth below revise the Draft Permit to include objectively enforceable specific terms that ensure the level of control claimed in the modeling analysis.

The Draft Permit describes the source's systems as including multiple material handling or transfer steps that have the potential to generate fugitive dust, as follows:

- Hammermill Shredder: two conveyors (at least part of which appear to be located outside of the shredder enclosure from the renderings submitted by GIII in the City's zoning process, referenced elsewhere in these comments)
- Ferrous Material Separation System: 70 conveyor transfer points; ASR stacking conveyor; and barge, rail car, and truckloading;
- Non-Ferrous Material Separation System: 99 material transfer points.[80]

We note at the outset that the descriptions of the Ferrous and Non-Ferrous Material Separation Systems on page 1 of the Draft Permit are inconsistent with the emission limits for these Systems contained on pages 14-16, Conditions 12(d) and 12(e).[81] IEPA must correct all descriptions and ensure that all emissions estimates, modeling based on those estimates, and proposed limits and monitoring, recordkeeping and reporting requirements encompass all proposed emission sources/units associated with their respective Systems.

In terms of proposed conditions to control fugitive emissions, the Draft Permit is exceedingly thin and vague, largely consisting of general restatements of regulatory provisions rather than case-by-case, objectively enforceable permit condition for the proposed GIII. The Draft Permit also relies in large part on a "fugitive particulate operating plan" to provide the specificity that the Draft Permit itself does not include, yet the fugitive particulate operating plan perpetuates the same vague and unenforceable approach, while creating confusion and conflict with (and so within, due to the operating program's incorporation into the Draft Permit) the Draft Permit.

More specifically, fugitive emission conditions are limited to the following:

- In **Condition 9**, boilerplate restatements of Section 212.701(a)'s requirement to prepare and submit "contingency measure plans reflecting the PM10 emission reductions set forth in [Section 212.703]" at a future date and restatement of the process set forth in 212.704 pertaining to exceedances of the NAAQS for PM10;
- In **Condition 10**, vague, general control obligations for storage piles, roadways, vehicle loading and unloading, and other transfer points that simply list available control

[80] *See* Draft Permit at 1, description of emission sources and/or air pollution control equipment.

[81] More specifically, both System descriptions on page 1 omit stockpiles, though the Condition 12 emission limits list stockpiles associated with these Systems (7 and 13 stockpiles for the Ferrous Separation and Non-Ferrous Separation Systems, respectively). The description of the Ferrous System on page 1 includes barge, rail car and truck loading, consistent with the application (*see* Section 2.2 describing the Ferrous System), but the Condition 12 limits on pages 14-15 list only truck and barge loading, not rail car. The page 1 description of the Non-Ferrous System omits vehicle loading all together, though the Condition 12 limits on pages 15-16 includes truck loading. We also note here that these descriptions omit torch cutting, an omission that we address elsewhere in these comments.

measures in the alternative and state that control shall be done "in accordance with" a required operating program, for which Condition 10 lays out minimum requirements, along with incorporation by reference of a December 2019 fugitive particulate operating program and a provision for updating the operating program and incorporating it into the permit;

- In **Condition 11**, a vague requirement to take "appropriate and necessary" reactive steps to address odor nuisances that do occur, without any monitoring/reporting to help prevent/detect odors prior to reaching nuisance levels or ensure that any mitigation taken is in fact working;
- In **Condition 12**, hours of operation limits and monthly/annual tonnage limits based on throughput and emission factor calculations that apply to various fugitive emission sources at the Ferrous Material Separation Process and Non-Ferrous Material Separation Process, including conveyor transfer points, vehicle loading (but not unloading) and stockpiles;
- In **Condition 13**, a restatement of Section 201.282 that confusingly includes a directive that sources "shall" conduct testing, followed by a permissive clause that IEPA "may" require an owner or operator to conduct testing and a clause that IEPA "shall have the right" to conduct tests at IEPA's request;
- In **Condition 14**, cross references to the methods for conducting monitoring and testing of various emissions sources set out in Sections 212.107 to 212.110, including methods for visible emissions and opacity;
- In **Condition 16**, a requirement that the source measure the PM, PM10, PM2.5, lead and manganese emissions from the Non-Ferrous Material Separation System within 60-days after the Hammermill Shredder first processes raw material; required methods for such testing, including use of Method 9 for opacity and Method 22 for visible emissions; requirements to submit a testing plan and written notification of testing; a clause discussing delay of testing; a requirement to submit a final testing report within 60 days of completing the testing; and a statement that satisfactory completion of the testing so as to demonstrate compliance is a prerequisite to issuance of an operating permit.
- In **Condition 19**, restatements of general recordkeeping requirements for Visible and Particulate Matter Emissions pursuant to Section 212.110(e) that a source retain testing records onsite for "at least three (3) years after the date a test is performed."
- In **Condition 21**, additional recordkeeping requirements, including keeping a copy of the fugitive particulate operating program and "a record of activities completed according to" that program, along with a requirement that all such records by "retained at a readily accessible location at the source or at least five (5) years from the date of entry" and shall be made available upon request by IEPA or U.S. EPA; and
- In **Condition 22**, a general requirement to give notice of testing for PM to demonstrate compliance and a requirement for submission of a report regarding periods during which

any process emission unit was in operation when air pollution control equipment was not in operation or was not operating properly upon request by IEPA.[82]

- In **Condition 25**, a requirement to submit a report to IEPA "[i]f there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit or otherwise."

The shortcomings in these provisions are as follows.

C. The Draft Permit Excludes Objective, Practicably Enforceable Control Measures, Monitoring and Reporting Necessary to Ensure Continuous Compliance with Applicable Requirements.

The Draft Permit recognizes that the source is subject to the prohibition on visible emissions beyond the fenceline, the 30% opacity limit, and the mass balance emissions limits contained in Condition 12, and should recognize that the source is subject to the prohibition on air pollution as well. However, the Draft Permit fails to ensure that these requirements will be met, and its broad provisions that lack the requisite specificity are grossly insufficient to protect the public and the environment from air pollutants as required by Federal and State law. In sum, the Draft Permit is utterly lacking in any control requirements and monitoring, recordkeeping and reporting requirements sufficient to ensure compliance with these limits by various "fugitive" sources on an ongoing, continuous basis.

a. Failure to ensure compliance with the prohibition on air pollution.

The general prohibition on air pollution is applicable to this proposed new source, and so IEPA must both acknowledge its applicability in the Draft Permit and include objective terms to ensure ongoing compliance with this requirement. As noted above, IEPA functionally applied the limit to the proposed GIII through its evaluation of air quality modeling impacts. Yet nowhere in the Draft Permit does IEPA recognize that the air quality modeling was conducted pursuant to the prohibition on air quality. Nor does the Draft Permit include any terms and conditions sufficient to demonstrate ongoing compliance with the prohibition, such as a requirement to comply with the assumptions in the air quality modeling (as noted throughout our comments, the Draft Permit's terms and conditions do not accurately reflect or otherwise ensure the emissions estimates and level of control used in the air quality modeling) or ground-based continuous monitoring of PM and HAPs.

b. Failure to ensure compliance with the 30% opacity limit.

The Draft Permit functionally excludes fugitive sources of emissions from the Section 212.123 opacity-based limit, despite the applicability of this provision to fugitive as well as process

[82] It is unclear why Condition 22 is written only to require notice of testing for PM to demonstrate compliance (and subsequent reporting only if requested by EPA) during periods when *process* units are operating but air pollution control equipment is not. This requirement to do testing of emissions during outage of control equipment should apply across the board to all sources of PM covered by various limits, including fugitive sources. Also, reporting of the results should be mandatory, not only on IEPA request.

emission units. Section 212.123 on its face applies to "All Other Emission Units" that are not otherwise subject to limits contained in Section 212.122 (which sets forth limits for certain fuel combustion units). *See* 35 IAC 212.123(a). The Act and State Implementation Plan, in turn, broadly define "emission unit" as follows: "any part or activity of a stationary source that emits or has the potential to emit any air pollutant," 415 ILCS 5/39.5, 35 IAC 211.1950, consistent with federal law. Nevertheless, the permitting materials collectively fail to apply and ensure compliance with the Section 212.123 opacity limit as applied to fugitive sources.

The Draft Permit generally states that the three Systems, and so by extension the material handling/fugitive sources associated with them, are subject to the 30% opacity limit and exceptions to it.[83] Yet the Draft Permit nowhere explicitly acknowledges the applicability of the 30% opacity limit specifically to emission units that are sources of fugitive emissions. Nor does the Draft Permit include any express requirement to do opacity testing of fugitive sources (or other process sources for that matter) to ensure compliance with this applicable limit. As discussed below, the fugitive particulate operating program that the Draft Permit incorporates by reference itself omits fugitive sources from the 30% opacity requirement.

c. Subjective control requirements.

With regard to control requirements, the Draft Permit states multiple control options in the alternative – without any basis for determining which control must be used, or which control will ensure compliance with which of the several applicable limits. The Draft Permit furthermore employs vague language to describe the frequency with which the controls must be used and the operating and other conditions under which a control or controls must be used. Overall the Draft Permit defers all specificity of fugitive emission control obligations to the fugitive particulate operating program.

For example:

- Condition 10(a) provides that "[a]ll storage piles of materials which are located within the source's property shall be sprayed with a surfactant *or* water, *or* treated by *an equivalent method*, in accordance with the operating program required by Condition 10(e)." (emphasis added).
- Similarly, Condition 10(b) states that "[a]ll normal traffic pattern access areas surrounding storage piles and all normal traffic pattern roads and parking facilities which are located on the source's property shall be paved *or* unpaved areas [sic][84] shall be treated with water, oils *or* chemical dust suppressants in accordance with the operating program required by Condition 10(e). All paved areas shall be cleaned *as needed* in accordance with the operating program required by Condition 10(e). All areas treated

[83] *See* Cond. 3.a and 3.b.
[84] We note that there appears to be a grammatical error in Cond. 10(b) – it may be that the provision omits an "and" between "unpaved areas" and "shall be treated."

with water, oils, *or* chemical dust suppressants shall have the treatment applied, *as needed*, in accordance with the operating program required by Condition 10(e)."

Conditions 10(c) (unloading and transport of materials collected by pollution control equipment) and 10(d) (various processes and material transfer points) follow this same format, listing controls in the alternative and leaving further explication, including choice among the controls and frequency of use and under what conditions, to the fugitive particulate operating program.

Nor does the Draft Permit create any substantive, objective standards by which Illinois EPA will judge whether the submitted fugitive particulate operating plan is in fact "designed to limit fugitive particulate matter emissions to ensure compliance with applicable limits and standards," as provided in Condition 10(e), including the prohibition on air pollution, the prohibition on visible emissions beyond the fenceline, and the 30% opacity limit. Again, rather than imposing objectively enforceable requirements, the Draft Permit simply and circularly restates the general regulatory requirement that the fugitive particulate operating program ensure compliance.

d. Virtually non-existent testing and monitoring requirements.

Furthermore, the only testing required by the Draft Permit to demonstrate compliance with the visible and particulate emissions limits for fugitives is a one-time, initial test supposedly conducted within 60 days of the Hammermill Shredder start-up, pursuant to Condition 16. "Supposedly" because Condition 16(e) discusses allowed delays of testing, with no factors that must be met to justify a delay, no requirement that IEPA consider those factors and approve or deny the delay, and no outer limit on how long the testing delay can last.[85] Condition 13, in turn, contains general and conflicting language that functions only as an assertion of IEPA's authority to require or itself conduct testing, rather than an actual, objectively enforceable requirement to in fact *do* any testing, beyond what's called for in Condition 16. Conspicuously missing from the Draft Permit is any requirement to conduct ongoing, periodic testing or monitoring of any sort to ensure continuous compliance over time and a variety of real-world conditions, and particularly with respect to fugitive dust sources, with the prohibition on air pollution, the prohibition on visible emissions beyond the fenceline, or the opacity limits.

e. Virtually non-existent recordkeeping and reporting requirements.

Nor does the Draft Permit contain sufficient recordkeeping and reporting requirements to ensure that IEPA can determine compliance, let alone so that members of the public can enforce the permit as a practical matter, a critical component of a practicably enforceable permit. The insufficiencies in control obligations and monitoring and testing in both the Draft Permit, as set out above, and the fugitive particulate operating program, as set forth below, carry through to

[85] Cond. 16(g) includes a statement that satisfactory completion of the initial test is a prerequisite to issuance of an operating permit, which in theory could set an outer boundary on delays. However, given IEPA's practice of sitting on permit applications for extended periods of time while it allows sources to continue operating, such as is the case with General Iron whose operating permit application has been in front of IEPA since 2005, we have concerns that testing may be delayed indefinitely.

render the recordkeeping requirements insufficient to create practicably enforceable permit terms. In addition, outside of the initial test report to IEPA, the Draft Permit requires no mandatory reporting whatsoever, such as a monthly or annual report certifying as to any exceedances or other irregularities or the lack thereof, other than (uncertified) event-related deviation reporting, leaving identification of exceedances or deviations entirely up to the applicant. Instead, the source need only hold various records in the event that IEPA or USEPA requests those records.

Nor are even the recordkeeping obligations practicably enforceable. Both Condition 19 and Condition 21 require that records be kept for "at least" a period of time, itself rendering the time period unenforceable at the upper end (is destruction of records after eight years a violation? Six years? Ten?). Moreover, these two conditions contain inconsistent lower bounds – three years and five years – with respect to specific records, including the fugitive particulate operating plan and records of activities conducted pursuant to it, again rendering the retention provisions unenforceable.

f. Improper automatic approval of the Fugitive Particulate Operating Program and post-hoc submission and approval of a Contingency Plan.

Finally, with respect to the fugitive particulate operating program, the Draft Permit contains an automatic-updating provision that both carries through the lack of objective standards from Condition 10(e) discussed above and further undermines the public review purpose behind the environmental justice process being undertaken by IEPA. Condition 10(i) provides as follows:

> The Fugitive Particulate Operating Program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with Condition No. 10(e) and (f) and shall be submitted to the Illinois EPA within thirty (30) days of such amendment. Any future revision to the Fugitive Particulate Operating Program made by the Permittee during the permit term is automatically incorporated by reference. In the event that the Illinois EPA notifies the Permittee that further information regarding the revision to the Fugitive Particulate Operating Program is needed, the Permittee shall respond to the notice within thirty (30) days of receipt of notification.

Not only does this provision again include no objective standards by which the (amended) fugitive particulate operating program will be evaluated, the public will have no opportunity to review and weigh-in on such amended programs. *See* Waterkeeper *Alliance, Inc. v. U.S. E.P.A.*, 399 F.3d 486, 498-504 (2d Cir 2005) (holding that EPA violated the Clean Water Act in adopting a rule that "effectively shield[ed]" site-specific permit conditions set out in nutrient management plans "from public scrutiny and comment…" and criticizing the agency for failing to provide for public participation in the development and enforcement of nutrient management plans because those plans "embody all the relevant 'site specific nutrient management practices,' [and thus] are a *sine qua non* of the 'regulation, standard, plan, or program' …established to regulate land application discharges"); see also *Sierra Club Mackinac Chapter v. Dep't of Envtl.*

Quality, 277 Mich. App. 531, 533-34 (Mich. Ct. App. 2008). This omission renders the Draft Permit unenforceable as a general matter, and also undermines IEPA's environmental justice policy by insulating subsequent fugitive particulate operating programs from public scrutiny.

Similarly, the Draft Permit improperly allows for the post-approval submission of the Contingency Plan required under Subpart U.

D. The March 2020 Fugitive Particulate Operating Program Fails to Acknowledge Applicable Legal Requirements, Creates Conflicts with the Draft Permit into Which it is Incorporated, and is Otherwise Unenforceable as a Practical Matter.

While the March 2020 Fugitive Particulate Operating Program ("FPOP") includes slightly more detail than the Draft Permit itself, it outright excludes applicable legal requirements and hence measures for ensuring compliance with them, and itself suffers from significant enforceability problems. As the Draft Permit relies on the fugitive particulate operating program to correct its own insufficiencies, these shortcomings again render the Draft Permit unenforceable as a practical matter and otherwise insufficient to ensure compliance with all applicable requirements. Specific shortcomings include, but are not limited to, the following:

a. *Exclusion of fugitive emission units from the 30% opacity limit contained in Section 212.123*. The application mischaracterizes Section 212.123 as follows: "Section 212.123(a) prohibits the emission of smoke or other particulate matter from any *process* source to exceed 30% opacity."[86] The FPOP repeats this misstatement of Section 212.123 by recognizing only the applicability of the prohibition on visible emissions beyond the fenceline contained in Section 212.301 to fugitive sources.[87] Nor does the FPOP include any mention of opacity limits as applicable to fugitive sources, let alone actual monitoring of opacity using Method 22 at each source of fugitive emissions to ensure compliance with this applicable provision.[88] Indeed, the word "opacity" is only used three times in the operating program, in each case to explain that certain point sources that do have opacity limits are not in fact fugitive sources.[89] This omission/mischaracterization creates a conflict with the Draft Permit, which as discussed above appears to recognize the applicability of 212.123 to fugitive emission units.
b. *Failure to recognize the applicability of the prohibition on air pollution contained in 415 ILCS 5/9(a).* Similarly, the FPOP nowhere recognizes the applicability of the prohibition on air pollution set forth in 415 ILCS 5/9(a), either to the facility as a whole or to fugitive emissions in particular. To the contrary, the FPOP characterizes itself as a "voluntary" program because the source is not otherwise covered by the express requirement to

[86] September 2019 Application at 39 (emphasis added).
[87] FPOP at Section 1.2, "Illinois Environmental Protection Agency – Fugitive Emission Regulatory Requirements."
[88] *See, e.g.*, FPOP at Section 3.1(A)(i), describing visual observations of the raw material unloading and handling areas for the presence of Visible Emissions and excluding any opacity monitoring.
[89] *See* FPOP at Section 1.3, "Definition of Visible Emissions"; Section 4.5.2, "Shredder Emission Control System"; and Section 4.5.3, "Non-Ferrous Processing Building Baghouse."

prepare such a plan contained in Section 212.302. As a result, the FPOP creates a conflict with the Draft Permit with respect to the applicable legal requirements and on this basis alone must be amended. Moreover, even assuming that the FPOP contained practicably enforceable limits on fugitive emissions, which it does not, nowhere does the FPOP attempt to demonstrate how the proposed measures in fact will ensure that fugitive sources will not cause levels of air contaminants that are injurious to human, plant, or animal life. The program solely focuses on the prohibition of visible emissions beyond the fenceline, which is at best a very rough proxy for PM or air toxics particles in the air. Experience at other nearby facilities like KCBX and S.H. Bell (as discussed elsewhere in these comments) demonstrate that continuous ambient air monitoring is necessary to ensure that facilities are not causing or contributing to levels of PM and/or air toxics that exceed the NAAQS or other health-based thresholds, in particular with respect to fugitive emissions.

c. *Mischaracterization of certain emission sources within the shredder enclosure as "fugitive" sources*. The FPOP mysteriously claims that the three conveyors *located within the shredder enclosure* and *uncaptured emissions from the shredder itself* constitute "potential sources of fugitive emissions,"[90] in contrast to shredder emissions within the enclosure that in fact end up captured by the hood setup. This claim ignores that such conveyor emissions and shredder emissions could "reasonably pass through a stack, chimney, vent, or other functionally equivalent opening," *see* 40 C.F.R. 52.21(b)(20), such as if GIII had selected a fully enclosed shredder like the METSO design discussed elsewhere in these comments. Indeed, the "[t]he existence of collection technology in use by other sources in a source category creates a presumption that collection is reasonable."[91]
d. *Repeated use of "as needed" without further articulation of objective conditions that must be considered in determining when use of a particular control is required*. *See, e.g.*, FPOP at p7 describing identification and control of Visible Emissions from raw material unloading and handling.
e. *Failure to specify which specific sources/areas will be subject to which described controls*. *See, e.g.*, FPOP at p8, stating that for Material Transfer Points, Dust Boss water atomizers "will be positioned to mist the facility areas with the highest potential for fugitive particulate," without further defining which areas these are, and that "[s]elect conveyors that transfer streams containing significant amounts of light material that could

[90] *See* FPOP at Section 3.2, "Shredder Enclosure."
[91] *See* Ex. 42, EPA, Memorandum from John S. Seitz, Classification of Emissions from Landfills for NSR Applicability Purposes (Oct. 21, 1994), available at: https://www.epa.gov/sites/production/files/2015-08/documents/emsnldfl.pdf; *see also* Ex. 43, EPA, Memorandum from Thomas C. Curran to Judith M. Katz, Interpretation of the Definition of Fugitive Emissions in Parts 70 and 71 (Feb. 10, 1999) (interpreting the same definition of fugitive emissions in the context of Title V rather than NSR in order to find that emissions from certain printing industry and paint manufacturers could reasonably be collected and are therefore not fugitive), available at https://www.epa.gov/sites/production/files/2015-07/documents/fug-def.pdf.

easily become windblown will be equipped with covers," without identifying which of the many conveyors at the three systems these are.

f. *Failure to include available best management practices for fugitive dust minimization*. *See, e.g.*, FPOP at p9, stating that "with the exception of the … ASR stockpile, all stockpiles identified in facility emission estimates will have solid partitions on three sides." We are extremely concerned that the applicant appears to be proposing to hold ASR of all sorts in entirely open piles, including piles within a very short distance of the Calumet River. Such open storage ignores that enclosure of such piles, including full enclosure as well as less protective covered enclosures designed to prevent material from becoming windborne[92], is an available control option. Omission of these controls is disturbing considering both the relatively high toxicity of ASR and ASR's propensity to become windborne due to its low density, and especially so given the track record of reported ASR dispersal into the community from the current General Iron site. As set forth elsewhere in these comments, such failures with respect to ASR render the Draft Permit insufficient to ensure compliance with all applicable laws and regulations. See also FPOP at p10, stating that "[t]he majority of the facility is paved with concrete *or* asphalt" (emphasis added), without acknowledging that the use of concrete for paved roadways is itself an important dust control measure as compared to using simply asphalt for paving, as discussed elsewhere in these comments.

g. *Failure to include objective measures of frequency, timing, intensity and other measures of control use by which the actual use of a control will be evaluated*. *See, e.g.*, FPOP at p8, describing simply that Dust Bosses will be positioned in various areas and that "[t]he water applied by the Dust Boss will increase the moisture content of the material being transferred to minimize the potential for Visible Emissions," without describing the various moisture contents that need to be achieved for control of dust from various materials, or the duration and intensity of Dust Boss use to achieve such moisture levels. *See also* FPOP at p9, noting that Dust Boss will "mist stockpiles if Visible Emissions are observed," which fails to require preemptive wetting by Dust Bosses or other wetting apparatus to prevent visible emissions in the first instance (such preemptive wetting is

[92] CDPH's June 2020 large recycling facility regulations require substantial control of ASR, in contrast to IEPA's lax approach, *see* Ex. 44, CDPH Large Recycling Facility Rules at Section 4.4.2, available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/CDPH%20Rules%20for%20Large%20Recycling%20Facilities_Issued%20June%205,%202020.pdf. IEPA should treat CDPH's regulations as the floor for what must be required at GIII in this specific permit, consistent with CDPH's statements in adopting the Rules that it retains the authority to impose more stringent controls in individual cases as needed to ensure protection of the environmental and public health. CDPH's general fugitive dust regulations, in turn, require full enclosure of petcoke and manganese piles; rules adopted by the South Coast Air Quality Management District ("SCAQMD") similarly require full enclosure of petcoke piles. *See* Ex. 45, CDPH Rules for Control of Emissions from Handling and Storing Bulk Materials at Sections 4.0 and 5.0, available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/Control_EmissionsfromHandling&StoringBulkMaterials_January2019.pdf, and Ex. 46, SCAQMD Rule 1158 at Section (d)(2), available at http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1158.pdf. That ASR can reasonably be stored in a full enclosure also renders emissions from ASR piles point source emissions, not fugitive emissions.

particularly critical for compliance in areas like the barge loading/riverfront area, where dust would be created essentially at the property boundary with the River and where, as discussed in these comments, RMT has already shown it cannot control fugitive emissions). *See also* FPOP at Section 4.3, page 15, vaguely stating that "[t]he deployment of Dust Bosses will be modified as may be required based on Facility operating experience." *See also* FPOP at p3, noting that "the *vast majority* of the Facility is paved with concrete *or* asphalt pavement. The *limited* area that is not paved is covered with compacted asphalt grindings *or* similar materials" (emphasis added) and failing to provide any diagram of which paving materials are used in which specific areas. *See also* FPOP Section 4.4, page 15, described that paved and unpaved areas are "*routinely* treated using water application and sweeping unless observed pavement conditions indicate it is unnecessary, such as following a precipitation event" and that "application of water will be limited by *near* freezing temperatures," (emphasis added). *See also* Section 4.4.1, page 15, stating that a water truck "will be used to *periodically* apply water" and Section 4.4.2, using similarly vague language to describe sweeping of paved areas. We note that the instances of vague language such as "routinely," "periodically," "on a regular basis," etc., in the operating program are too numerous to list here.

h. *Failure to require enforceable testing and/or monitoring to ensure that the facility in fact employs controls for fugitive emissions as necessary to comply with applicable limits*. Similar to the failure to provide objective standards by which to gauge proper use of a control, the FPOP fails to objectively describe the specific conditions under which the limited visible emissions testing will occur. *See e.g.*, FPOP at p8, stating that visual observations will be conducted "three times per day," without specifying when, under what operating and weather/atmospheric conditions, and for what duration such observations will occur. Without such specificity, the operator could conduct three back-to-back observations at locations relatively far from the fenceline during non-operational times at low wind speeds and claim compliance with the express terms of this supposed monitoring requirement. The fugitive particulate operating program also contains a puzzling provision that describes additional visible emissions identification by "other employees" who are "trained to identify Visible Emissions," but whose observations will NOT be recorded in the same format as the visible emissions monitoring by "designated trained personnel." *See* FPOP at Section 4.1.1. Also as discussed above, the fugitive particulate operating program ignores the applicability of both the 30% opacity limit and the prohibition on air pollution, and so omits any testing and/or monitoring to ensure compliance with these limits.

i. *Failure to require sufficient recordkeeping and reporting*. Similar to the control, testing and monitoring requirements, the recordkeeping and reporting requirements in the operating program are insufficient to ensure compliance with the applicable limits on air pollution, visible emissions, and opacity. Unsurprisingly given the vagueness of the monitoring requirements themselves, none of the logs require description of the operating

conditions or atmospheric/weather conditions at the time of observation so as to gauge whether deployment of the controls was in fact done during conditions that are likely to generate fugitive dust. Nor does the operating program require any additional reporting beyond the virtually non-existent reporting required by the Draft Permit.

In sum, neither the Draft Permit nor the fugitive particulate operating program nor the yet-to-be-submitted Contingency Plan contain any practicably enforceable limits on fugitive emissions. Drafting objectively enforceable fugitive dust permit requirements (not to mention objectively enforceable fugitive dust regulations) that demonstrate compliance with the prohibitions on air pollution and visible emissions beyond the fenceline, as well as the 30% opacity limit, is entirely feasible, as demonstrated by the efforts of CDPH and SCAQMD.[93] Nor need or can the applicant and IEPA wait until the facility is actually operating to cure these many shortcomings: the vast majority of the vague and subjective conditions in the Draft Permit and operating program can and should be addressed now in order to render the Draft Permit practicably enforceable. (We also restate our concern that IEPA's track record of substantially delaying issuance of operating permits – such as the 15 years that it has sat on General Iron's operating permit – render a commitment to address issues in the operating permit meaningless).

For example, and as discussed in more detail elsewhere in these comments, the reporting requirements can be increased to regular, certified reports that are made publicly available. Monitoring and testing can be made continuous, ongoing obligations accompanied by additional specificity as to the operating conditions and atmospheric/weather conditions under which they must take place. The applicant can include specificity on the operations that are expected to generate more fugitive emissions, and specificity on the controls to be deployed to these areas and specifics on how they will be deployed. And as taken up below, control can be built into the front end design instead of relying on subjective work practice standards that fail in fact to be employed or to otherwise ensure control and compliance with limits over a range of real-world conditions. We note that a number of the enforceability issues in the Draft Permit – such as the lack of ongoing testing and monitoring requirements, and the virtually nonexistent reporting obligation – extend to process sources as well. For these reasons, the Draft Permit cannot issue as written.

IV. IEPA Cannot Issue the Draft Permit Without Substantial Revision to Create Objective Control and Compliance Obligations that In Fact Result in Robust, Enforceable and Continuous Control of Facility Emissions.

Throughout these comments, we have provided numerous reasons why the Draft Permit cannot be issued as written, including the companies' long and ongoing history of noncompliance with the Act with respect to numerous relevant sources/operations, including but not limited to the

[93] *See* CDPH and SCAQMD rules cited above; see also Ex. 47, S.H. Bell, Fugitive Dust Plan, November 2017, available at https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/SH_BellFugitiveDustPlan_Nov2017.pdf.

shredder itself, roads, piles, transfer points, and vehicle loading[94]; deficient and unenforceable control obligations; and insufficient testing and monitoring, in turn further weakened by poor recordkeeping and reporting, compounding enforceability issues. Each of these justifications stands on its own requiring denial, postponement, and/or significant revision of the Draft Permit. Collectively, they showcase how far IEPA has to go to ensure it is protecting the health and wellbeing of Illinois residents in this environmental justice community. As stated at the public hearing, this is petcoke all over again.

In this section, we provide additional comment on the various sources and issues in the Draft Permit that need to be addressed before IEPA approves any construction permit for GIII, as well ways that IEPA must revise the Draft Permit to address them.[95] In addition to the prior discussion of IEPA's authority under Section 5/39(a), we reiterate here that IEPA has broad authority under that provision to "impose such other conditions as may be necessary to accomplish the purposes of this Act" that are not inconsistent with the regulations promulgated by the Illinois Pollution Control Board. IEPA should embrace this authority to produce a more just outcome consistent with its commitment to environmental justice and its environmental justice policy. We also note that to the extent the application failed to provide information needed for this additional review and revision, IEPA must declare the application incomplete.

A. IEPA Must Revise the Estimated Emissions for the Hammermill Shredder and Strengthen Control Requirements, Testing, Monitoring and Recordkeeping and Reporting Obligations for It, and Modify Air Quality Modeling Accordingly.

The Draft Permit cannot issue as proposed because the applicant's and IEPA's emissions estimates for the proposed hammermill shredder, hood and controls significantly underestimate the likely actual emissions from this configuration, due to their failure to account for substantial uncontrolled emissions that will exit the partially enclosed shredder and escape the hood prior to the pollution controls. This underestimation of actual shredder emissions also renders unsupported the air toxics modeling on which the Draft Permit is based, as the modeling relies on the artificially high level of control claimed by the applicant. It also provides further grounds for requiring PM_{10} modeling to ensure protection of the NAAQS.

The high levels of control claimed by the applicant might be supportable if GIII were employing a fully enclosed design with a metal bonnet for ensuring shredder emissions route to the control

[94] In this section, we rely on the history of control at General Iron and the RMG facilities from two distinct viewpoints: (1) as this history pertains to their specific noncompliance, and (2) as general data on experience in the industry with the use and effectiveness of the proposed controls. With respect to this second viewpoint, such field experience with controls is routinely relied upon by permitting officials in gauging which controls to require, their expected effectiveness in fact, and what limits to include in a permit, for instance in the Best Available Control Technology analysis. This information similarly is relevant to IEPA's permitting decision here, regardless of whether IEPA determines to adhere to its exceedingly narrow interpretation of the agency's authority to consider past/ongoing noncompliance in the permitting context.

[95] Expert engineering analysis for these comments was provided by Dr. Ranajit Sahu. *See* Ex. 48, Resume of Dr. Ranajit Sahu, PH.D, QEP, CEM, January 2020.

device, such as the METSO Landsmann ZZ design being deployed in Europe.[96] However, the application describes the shredder as being located within a "partial enclosure with… a vented metal roof," outfitted with a "capture hood" for routing shredder emissions to the RTO and scrubber (with the RTO itself being transferred from the General Iron site, noting that such direct transfer is now impossible due to the RTO explosion).[97] While the applicant has claimed Trade Secret protections for the design renderings of the shredder – a claim that is in conflict with U.S. EPA's policy for treating "emission data" as subject to public disclosure notwithstanding trade secret claims[98]— resulting in IEPA's redaction of the design information from the application, GIII did submit a rendering of the shredder in the Chicago zoning process that confirms the roof will have a significant grate at the top and multiple openings along the bottom[99].

Given these openings and the proposal to use a flexible hood to route emissions to the controls, it is incorrect to assume, as the applicant and IEPA do, that all of the PM and VOM that will be generated due to the violent shredding operations will be contained and directed to the particulate control equipment and RTO. Some portion of the pollutants generated will escape the enclosure and capture setup as emissions from the shredding operation as a whole, in spite of the water spray that is typically used within the shredder enclosure.

The capture efficiency of the rubber-lined conceptual enclosure (in combination with wet suppression for PM) is unlikely to exceed 50% as an engineering judgement. It could be even lower given the high degree of wear of this type of enclosure over time, which makes the

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[96] *See, e.g.*, Ex. 49, R&R Beth, "Seattle & Iron shredder dedusting system – pressure at bonnet and airflow references," at p2 (rendering of a METSO car shredder in Gotzis, Germany). The METSO Lindemann ZZ series is described by METSO as "state-of-the-art," *see* Ex. 50, METSO website page for Lindemann ZZ, available at https://www.metso.com/products/shredders/metal-shredders/lindemann-zz-shredders/. We present this information not as a full endorsement of the METSO design, but to illustrate that significantly more protective shredder designs employing full enclosure are in fact available for this new facility. To the extent that such shredders require a cleaner, more specific feedstock on the front end than the design proposed by the applicant, IEPA should require enforceable feedstock sorting and cleaning as needed to enable use of better controlled shredder designs.

[97] Application at Section 2.1.

[98] The Clean Air Act provides that "emission data" "shall" be disclosed, regardless of whether it would otherwise be granted trade secret protection. *See* 42 U.S.C. § 7414(c). Federal regulations broadly define "emission data" as any "[i]nformation necessary to determine the identity, amount, frequency, concentration, or other characteristics . . . of any emission which has been emitted," or information necessary to determine the characteristics of any emissions which "under an applicable standard or limitation" a source may emit, or even "[a] general description of the location and/or nature of the source." 40 C.F.R. § 2.301(a)(2)(i). "Emission data" is to be interpreted comprehensively, to fulfill the public purposes of the Act and regulations. In the context of a federally-enforceable synthetic minor permit, IEPA should ensure that its interpretation of trade secret protections comports with this longstanding federal interpretation of emission data. Here, the shredder design – in particular the location and extent of openings in the enclosure – is important information for accurately assessing shredder emissions and should be disclosed to the public. The failure to disclose renders the record on which the Draft Permit is based incomplete and the shredder emissions estimates further unsupported.

[99] *See* Ex. 51, excerpts from Exhibit C to GIII's application to the City of Chicago Zoning Board of Appeals for a Special Use Permit, obtained through a Freedom of Information Act Request to the Chicago Department of Planning and Development (application stamped as received March 5, 2019) (full document available upon request). While we obviously do not know the design and level of detail in the shredder and other systems renderings provided by the applicant to IEPA, we note that the provision of these renderings to the Department of Planning and Development apparently without trade secret claims, and the Department's subsequent dissemination of the renderings in response to a FOIA request, appear to further undermine the trade secret claims in this permit proceeding.

effectiveness over the long-term even more questionable, and the potential for irregular use of wet suppression (see below with respect to General Iron's and RMG's track record with wet suppression). Moreover, this relatively low capture efficiency of the hood calls into question the applicant's assertion that the VOM 81% control requirement in 35 IAC 218 Subpart TT does not apply, and similarly if the requirement does apply, whether the control scheme proposed in fact achieves at least the required 81% control.

Adding to this engineering assessment, significant field evidence exists that the "capture" hood does not in fact achieve the high level of capture and thus control claimed by the applicant and assumed by the Draft Permit. The hood structure at the current General Iron location has been reported as allowing significant emissions to escape before they enter the control devices. CDPH inspectors have observed "untreated emissions" and sometimes smoke escaping the top and sides of the shredder on numerous occasions.[100] Indeed, CDPH inspectors have noted that the emission controls do not appear to be working because of the flawed design of the shredder, and that the shredder has a hood but is not fully enclosed[101], causing emissions to escape the shredder before the treatment process and rendering the RTO and scrubber ineffective for those escaped emissions.[102] As one inspector stated in January 2020, "[b]eing able to observe emissions escaping the shredder leads me to believe that the equipment capturing the emissions is insufficient."[103] In addition, inspectors have noted emissions from the RTO[104] and excessive emissions from the scrubber stack.[105]

In order to ensure achievement of the very low level of emissions claimed by the applicant and assumed/relied upon in the Draft Permit, IEPA must require GIII to employ a fully enclosed shredder design with no openings, such as the METSO design described above and being deployed in Germany and Belgium. While add-on controls to a shredder enclosure with significant openings may have been appropriate for an existing shredder like the General Iron facility (though as noted above, such a design likely is causing violations with several state and local air requirements at that facility), there is no justification for employing such a design at an entirely new facility to be located in an already-overburdened environmental justice community.

If the applicant and IEPA determine such a fully enclosed design is infeasible, they must fully explain this determination on the record and provide further measures to continuously and

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[100] *See* Ex. 23, CDPH Inspection Reports for 1909 N. Clifton: Inspection ID 11152408 (Mar. 26, 2020); ID 11124169 (Mar. 20, 2020); ID 10929879 (Feb. 11, 2020); ID 10881195 (Jan. 31, 2020); ID 10836335 (Jan. 23, 2020); ID 10767158 (Jan. 10, 2020); ID 10746578 (Jan. 7, 2020); ID 10716916 (Dec. 31, 2019); ID 10708652 (Dec. 29, 2019); ID 10706274 (Dec. 27, 2019); ID 1494955 (Dec. 18, 2019); ID 10639264 (Dec. 11, 2019); ID 10573289 (Dec. 2, 2019); ID 10462386 (Nov. 15, 2019); ID 10292164 (Oct. 28, 2019); ID 10208629 (Oct. 18, 2019); ID 10461347 (Nov. 15, 2019); ID 1010782 (Oct. 7, 2019); ID 10039135 (Oct. 1, 2019); ID 10047093 (Oct. 1, 2019); ID 9802564 (Sept. 5, 2019); ID 9495131 (Aug. 1, 2019); ID 493751 (Apr. 29, 2013); ID 457763 (Oct. 31, 2012).
[101] *See id.,* Inspection Reports: Inspection ID 10836335 (Jan. 23, 2020); ID 10767158 (Jan. 1, 2020); ID 10708652 (Dec. 29, 2019); ID 10461347 (Nov. 15, 2019); ID 10047093 (Oct. 1, 2019).
[102] *See id.,* Inspection Reports: Inspection ID 10746578 (Jan. 7, 2020); ID 10716916 (Dec. 31, 2019); ID 10706274 (Dec. 27, 2019); ID 1494955 (Dec. 18, 2019).
[103] *See id*., Inspection Report Inspection ID 10836335 (Jan. 23, 2020).
[104] *See id.,* Inspection Reports: Inspection ID 11001377 (Feb. 26, 2020); ID 1501827 (Jan. 30, 2020); ID 1469863 (Jan. 16, 2020); ID 1451164 (Nov. 5, 2019); ID 9895600 (Sept. 16, 2019).
[105] *See id*., Inspection Report ID 9935298 (Sept. 19, 2019).

stringently control the emissions that will escape the shredder, the enclosure, and the hood capture setup as proposed. In particular, additional VOM measures may be needed in order to meet Subpart TT's 81% control requirement (additional feedstock cleaning measures are one additional front end VOM control that may significantly reduce VOM from the shredder and so that should be considered). Such measures must be accompanied by robust recordkeeping and mandated reporting obligations to ensure the continuous and proper use of any "work practice" measures required for emissions that will escape the enclosure and capture/control setup.

Monitoring of uncontrolled emissions must be included along with this design as well to ensure actual use of such measures and compliance with the applicable requirements, including the prohibition on air pollution. Such monitoring should consist of ground-based continuous VOM monitoring, such as with the AERARAE monitors previously deployed by CDPH to gauge VOM levels at the General Iron facility, and ground-based continuous PM monitoring (similar to the fenceline monitoring required by CDPH under its local rules for fugitive emissions from material handling and for large recycling facilities,[106] positioned specifically to gauge uncontrolled PM from the shredder), as well as FLIR monitoring as discussed elsewhere in our collective comments. The Draft Permit should require at least monthly, and preferably real-time, reporting of this monitoring data to be made public on IEPA's website, for overall enforceability, as well as due to both the poor performance of the hood at the General Iron facility and the proposed location of the proposed new facility in an environmental justice community. In addition, the Draft Permit should require upfront provision of "stack" testing protocols for the Hammermill Shredder, and mandatory repeat testing on a quarterly, with requirements to do regular feedstock characterization testing and conduct emissions testing with significant changes in the feedstock. Such mandatory repeat testing is also needed given the likely deterioration of the hood over time.

As noted above, it is not clear whether the proposed less protective partially-enclosed-shredder-and-hood design comports with VOC requirements as a threshold matter. If the applicant and IEPA determine that it does and persist with the proposed less protective design without additional PM controls, the applicant and IEPA must revise the emissions calculations for the shredder and all aspects of the permit materials that rely on them, including the air quality modeling demonstration. With respect to estimating PM emissions for purposes of PTE and air quality modeling, little test data is available on PM emissions from uncontrolled autobody shredders. The only data available date back to the late 1990s, contained in an industry report (Institute of Scrap Recycling Industries, ISRI) not publicly available. However, using that industry data, the Ohio EPA has estimated that uncontrolled PM emissions from a car shredder would be 39.06 tons/year for a shredder, Omnisource, with a throughput of 720,000 tons/year of auto bodies.[107] In the present instance, scaling to 1,000,000 tons/year of operation expected at GIII at its new location, the uncontrolled PM emissions are expected to be 54.25 tons/year, rounded to 54 tons/year. Speciation of this into PM10 and PM2.5 could be attempted but with no

[106] *See* CDPH's regulations discussed and cited above.
[107] *See* Ex. 52, Ohio EPA, Draft Air Pollution Permit-to-Install and Operate, Permit Number P0103630, July 31, 2008 ("Omnisource Permit").

real test data or other support. For now, we assume that all these uncontrolled PM emissions are total PM as well as PM10 and PM2.5.

Based on the above, our engineering assessment supports a value of 27 tons/year as uncontrolled PM/PM10/PM2.5 emissions for the shredding operation. The balance of the emissions – *i.e.*, 27 tons/year – are assumed to pass through the PM pollution control device as well as the RTO. A control efficiency of 90% of the emissions that in fact are captured and routed to the RTO and scrubber would be appropriate based on prior engineering experience, especially assuming typical maintenance of the PM control device and some additional PM generation in the RTO. Overall, the PM emissions from the shredder are calculated to be roughly 29.7 tpy for purposes of PTE and air quality modeling.

In addition to revision of the emission estimates, controls and compliance measures for the shredder discussed above, the Draft Permit must be revised to include monitoring to ensure compliance with the operational hours limit on the shredder. Condition 12(a)(i) contains hours of operation limits for the various systems/sources, including the hammermill shredder. However, the Draft Permit lacks monitoring and recordkeeping/reporting requirements to ensure compliance with and enable enforcement of these limits on the hours of operation. With respect to the shredder, noise monitoring can and should be used to track shredder operations on a continuous basis for purposes of determining compliance with the limit on hours of operations. Conversely, without such monitoring, the limit on hours of operation are unenforceable, further rendering the emissions calculations and air quality modeling unsupported.

Such monitoring is further warranted given the numerous complaints by residents of Lincoln Park that General Iron began operations early in the morning before its permitted start time.[108]

B. IEPA Must Impose Conditions to Prevent Auto Fluff from Migrating Offsite.

IEPA has a duty to ensure that the proposed facility will not cause or threaten air pollution, which encompasses airborne pollutants like auto shredder residue. Also as described elsewhere in our collective comments to IEPA and in our rulemaking comments to CDPH, auto shredder residue ("ASR" or "auto fluff") is a potential hazardous material, is highly prone to becoming windborne, has been documented escaping numerous metals recycling facilities across the country, and has been identified as the source of soil contamination in communities surrounding metals recycling facilities.[109] In its airborne state, ASR poses a number of health risks to people,

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[108] Ex. 27, CDPH Complaints for 1909 N Clifton: Complaint ID 600794213 (Mar. 9, 2020); ID 600793596 (Mar. 6, 2020); ID 600792608 (Mar. 4, 2020); ID 600792219 (Mar. 3, 2020) ("Loud crushing noise awakened at 2:45 AM and continue until 4 AM very disturbing also horrible gassy odors that make us choke and cause a headache"); ID 600789502 (Feb. 24, 2020) ("They are crushing cars at 4 AM creating loud noise and waking up the neighbors" and "emitting a toxic gas odors that overwhelms in my house"); ID 600760890 (Dec. 2, 2019); ID 600747372 (Nov. 4, 2019); ID 600738064 (Oct. 21, 2019); ID 600665670 (June 26, 2019); *see also* Ex. 23 CDPH Inspection Reports for 1909 N Clifton: Inspection ID 11154818 (Mar. 26, 2020); ID 11154697 (Mar. 26, 2020); ID 11154566 (Mar. 26, 2020); ID 11152408 (Mar. 26, 2020); ID 11154864 (Mar. 26, 2020); ID 11001377 (Feb. 26, 2020); 10461347 (Nov. 15, 2019); 7134833 (Oct. 11, 2018); 1204508 (Jan. 25, 2018); 3247181 (June 20, 2017); ID 3180215 (June 12, 2017); ID 7743 (Oct. 16, 2013).

[109] *See* Ex. 5, NGO Large Recycling Rule Comments, at pp. 4, 16 (footnote 46), and 19-21; *see also* Ex. 53, Supplemental Comments on Proposed Rules for Large Recycling Facilities, submitted by Southeast Environmental

including eye irritation, allergic reaction, and cancer.[110] Again this record alone warrants IEPA including more stringent measures for controlling air releases of auto fluff into the environment, which in this case includes the Calumet River to the West (roughly 500 feet from the proposed ASR open storage area based on facility diagrams in the application) as well as the neighboring residential community.

Here in Chicago, we again see General Iron's poor track record, which provides further support for requiring stringent control of ASR. CDPH has observed ASR on nearby properties and across the river from General Iron, including several recent instances in 2020, and as far back as 2012.[111] In 2020, fugitive auto fluff from the facility led CDPH to issue several Notices of Violation. Lincoln Park residents have reported finding auto fluff a significant distance from the General Iron facility.

Despite this record, as noted here and elsewhere in our collective comments, the Draft Permit and fugitive particulate operating program are shockingly silent on controls for ASR, and appear to allow open piles of ASR within a short distance of the Calumet River and roughly a half mile from Rowan Park and Washington High School. IEPA should instead require full enclosure of all ASR handling, including conveyors, transfer points, and piles. Regular (at least monthly) testing of ASR should also be required to characterize the content of the material, which may vary significantly with feedstock. If full enclosure of ASR storage and handling is determined infeasible, IEPA must at minimum require significant enclosure of these operations (such as with roofed and sided enclosures), robust and objective dust suppression measures, stringent recordkeeping and reporting for any such suppression measures, and regular moisture content testing and recordkeeping for ASR of sufficient frequency to demonstrate continuous compliance over a range of ASR content and handling conditions. While our primary concern in this proceeding is with ASR in its airborne state, we note that robust enclosure of ASR can also prevent or minimize water contamination and soil contamination from ASR, providing further justification for requiring such control measures here.[112]

Task Force, the Chicago South East Side Coalition to Ban Petcoke, Little Village Environmental Justice Organization, and the Natural Resources Defense Council, to the Chicago Department of Public Health on Dec. 19, 2019 and exhibits 6 to 10 to these comments; Ex. 54, Comments on Amended Rules for Large Recycling Facilities, submitted by Natural Resources Defense Council on May 22, 2020, pp. 5-6, available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/Additional%20Comments%20from%20NRDC%20(witth%20attachment%20but%20without%20Excel%20exhibits)%205-22-20.pdf.

[110] *See, e.g.*, Ex. 55, Gerdau, Material Safety Data Sheet, Material Name: ASR, available at https://www2.gerdau.com/sites/default/files/downloadable_files/Automobile%20Shredder%20Residue%20_ASR_%20MSDS%20_NA_%202-15-12.pdf.

[111] Ex. 23, CDPH Inspection Reports for 1909 N. Clifton: Inspection ID 11124169 (Mar. 20, 2020); ID 10929879 (Feb. 11, 2020); ID 10767158 (Jan. 10, 2020); ID 10716916 (Dec. 31, 2019); ID 1494955 (Dec. 18, 2019); ID 9495131 (Aug. 1, 2019); ID 450164 (Aug. 9, 2012); ID 416450 (Jan. 26, 2012).

[112] We strongly urge IEPA to require stringent controls of ASR via its waste and stormwater authorities, and to consider all modes of ASR release and so impacts in its evaluations.

C. IEPA Must Impose Objective, Stringent Measures to Control Fugitive Dust from Other Sources Such as Piles, Transfer Points, Vehicle Loading/Unloading, and Roadways.

Metals facilities, like other material handling facilities, have issues with controlling fugitive dust from general material handling, including from piles when worked by construction vehicles, from vehicle loading and unloading, from conveyor drop points, and so on.[113] There is anecdotal understanding in the material handling industry that workers do not like using misting cannons and water spray trucks, given that they can be soaked in the process as well. In other instances, lack of sufficient mobile wetting or other dust suppression equipment to address all dust-generating activities at a facility results in a degree of control at one source while another source goes uncontrolled in another area of the facility. Or mobile dust suppression equipment is not used at all, due to the delays its limited availability can create for facility operations. These factors lead to general underuse of wetting and other dust suppression methods, compounded by inadequate monitoring, recordkeeping and reporting requirements that fail to ensure that dust suppression controls are in fact used to prevent and otherwise control fugitive dust.[114] Nor are wet or other suppression systems particularly effective at dust control under a full range of conditions. In addition to the temperature limitations of some such controls, wind conditions including wind direction can significantly undermine their effectiveness, including at levels below the regulatory 25 mph wind threshold.[115] Similar problems with regular maintenance and dust control arise with roadways in particular in this industry, a general engineering issue due to the intensity of heavy vehicle use on plant roads and the stress put on paving surfaces.

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[113] *See* Ex. 5, NGO comments to CDPH on Rules for Large Recycling Rules, at 13 (describing photos of brown dust from vehicle working of piles at metals facilities in Houston). *See also* Ex. 56, Scott McGlothlin, Clearing the Air, Recycling Today, February 2, 2011, available at https://www.recyclingtoday.com/article/january-scrap-metal-supplement-clearing-the-air/ (describing various material handling operations at metals recycling facilities and their potential to create dust).

[114] *See, e.g.,* Ex. 57, Comments of NRDC, SETC, and the Coalition to Ban Petcoke to CDPH, Watco Transloading, LLC, Variance Request, October 16, 2017, at pp. 21-22 (describing CDPH inspection reports of the precursor Kinder Morgan facility, where inspectors logged numerous failures such as lack of road watering, poor logging of water application, and creation of dust by truck wheels, including track-out), available at https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/PubCom_NRDC_SETF_SSCBP_ComWatcoVarReq_10162017.pdf; Ex. 58, Comments of the Coalition to Ban Petcoke, SETF, and NRDC to CDPH, Watco Terminal and Port Services April 24, 2019 Variance Request, at pp3-4 (describing ongoing failures to control dust at the Watco facility, including particularly egregious dust issues and failures to use control equipment at one loading building), available at https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/PublicCom_NGOCom_Watco_VarReq_6282019.pdf; Ex. 59, CDPH Inspection Reports for the Kinder Morgan and Watco facility at issue in these variance proceedings. *See also* Ex. 37, USEPA, In the Matter of Chicago Rail and Port, LLC, Notice of Violation EPA-5-18-10, April 20, 2018, available at https://www.epa.gov/sites/production/files/2018-06/documents/chicago_rail_and_port_llc_nov.pdf; Ex. 60, USEPA, In the Matter of KCBX Terminals Company, Notice of Violation EPA-5-15-08, April 28, 2015, available at https://www.epa.gov/sites/production/files/2015-04/documents/kcbx-nov-20150428.pdf.

[115] *See, e.g.*, Ex. 23, CDPH Inspection Reports for 1909 N Clifton, Inspection ID 11491696 ("Two misting cannons (West side of the shredder and East side of the shredder) were deployed during this inspection but with the wind direction, it did not seem to completely control windborne particulate and the untreated emissions that migrated offsite.")

Once again, General Iron's and RMG's histories of noncompliance – specifically with failing to employ basic measures like wetting to a range of sources and to properly apply such methods where used, as well as failing to maintain roads in paved, clean condition – are in keeping with these generally recognized issues, bolster concerns with fugitive dust from multiple sources at the proposed new facility, and highlight inadequacies in the Draft Permit and fugitive particulate operating program as well as the air quality modeling demonstration. In many instances at the two sites, fugitive dust has been observed visibly escaping from dry material piles and when materials are moved around the site, including during periods when suppression methods are not being employed. As mentioned above, failure to suppress fugitive dust and creation of visible emissions beyond the fenceline has been the basis of several recent NOVs issued by CDPH. A more in-depth accounting of such issues, and necessary measures for addressing them, follows.

Failure to deploy wetting and similar dust controls. We incorporate prior discussion of CDPH inspection reports evidencing fugitive dust issues here and provide this additional summary/characterization. There have been a number of occasions where CDPH inspectors noted fugitive dust and/or dry conditions onsite at General Iron, and yet misting cannons were observed to not be in operation.[116] Likewise, during some inspections the water truck was not in operation where dry conditions were present.[117] Moreover, failing to use adequate wetting methods has been documented for *over a decade* at General Iron, despite repeated warnings to employ suppression methods. In a September 2009 inspection, the CDPH inspector noted as follows: "When I arrived I found that the water they were supposed to be using on the pile was not on. This is something that I and other inspectors have warned them about in the past. Their permit states that they need to use the water on an as needed basis and from what I observed it was needed."[118] A decade later during two October 2019 inspections, reports state "[f]ugitive dust observed onsite when disturbing material piles . . . Misting cannons were observed to not be operated at the time of inspection nor was a water truck wetting the streets. Dust was observed on Kingsbury and Wisconsin being kicked up from the trucks from General Iron."[119] These observations were repeated yet again several months later in January 2020 on a day with temperatures ranging from 41 to 55 degrees, when a CDPH inspector reported "[o]bserving auto fluff in the public way and fugitive dust without operating misting cannons leads me to believe that reasonable measurements were not and are not being taken to ensure dust, debris, and dirt won't migrate off site and into the public way."[120]

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[116] *Id.* CDPH Inspection Reports: ID 11152408 (Mar. 26, 2020); ID 11124169 (Mar. 20, 2020); ID 10929879 (Feb. 11, 2020); ID 10767158 (Jan. 10, 2020); ID 10746578 (Jan. 7, 2020); ID 10716916 (Dec. 31, 2019); ID 10708652 (Dec. 29, 2019); ID 10706274 (Dec. 27, 2019); ID 1494955 (Dec. 18, 2019); ID 10639264 (Dec. 11, 2019); ID 10573289 (Dec. 19, 2019); ID 10578242 (Dec. 2, 2019); ID 10462386 (Nov. 15, 2019); ID 10292164 (Oct. 28, 2019); ID 10208629 (Oct. 18, 2019); 10039135 (Oct. 1, 2019); ID 10022352 (Sept. 30, 2019); ID 9935298 (Sept. 19, 2019); ID 1235829 (Apr. 25, 2018); ID 842777 (Apr. 25, 2016).

[117] *See id.,* CDPH Inspection Reports: ID 10639264 (Dec. 11, 2019); ID 10039135 (Oct. 1, 2019); ID 9495131 (Aug. 1, 2019); ID 1411656 (June 21, 2019); ID 1391614 (June 14, 2019).

[118] *Id*., Inspection ID DOEINS41689 (Sept. 28, 2009).

[119] *Id.*, Inspection Reports: Inspection ID 10039135; ID10208629.

[120] *Id.,* Inspection ID 10746578 (Jan. 7, 2020) (emphasis added).

Similarly, during the June 27, 2019 inspection that led to a CDPH NOV and adjudicated liability finding against Reserve Marine Terminals, the inspector reported a failure to employ wetting controls and fugitive dust at the barge loading operations on the facility's border on the Calumet River:

> I observed plume of windborne particulate matter from barge loading operations of metal scrap, with heavy duty loading machine. *There was no dust control and suppression measure observed; for dust and air-borne materials, during this loading operation* . . . I observed the plume of windborne particulate matter from the barge loading operations of metal scrap migrating off-site . . . I observed plume of windborne particulate matter from pile of metal scrap processing.[121]

Such failure to employ wetting measures (and otherwise control fugitive dust) at General Iron and the RMG-SCPM facilities has been noted by CDPH inspectors across a range of temperature and wind conditions, including those well above freezing and well below the state's high wind threshold, at a range of sources from roads to piles.[122] Past inspection reports demonstrate that misting cannons are also not operated at near freezing temperatures, as personnel wait to utilize water misters until it is warmer than 34 degrees.[123] Nor are fugitive emissions otherwise being controlled at such near-freezing temperatures, with methods that can be deployed at or below such temperatures, though such measures appear to be needed given visible emissions on days when temperatures dropped below freezing as described in these comments.

In other instances, CDPH inspectors have observed windborne material and lack of barriers to prevent the material from blowing off the facility grounds.[124] CDPH has also documented dust escaping from General Iron's dumpster for the wire shred line, and holes and defects in the dumpster.[125] And, CDPH has documented defects in the plastic flaps along General Iron's conveyor, leading material to bounce out and enter the river or become airborne.[126]

Despite these engineering and overall practical realities and history at the two companies' sites, as well as the enforceability issues with limits on fugitive sources taken up in the section of these comments on unenforceability, the Draft Permit is based on assumption of robust and aggressive

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[121] *Id.,* Inspection ID 678670.
[122] *See* CDPH inspection report quotes from General Iron and RMG inspections elsewhere in these comments.
[123] *See* Ex. 23, CDPH Inspection Reports for 1909 N. Clifton, Inspection ID 1231335 (Apr. 17, 2018) ("the water truck is in use but at the site the water misters were not. . . . I met Jeff (manager) he told me that they would wait until it is warmer than the current 34 degree temperatures to begin watering the pile"); *see also id.,* Inspection Report, ID 7183644 (Oct. 17, 2018) ("I called the facility, found that the water used for dust suppression was operational. They had failed to use it during early yesterday hours when temperatures were near freezing.").
[124] *See id*., Inspection Reports: Inspection ID 1432160 (Aug. 1, 2019); ID 9495131 (Aug. 1, 2019); ID 1313012 (Nov. 1, 2018); ID 1223308 (Feb. 8, 2018); ID 1208846 (Feb. 8, 2018); ID 1207398 (Jan. 31, 2018); ID 1174349 (Dec. 7, 2017); ID 1137460 (Oct. 30, 2017); ID 830775 (Mar. 31, 2016).
[125] *See id*., Inspection Reports: Inspection ID 1528963 (Aug. 1, 2019); ID 1372015 (May 4, 2019); ID 1332401 (Mar. 22, 2019); ID 1246527 (June 28, 2018); ID 1229400 (May 9, 2018); ID 1214005 (Mar. 14, 2018); ID 1187038 (Jan. 31, 2018); ID 1081440 (June 20, 2017); ID 829790 (Mar. 31, 2016); ID 715706 (Dec. 7, 2015); ID 712767 (Nov. 3, 2015).
[126] *See id*., Inspection Reports: Inspection ID 830775 (Mar. 31, 2016); ID 804947 (Dec. 7, 2015); ID 712835 (Nov. 3, 2015); ID 533176 (Nov. 4, 2014); ID 520589 (Apr. 24, 2014).

use of wetting methods to control a range of fugitive dust sources, including those associated with the Ferrous and Non-Ferrous Material Separation Systems. In order to claim such aggressive control and low emissions, as well as to ensure compliance with the prohibition on air pollution and visible emissions beyond the fenceline, as well as the opacity limit, IEPA must revise the Draft Permit to include robust, specific and objectively enforceable control requirements, monitoring and recordkeeping/reporting requirements for fugitive sources of dust like piles, conveyors, and transfer points.

The most obvious available control that ensures continuous minimization of fugitive emissions from a number of sources over a range of conditions is full enclosure.[127] Enclosure is an effective control for fugitive dust during high wind periods and low temperatures, when regulations and IEPA practice give facilities a pass from the prohibition on visible emissions beyond the fenceline and spraying, *see, e.g.*, 35 IAC 212.304. Enclosure thus is critical for ensuring compliance with the prohibition on air pollution that is not subject to such exceptions, as is evidenced by Chicago Rail and Port's PM_{10} emissions in December 2017 on high wind days, as discussed above. IEPA should require evaluation and deployment of full enclosure for conveyors[128], vehicle loading/unloading[129], piles, and other transfer points associated with all three Systems, given that General Iron and RMG have demonstrated they are not capable of or are unwilling to consistently control such sources using wetting and other work practice measures.

To the extent that IEPA determines that full enclosure is not feasible for certain sources, determinations that it must support in the record, it must enhance wetting and other work practice requirements in the Draft Permit to ensure that these measures in fact happen in a manner that minimizes dust and otherwise ensures compliance with the prohibition on air pollution and visible emissions, as well as the opacity limit. First, the Draft Permit (or the FPOP, if IEPA continues to rely on this deficient approach) must specify where specifically the Dust Bosses will be deployed and under what operating and weather conditions, rather than the exceedingly vague description in the FPOP narrative and "anticipated" Dust Boss locations provided in Figure 4-1. For instance, IEPA should require that Dust Bosses "shall" be used at all times during active working of piles and vehicle loading, as opposed to allowing for use of this equipment "as

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[127] We note, as discussed with respect to conveyors within the shredder enclosure, that sources that can in fact be enclosed are not properly considered sources of fugitive emissions and their emissions count towards the major source thresholds for facilities like GIII.

[128] *See, e.g.*, Ex. 61, California DTSC, "Evaluation and Analysis of Metal Shredding Facilities and Metal Shredder Wastes," (Draft) January 2018, at 36-37 (describing enclosure of conveyor systems at Sims Metal Management in the Bay Area, to address fugitive PM and light fibrous material emissions), available at https://dtsc.ca.gov/wp-content/uploads/sites/31/2017/01/Metal-Shredder-Analysis-DRAFT.pdf (as included in exhibits to NGO Comments on CDPH's Large Recycling Rules). As explained in the enforceability section of these comments, the FPOP is exceedingly vague and unenforceable regarding which conveyors will be enclosed at the facility and with what kind of enclosures. The applicant and IEPA must require full enclosure for the conveyors that will carry material with the potential to generate dust and specify exactly which conveyors these are and where they are located.

[129] CDPH's Bulk Material Rules require truck and railcar loading/unloading of coke and coal to be conducted in full enclosures, *see* Section 3.0(12) and (13).

needed" or only after the fact if visible emissions are identified.[130] This approach eliminates any vagueness or uncertainty around whether wetting and similar methods must be used in a given case based on subjective operator judgment or vague, inadequate visible emissions testing. It also better ensures that the facility will in fact have sufficient wetting equipment available for all dust-generating sources and activities. IEPA also should require use of dry fogging systems at low temperatures when regular wetting procedures cannot be deployed effectively, again to ensure compliance with the prohibition on air pollution that contains no exceptions for temperature.[131] Robust logging and at least monthly reporting of control measure use must also be required, with such reports made publicly available on IEPA's website given the location of the facility in an environmental justice community and the deplorable company history on use of wetting and other work practice controls.[132]

In addition, IEPA must clarify that the opacity limit contained in Section 212.123 applies to all sources of fugitive emissions, and require ongoing, regular and at least monthly opacity monitoring at each fugitive emission source and reporting of such opacity monitoring to ensure compliance with this limit. At least monthly opacity monitoring is warranted given the significant variability in wind directions and intensity from month to month in this area, as discussed below with respect to roadway emissions. Such opacity monitoring should include methods for assessing opacity during nighttime hours, given that the opacity limit contains no exceptions for hours of the day; the facility's operating hours under the Draft Permit include hours during which the facility will be operating during non-daylight hours; and it is feasible to develop a nighttime opacity monitoring protocol, as demonstrated by the Evraz Rocky Mountain Steel facility in Pueblo, Colorado (also known as the CF&I Steel facility). The visible emissions monitoring proposed in the fugitive particulate operating program similarly needs significant modification to include specificity in the sources/areas where such testing/monitoring will be conducted, as well as the operational and atmospheric/weather conditions under which it will occur, to ensure monitoring of those sources with the potential to cause a violation of the prohibition on visible emissions beyond the fenceline.

Finally, IEPA must require fenceline continuous monitoring of PM and metals to ensure compliance with the prohibition on air pollution over all conditions and considering the aggregate impact of multiple fugitive and point sources at GIII and the co-located facilities, as well as the history of noncompliance of these sources and the proposed location in an environmental justice community which already experiences the highest levels of several airborne heavy metals in the state including those associated with metals facilities, according to

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[130] *See* FPOP at Section 3.1(B)(i), Section 3.4(B)(i).

[131] *See, e.g.*, Ex. 47, S.H. Bell, Fugitive Dust Plan, November 2017, at 6 ("Use of dry fogging unit to control fugitive dust, appropriate for use in freezing temperatures; dry foggers have a special air-atomizing nozzle that produces a dry fog consisting of ultra-fine water droplets which wet the dust particles and increase the weight to allow settling,"), available at https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/SH_BellFugitiveDustPlan_Nov2017.pdf.

[132] Notably, the FPOP for the Chicago Rail and Port facility requires monthly as well as annual reporting, *see* Ex. 38.

IEPA's own air quality monitoring reports. As noted above, fenceline monitoring data at the Chicago Rail and Port facility demonstrated that the facility caused or contributed to PM_{10} NAAQS violations, even where the facility was supposedly operating in compliance with its fugitive particulate operating program. The same is true for KCBX and S.H. Bell., the latter with regards to neurotoxic manganese. Such continuous monitoring therefore is critical to ensuring not only that a facility is in fact complying with its permit and enforceable fugitive particulate operating program, including the prohibition on air pollution. The data from the continuous monitors again should be made publicly available on a timely basis, at least monthly.

As noted in the section on enforceability, there is no justification for delaying such analysis and specificity until a later date, after construction. Indeed, such decisions go to the heart of the design that will be constructed, and deferral renders the current permit unenforceable and thus legally insufficient.

In addition, we again raise concern that segmenting of the permitting for this single source may be resulting in a failure to account for the vehicle loading and unloading emissions that will occur at 11600 S. Burley as a result of the addition of GIII. The GIII application is exceedingly vague as to vehicle loading and unloading, with a few scattered references to these activities, including a statement that "[m]aterial from the ferrous stockpiles are loaded into barges, rail cars or trucks for off-site shipment to customers,"[133] and visible emissions monitoring of the barge loading area[134]. Yet there is little to no discussion of controls to be used for rail or barge loading, or even confirmation that rail and/or barge loading occurs on the GIII property as opposed to at its RMG neighbors or Calumet Transload Railroad (or even Calumet River Terminals to the North, which we understand IEPA has looked into as a possible single source with Calumet Transload Railroad). The materials are even silent to a large extent on truck loading. The applicant and IEPA should provide clarification of where such vehicle loading and unloading of GIII-related materials will occur and how such operations will be controlled (as noted above, loading of at least trucks and railcars should occur in enclosures), and include objective, enforceable requirements for continuous control and monitoring of emissions from vehicle loading/unloading of GIII materials wherever such activity occurs on the 11600 S. Burley campus or adjacent site as part of a true "single source" analysis and permitting.

Failure to maintain intact paved roads. Chronic and severe issues with maintaining paved surfaces have also been documented at both General Iron and more prominently the RMG facilities. In 2015 to 2017, General Iron had significant paving issues that took years to remedy, despite many inspections and discussions of how to fix these issues.[135] The paving record at the RMG S. Burley facilities is even more extreme, with facility managers recognizing that

[133] Application at 14.
[134] FPOP at Section 3.9.
[135] Ex. 23, CDPH Inspection Reports for 1909 N. Clifton: Inspection ID 1432160 (Aug. 1, 2019); ID 1061585 (June 20, 2017); ID 1011476 (Jan .11, 2017); ID 1001811 (Oct. 31, 2016); ID 882010 (July 27, 2016); ID 830775 (Mar. 31, 2016); ID 711215 (Sept. 30, 2015); ID 708237 (Aug. 27, 2015); ID 700925 (July 16, 2015); ID 499636 (May 21, 2013).

maintaining intact pavement is a virtually impossible task.[136] These issues apparently arise in large part due to use of solely asphalt for roadways, instead of more robust concrete or other available materials like rubber and plastic liners. They are compounded by chronic failures to timely repair the damaged pavement, in many cases with damage going for years before repair (only for the repaired areas to deteriorate once again).

The issues with maintaining paved surfaces in intact and clean condition at RMG are as follows,[137] further supporting that the Draft Permit is based on unrealistic assumptions about emissions from paved roads, must be revised to strengthen control and compliance provisions, as well as air quality modeling, and should be revised to take into account the full impact of the RMG-SCPM and other appropriate facilities as part of the "single source" of which the proposed GIII would be a part.

Reserve Marine Terminals

Beginning in 2014, City inspections note materials intermingling with dirt at the Reserve Marine Terminals site. In 2015, inspectors continued to note piles of dirt containing metal and muddy standing water, and commented that the facility must address pavement issues in a pavement plan. In 2019, city inspectors were still telling staff at the facility that they should have a written pavement plan.

The heavy machinery and truck traffic at the Reserve Marine Terminals site has been observed to cause chronic damage to all pavements at the site. City inspectors have noted in several inspections that "maintenance is a never-ending cycle."[138] Indeed, despite weekly application of asphalt, pavement issues have persisted over the years, including many observations of potholes and large pools of water throughout the property. On June 28, 2017, an inspector noted that "some of the pavement is more dirt than anything else, caused by continuous traffic by trucks and the machines used onsite for processing."[139] The pavement problems have contributed to dust issues at the property, including observations of fugitive dust during an October 2019 inspection when vehicles were driven on the main roadways and open areas. The site also appears to pose danger of contamination in the river, with one instance where large potholes holding several gallons of water were observed near the river.

[136] The issues with paving at the RMG-SCPM facilities in the CDPH inspection record are accompanied by reference to significant piles of metallic fines and metallic fines mixing in with dirt. Given this history and the broader history of the LTV contamination at the site, we are very concerned with assumptions regarding soil/silt content that rely on composite averages from onsite sampling. The applicant should disclose the full onsite sampling results, including the results for each sample and the range of values obtained, for further analysis of the impact of varying soil content on air emissions.
[137] Information in tables from Ex. 24, CDPH Inspection Reports for 11600 S. Burley and Ex. 62 , CDPH Inspection Reports for 11610 S. Ave. O.
[138] Ex. 24, CDPH Inspection Reports for 11600 S. Burley, RMT, Inspection ID 884332.
[139] *Id.*, RMT, Inspection ID 1111122.

Date of inspection	Inspection notes re pavement issues at Reserve Marine Terminals
10/14/2014	Photo A: material piles extend all the way back to the treeline and materials intermingle with the dirt.
5/6/2015	Findings: site being cleaned up. Piles of dirt that also contain metallic are scattered throughout
11/19/2015	Photo A) one of several mixed materials (dirt, metal fragments) piles scraped from the ground that must be processed (segregated metal from dirt). Photo B) muddy ground with standing water []also an issue that must [be] addressed in a pavement plan
1/28/2016	Photo A) Area where the berm has been removed to place a charging station for the machines[.] The area needs to be scraped and the ground cleared of materials that are impregnating it . . . Photo B) pile of mixed materials (metals, dirt) that needs to be screened to remove metals[.] This is the largest of a few piles in this section of facility
3/11/2016	There is no clear separation between the road and the materials storage/processing area. RT has yet to provide a pavement plan, this is also detailed in the permit. There is standing water in large pools along the road and among the piles, prevention of this is also detailed in the permit.
4/8/2016	The pavement shows ponding throughout the site. RT states that types of activity (crushing, breaking hammering []all with machines) combined with the heavy machinery in use causes the damage to the roadway, they are constantly adding asphalt to maintain pavements but it's a never-ending cycle
5/11/2016	The pavement still shows ponding throughout the site. RT states that they are generating a pavement plan and schedule. The activity (crushing, breaking, hammering[.] All with machines) combined with the truck traffic causes damage to all pavements, maintenance is a never-ending cycle.
6/28/2016	As we toured the site, we discussed options to meet requirements for proper paving, dust control, and trackout . . . [tour w/ management]
7/28/2016	The pavement still shows potholes and ponding throughout the site. RT showed me a large pile of asphalt grindings, told me that they were using it to make repairs to the road every day because their activity (shearing, breaking, hammering) combined with the truck traffic causes damage to all pavements - maintenance is a never-ending cycle.
9/23/2016	The pavement still shows potholes and throughout the site several huge piles of asphalt grindings are onsite to use for continual repair to site pavements. On the southern boundary, materials are being processed in an area which is uneven and more dirt than asphalt.
11/18/2016	Previous findings: pavement potholes throughout the site. Current findings: pavement potholes remain throughout the site but they are filled with available asphalt on a weekly basis. There are large potholes near the river holding several gallons of water
1/23/2017	Previous findings: pavement potholes throughout the site. Current findings: pavement potholes remain throughout the site but they are filled with available asphalt on a weekly basis. There are large potholes near the river holding several gallons of water

3/22/2017	Upon arrival, I noted that the entry road had been partially wet (for dust control) but the center was dry and the wetting did not extend close to the street where trucks exited. At the entry gate, I noted very large potholes holding water . . . . He stated that they had recently gotten bids from pavement contractors to replace the damaged asphalt at the gate with asphalt. he will have a plan to either repair or replace the pavements by next inspection . . . . There were potholes evident along the interior haul road . . . .
5/1/2017	Upon arrival, I noted the damaged asphalt at the gate was even more damaged than previously noted, with a huge pool of water collected that must be inches deep at the center . . . . There were potholes evident along the interior haul road. []RT was supposed to have written a pavement repair/maintenance plan but had not. He will have that down by reinspection.
6/28/2017	There were large potholes evident along the river wall
8/18/2017	Some of the materials piles are confined by concrete blocks but some not. Some of the pavement is more dirt than anything else, caused by continuous traffic by trucks and the machines used onsite for processing. Pavements are supposed to be maintained on a rotating basis by the addition of asphalt grindings.
9/25/2017	There were large potholes evident in the haul road and the auxiliary roads branching off of it. RT stated that they filled potholes on [‘]as needed[’] Basis but that method did not appear to be effective. I asked that he set up a schedule for maintenance of these and he agreed to.
2/6/2018	I spoke to RT about the pavement plan/schedule that they should have in place[.] He told me that their safety representative had quit but they had just hired another and this one would be responsible for it
3/28/2018	There were potholes and standing water evident along the interior road.
5/11/2018	There were potholes throughout the site[.] DS committed to a paving plan that would maintain pavements on a scheduled basis. There is a dirt berm used to separate the terminal materials that also has waste (plastic, wood) in or on top of it
11/6/2018	The main issue is the potholes that span the length of the road through the middle of the site.
2/11/2019	The main issue is the potholes that span the length of the road through the middle of the site . . . I told Trivosonno that they should 1) have a written pavement maintenance plan and 2) a written plan showing the watering of the roads.
10/23/2019	Fugitive dust was observed when personnel would drive motor vehicles on the dry roadways and open areas, and when material piles were disturbed . . . It was concluded that they will repair the roadways since they were completely covered in dirt/debris and they will need to spray piles to control fugitive dust when they are moving the material piles.

South Shore Recycling

Beginning in 2015, City inspections noted soil contamination including metals mixed into the soil at the South Shore Recycling facility, requiring pavement to be added to the site. Paving progressed slowly, with inspections revealing standing pools of water at the site in 2016 and 2017, and limited progress on paving, particularly in the Northern portion of the site and the area East of the main door. In 2018, an inspector noted that the pavement is “in great need of repair,”

with potholes and standing water present. Additional inspections noted the presence of weeds and piles of dirt mixed with metal and other debris. In 2019, inspectors noted the need to level and compact the asphalt.

Recently, in October 2019, CDPH inspectors noted that there was dirt and debris all over the roadway leading to fugitive dust leaving the site. The most recent inspection in March 2020 revealed standing water and potholes, and a crack in the drainage grate.

Date of Inspection	Inspection notes re pavement issues at South Shore Recycling
7/23/2015	Photo A: scrap pile where the ground is covered with steel plate. Photo B: scrap area where pavement is cement. Photo C: area (which is dirt) will be scraped to remove contaminants . . . Outdoor storage area to be upgraded, proper pavement added
11/19/2015	Photo A: area of cement and dirt/mud. This area will be paved but not soon since their pavement plan starts on the western side and this is the eastern end. Photo B: pile of mixed materials (metal, dirt) that will be processed to remove contaminants and reclaim metal.
1/28/2016	Photo A: metal materials frozen in the dirt[.] This to be cleaned up at the spring thaw and materials must be stored in proper, dedicated areas. Photo B: Device for evacuating refrigerants[.] Staining on the ground is evidence of leaks. This activity will be moved to impermeable pavement.
3/11/2016	The area JH had committed to cleaning and pavement has been cleared of most of the materials but steel turnings have been deposited here instead of the turningspad on the other side of the road. Apparently this had been done by workers at the neighboring RMT facility, possibly due to the delineation between the 2 sites being unclear. This will be addressed immediately. The materials storage area has not been improved noticeably since the last inspection. in addition to materials, the ground also has singles on it that were apparently blown off the roof
4/8/2016	Previous findings: metal materials (turnings) deposited here instead of the turnings pile. Dirt area with scrap and roof debris on the ground . . . Metal materials (turnings) had been removed. The dirt area with scrap and roof debris had been cleaned up, gravel laid. The outdoor western storage area had been cleared of material and they will continue moving east, cleaning and laying asphalt.
5/11/2016	The presence of pooled water shows that paving had not progressed as much as JH had committed to[.] He stated that the machine they use to move materials actually also damages the pavement. He will look into an alternate method/machine and will pay more attention to maintaining the existing pavement by leveling it, on a schedule
6/8/2016	The paving improvement in the Northern portion has not progressed as much as expected . . . There is still uneven ground with standing water present
7/28/2016	Previous findings: standing water in areas showed poor drainage. Current findings: The paving improvement in the northern portion has progressed but not as much as expected … uuneven ground with standing water present. []JH committed to address a specific portion of this area by 1st removing magnetic materials then using a screener to remove other contaminants from the dirt. Then he will level and pave the area with asphalt.

9/23/2016	Previous findings: The paving improvement in the Northern portion had progressed but not as much as expected. []JH was to increase his efforts to pave this area. Uuneven ground with standing water present. []JH had committed to address a specific portion of this area by 1st removing magnetic materials then using a screener to remove other contaminants from the dirt. Then he will level and pave the area with asphalt . . . Current findings: The paving improvements in the Northern portion had progressed, there is added aphalt and the standing water is no longer evident. The next area to address is the adjacent area, where the gathered metals will be processed and the ground cleaned with the magnet. Asphalt will then be added and compacted.
11/18/2016	Previous findings: The paving improvements in the northern portion had, with added asphalt. The next area to address is the adjacent area, where the gathered metals will be processed and the ground cleaned with the magnet. Asphalt will then be added and compacted. Current findings: The paving improvements in the Northern portion had not progressed, but efforts had been redirected to the inbound scrap dropoff, where metal plates had been added as a ground cover. They will return to the pavement improvements. There is a wastepile (from scraping the pavement) of dirt with metal intermingled
1/23/2017	No improvement was noted in the outdoor area, cleanup efforts being hampered by the snow and cold
3/22/2017	The exterior needed a lot of improvement. Material piles were on the ground which is mostly dirt with some asphalt in places, some cement in others. Because of the mud and dirt, I've asked JH to begin cleaning, levelling, and paving. He will start in the portion east of the main door and proceed to the first set of blocks. He will focus in this area and only move to the next adjacent (east) area once completed. . . . The cleaning and pavement improvement is needed throughout the site.
5/1/2017	The exterior shows improvement but still need a lot more. Material piles had been moved from about half of the portion east of the main door in preparation for pavement improvement. Some asphalt grindings had been put down but they have not been compacted and the other metal must be relocated in order to do this completely. JH will focus in this area. On the other side (west) of the main door is material storage where metal plates are use as pavement and it is flooded because the ground underneath needs to be levelled. I told JH that he might have to remove these if they are judged inappropriate for pavement.
6/28/2017	The exterior portion east of the main door shows improvement but that apparently stopped before completing the pavement to the point agreed on (to the blocks). The area on the other side of the interior road is uneven ground with potholes and standing water. There are asphalt grindings but they are not being used.
8/18/2017	The addition of pavement in the exterior portion east of the main door has continued but has not reached the point agreed on (to the blocks). There are now trailers parked on the area where asphalt has been recently added. There remains an area needing pavement in between these trailers and the cement boundary blocks to the east.
9/25/2017	The area needing to be cleaned had been completed. The much cleaner area still needs the pavement levelled and that will be done after the last materials have been processed. The next area to be addressed is about halfway done[.] There remained trailers and other materials to be processed, then the pavement can be levelled.
3/28/2018	The pavement is in great need of repair, with potholes and standing water evident

5/11/2018	The exterior portion was full of materials but also waste. A pile of CD debris (dirt, broken concrete) was among the metal scrap . . . . The material storage/processing areas needed to be cleaned up, with metal removed from the ground and the pavement levelled.
7/12/2018	The exterior portion was full of materials but also waste (piles of dirt with metal intermingled, wood) and weeds are growing among the scrap
9/17/2018	The exterior portion was full of materials and previous[l]-noted waste (piles of dirt with metal intermingled, wood) remained and weeds were still growing among the scrap[.] JH was to have addressed these by reinspection but improvement had not gotten to a very noticeable point.
11/6/2018	The road pavements were full of potholes . . . . I recommended that they address the uneven pavements before placing new materials here.
7/26/2019	In the exterior, they had added separation to the unload area between individual peddlers. The asphalt pavement needed to be levelled and compacted.
9/10/2019	the asphalt pavement still needed to be levelled and compacted
10/23/2019	Fugitive dust was observed when personnel would drive motor vehicles on the dry roadways and open areas, and when material piles were disturbed . . . It was concluded that they will repair the roadways since they were completely covered in dirt/debris and they will need to spray piles to control fugitive dust when they are moving the material piles.
3/13/2020	In the exterior, the onsite drain does have a proper filter in place but the grate has a large crack in it. []JH will replace it. The pavement needs attention, potholes and pooled water are evident

Regency Technologies

City inspections have identified chronic pavement issues at Regency Technologies since at least 2017. City inspectors have consistently noted damaged pavement, potholes, standing water, and flooding due to uneven pavement. The most recent inspection in March 2020 illustrates that the pavement insufficiencies remain ongoing.

Date of inspection	**Inspection notes re pavement issues at Regency Technologies**
1/23/2017	The outdoor area pavement is in need of repair, as shown by pooled water
5/1/2017	The area around the outdoor bays . . . Is flooded. They have put down steel plates as a form of pavement. I told RT that this is not acceptable and they must choose another (i.e. stone, asphalt)
6/28/2017	The area around the outdoor bays . . . That was flooded and had steel plates down as a form of pavement was no longer flooded and gravel had been used to fill the potholes.
3/28/2018	The pavement is damaged, in need of repair
5/11/2018	The pavement is damaged, in need of repair
7/12/2018	The pavement that had previously been damaged is in better condition, having asphalt added to the low spots.

4/11/2019	The outdoor storage area includes 3 bays . . . And all bays had been overfull but they were now not. The pavements were damaged and potholes had collected water
6/13/2019	The outdoor storage bays . . . Were flooded with water ?RT had said that this would be addressed by reinspection. Today he told me that 1) he had added asphalt but this is a low spot in this area, and 2) recent heavy rains had flooded the area again.
7/26/2019	The outdoor storage bays . . . Had damaged pavement. This was similar to the last inspection and RT had said that this would be addressed. Today he told me that he had added asphalt but this was a high traffic area and he would continue maintaining the ground.
3/13/2020	The pavement in the outdoor storage needed improvement due to potholes and standing water

Napuck Salvage of Waupaca

At the Napuck facility, City inspections have noted damaged pavement and potholes. In numerous instances, City inspections have noted wastes, dirt piles, and materials being stored on the ground instead of on proper pavement.

Date of inspection	**Inspection notes re pavement issues at Napuck**
2/28/2005	paving could use an upgrade, too much mud.
7/23/2015	Photo A) materials stored on ground which is dirt not cement, asphalt, gravel etc. Photo B) materials stored on ground, building conditions (walls) deteriorating. Photo C) materials pile not confined/controlled.
10/15/2015	Photo A) Outdoor storage has only partial containment, materials spreading to grass/dirt area.
3/11/2016	Right outside the West building, a metal pipe containing some sort of oil was protruding from the ground. The pipe is connected to something underground (possibly a UST), but RT is unaware of what . . . On the Eastern boundary, materials (engines) are normal stored on cement but today some are on the ground, which is dirt - not acceptable pavement.
4/8/2016	The pipe has been exposed and found to be a part of now-defunct railroad mechanisms that have been covered over with asphalt.
6/28/2016	The abundance of materials have been removed and processed, except for some dirtpiles that must be processed. Then the area will be magneted and screened to remove metals, and graded.
7/28/2016	In the Northern area, the ground has large depressions holding water and weeds are excessive. RT has one pile of asphalt ready, says he will need 5-6 more loads to make repairs.

11/18/2016	The large area after the ramp (from where materials are stored) has potholes that need addressed.
1/23/2017	Previous findings: The large area after the ramp (from where materials are stored) had potholes that need addressed . . . . Current findings: The area remains unchanged.
5/1/2017	The Western area is flooded because of the damaged pavement . . . There is an area of dirt pavement where metal fragments are being stored.

Given the recognized engineering issues with maintenance of paved surfaces with such high intensity heavy vehicle use; the vagueness of GIII's application regarding which paving materials will be used in what areas and for what percentage of paved surfaces; and the extensive evidence that General Iron and RMG-SCPM are not in fact maintaining paved surfaces, it is entirely unreasonable to assume intact pavement and the high levels of control used in the paved roads emission calculations for GIII. The applicant and IEPA thus must revise the emission estimates and control, testing/monitoring and recordkeeping/reporting requirements.

It is possible to conduct complex emissions estimates, as a function of wind speeds, based on currently used approaches – however, doing so requires making significant additional assumptions regarding so-called silt loading, efficacy of watering or other dust control measures, frequency of maintenance, and other factors for which the application and IEPA do not provide information. In light of this gap, the approach used by applicant and IEPA is inappropriate. Instead, the emissions estimates should use a simplified fugitive dust estimate employing AP-42 Section 13.2.3 for Heavy Construction Operations. In the aggregate, operations at a typical shredding and recycling facility are not dissimilar, in terms of the ability to generate dust from exposed sources, including unpaved and partially paved/deteriorated surfaces. The emission factor recommended is 1.2 tons/acre/month. Annual emissions can be estimated using estimates of potentially erodible acreage. To allow for a portion of the area which might be paved with more robust materials like concrete, we recommend that this emission factor be applied to the rest of the total GIII acreage at the rate of 1.2 tons/acre/month.

Conversely, in order to claim the high levels of control for roadways that is the basis for the Draft Permit, including the air quality modeling, IEPA must substantially revise the Draft Permit (and fugitive particulate operating program) to require that all paved roads use robust, long-lasting and relatively low-maintenance materials such as concrete; to employ objective requirements for maintenance of those roads, such as time period within which any deterioration will be correct; to include objective, practicably enforceable requirements for sweeping and wetting, including recordkeeping and mandated at least monthly reporting; and to address the points raised above regarding control and compliance measures for other fugitive sources that equally apply to roadways. Regarding enforceable requirements for sweeping and wetting, again the SCAQMD and CDPH rules both require sweeping at least every 4 hours or 100 trucks, but not less than once daily.[140] These rules also employ additional measures for surface maintenance

[140] *See* Ex. 44, CDPH Rules for Large Recycling Facilities, at Section 4.14; Ex. 46, SCAQMD Rule 1158 at Section (d)(7)(B).

and cleaning, including a prohibition on accumulation of material, removal of any material spills of more than a certain amount within one hour, material moisture content requirements, and silt limits.[141] In addition, the CDPH rules recognize the applicability of an opacity limit to roadways and require at least quarterly opacity testing to ensure compliance with this limit.[142] The Draft Permit should do at least the same in this individual permitting, again based on the poor track record of these companies and the proposed location in an already-overburdened environmental justice community.

We also note here heightened concern over the combined impact of multiple co-located facilities, again emphasizing the need to in-fact consider the facilities as a single source in permitting. Due to the proximity of the facilities, fugitive dust from inadequate paving and contaminated soil at one facility is likely to create issues at the others. Thus, even IF the proposed GIII employs concrete roads throughout its new facility and in fact aggressively controls dust on paved roads, dust related to the documented poor paving at the other -SCPM facilities is likely to end up on GIII's roadways, impacting emissions from the GIII roadways.

The GIII site would be located between existing facilities at the 11600 S. Burley Avenue site, directly south of the Reserve Marine Terminal scrap processing and material storage site and north of South Shore Recycling and Regency Technologies (see Figure 1 and Figure 2 below).[143] The FESOP application materials for the RMG-SCPM facilities identify roadway emissions as the primary source of emissions from these facilities, noting that, as discussed above, the emissions estimates from RMG-SCPM are significant underestimations given the abysmal paving conditions and failed paving maintenance at these sites.

[141] *See* Ex. 46, SCAQMD Rule 1158 at Section (d)(7).
[142] *See* Ex.44, CDPH Rules for Large Recycling Facilities, at Sections 4.7.4 and 4.7.5.
[143] Ex. 63, Lifetime Operating Permit Application, Supplemental Document, S. Chicago Property Mgmt. Ltd., 11600 S. Burley Ave., Chicago, IL 60617 (Nov. 26, 2019) ("RMG FESOP Application"), at p. 16, Figure 1; RK & Associates, Inc., General III, LLC, Fugitive Particulate Operating Program (Mar. 20, 2020), Figure 2-2.

Figure 1. Map of Existing RMG-SCPM Facilities at 11600 S. Burley.

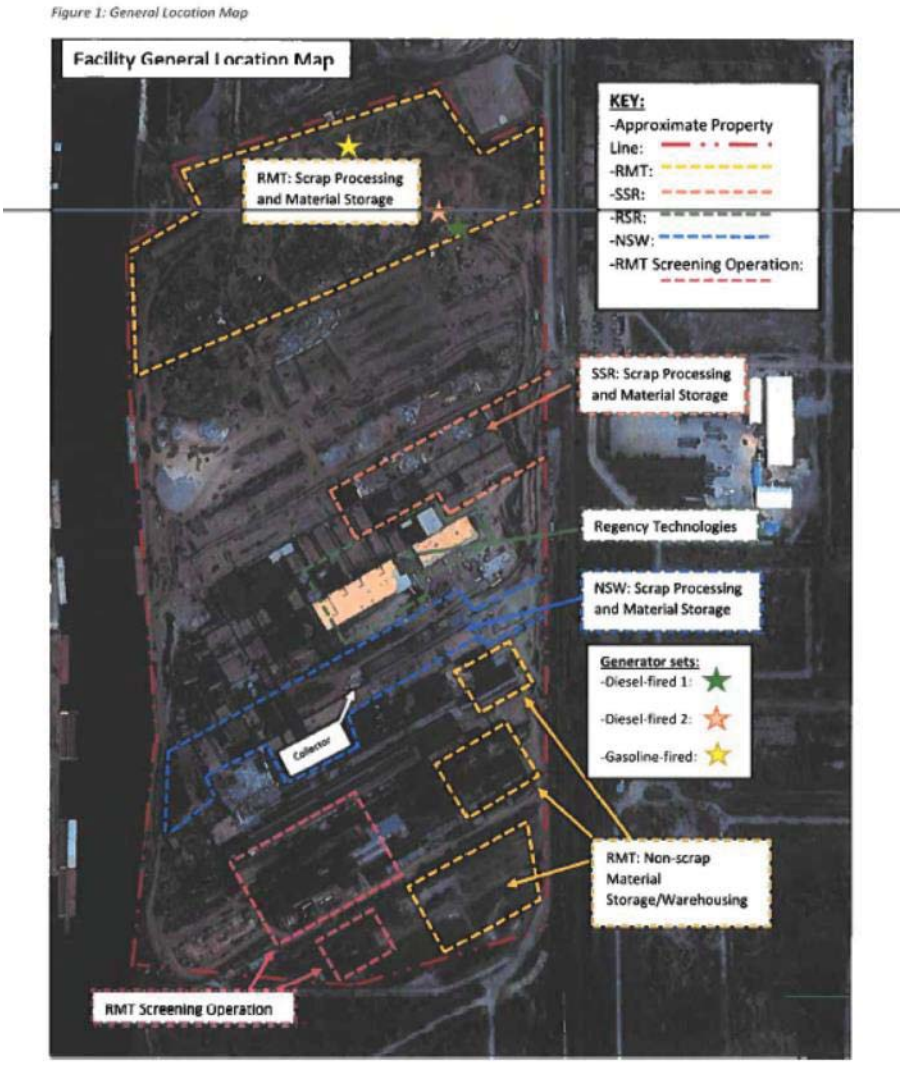


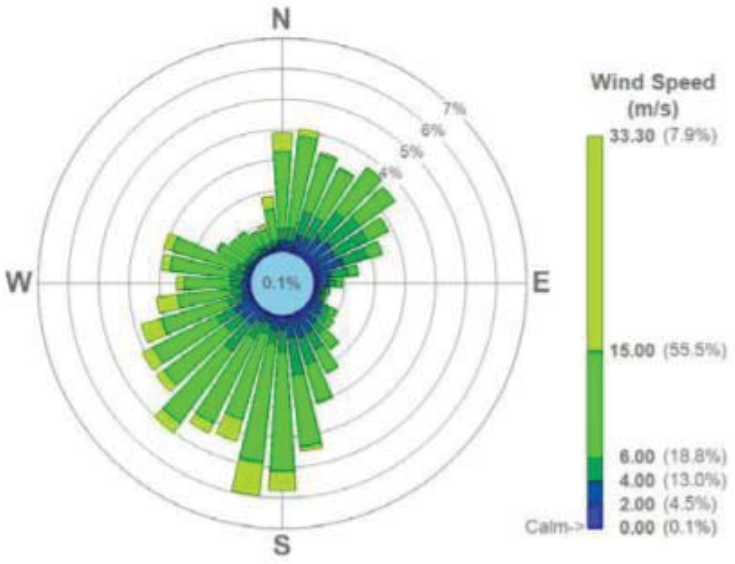
Figure 2. Proposed General Iron III Facility Location.

Because all the facilities are in close proximity to each other running North-to-South, fugitive roadway emissions are likely to be redistributed between the facilities by the wind. The predominant wind direction is from the South and Southwest.[144] Strong winds also blow from the

[144] Ex. 64, Iowa Environmental Mesonet, Iowa State University, Wind Roses for Midway Airport, Jan. 1, 1970 to Dec. 2, 2019, *available at* http://mesonet.agron.iastate.edu/sites/windrose.phtml?station=MDW&network=IL_ASOS.

North and Northeast.[145] Data collected from a nearby facility located at 10730 Burley Avenue demonstrates this pattern on an annual basis (Figure 3).[146]

Figure 3 - Combined 2015-2016 Windrose Derived from Meteorological Data collected at KCBX South Terminal (10730 Burley Ave.)



As shown in Figures 1 and 2, South Shore Recycling, Regency Technologies, and a portion of the RMT facility lie directly South of the proposed GIII facility, and thus fugitive dust from those facilities would blow toward the GIII site when the wind is coming from the South. Likewise, dust generated by the GIII facility would usually blow into the RMT scrap yard directly north of the site, which given the poor conditions at RMT would then likely be reentrained and deposited on the neighborhood around Rowan Park and Washington High School.

When the wind is blowing from the North, the fugitive emissions from RMT scrap yard would blow into the GIII site. Dust generated by GIII, in turn, would blow into properties located south of the GIII site, where it may again blow into the Calumet River and onto adjacent facilities to the South, given the chronic paving issues with the existing RMG-SCPM facilities.

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[145] Ex. 64, Iowa Environmental Mesonet, Iowa State University, Wind Roses for Midway Airport, Jan. 1, 1970 to Dec. 2, 2019, *available at* http://mesonet.agron.iastate.edu/sites/windrose.phtml?statio=MDW&network=IL_ASOS; Ex. 65, Xact Metals Study: Southeast Chicago, report prepared by Motria Caudill, field monitoring data from Dec. 12, 2014 to July 23, 2015, Appendix D to 2017 Watco Variance Request, *available at* https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/ExhibitsA_EtoWatcoVarianceRequest.pdf.

[146] Ex. 66, Watco Variance Request, (July 31, 2017), at 28, Figure 3, *available at* https://www.chicago.gov/content/dam/city/depts/cdph/environmental_health_and_food/VarReqfromWatcoTransloadingLLC_2926E126thSt.pdf.

We also note here that the Westerly winds evident from wind roses provide concern for roadway-related fugitive dust from all of the facilities blowing into the shopping and residential area to the East of 11600 S. Burley.

D. IEPA Must Account for, and Include Stringent Limits on, Torch Cutting.

The Draft Permit cannot issue as proposed because it does not properly estimate emissions from torch cutting associated with the proposed GIII and fails entirely to include any requirements to control air pollution from this dangerous process, which is associated with substantial emissions of heavy metals and which has been identified as the source of increased cancer risk at some metals facilities based on ambient monitoring. Again, we raise concerns that the failure to in-fact consider the multiple facilities at 11600 S. Burley obscures the true impact of these co-located, interconnected operations.

Torch cutting is used in the recycling process to break apart large metal pieces, to reduce larger sized scrap to smaller sizes suitable for shredding. Torch cutting typically uses gas, but torches may also use plasma or powder.[147] Torch cutting vaporizes metal, resulting in airborne toxic metals - as well as dust and opacity - and, depending on the type of torch used, may create large amounts of smoke and noise.[148] Torch cutting is especially concerning because it generates fine particulate matter air pollution (PM 2.5).[149] Even short term exposure to particulate matter air pollution is associated with morbidity and mortality, especially with respect to fine particulate matter (PM 2.5).[150] Moreover, airborne metals generated by torch cutting include nickel, cadmium, hexavalent chromium, and copper, all of which are carcinogenic.[151] In a study based on monitoring at five recycling facilities in Houston, researchers concluded that the increased cancer risk from ambient air concentrations of these metals generated at the recycling facilities ranged from 1 case in 1 million to 8 cases in 10,000.[152] Torch cutting also generates hazardous lead dust.[153]

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[147] Ex. 67, OSHA, Guidance for the Identification and Control of Safety and Health Hazards in Metal Scrap Recycling at 9-10 ("OSHA Guidance"), available at https://www.osha.gov/Publications/OSHA3348-metal-scrap-recycling.pdf.

[148] Ex. 67, OSHA Guidance, at p11; *see also* Ex. 68, Michigan Department of Environmental Quality, Violation Notice to RJ Industrial Recycling (May 25, 2016), available at https://www.deq.state.mi.us/aps/downloads/SRN/N7885/N7885_VN_20160525.pdf.

[149] Ex. 69, L. Raun, K. Pepple, D. Holyt, D. Richner, A.Blanco, and J. LI, *Unanticipated potential cancer risk near metal recycling facilities*, Environmental Impact Assessment Review 41 at 71 (2013) ("Raun, et. al.").

[150] *Id.* at 71; *see also, e.g.,* Ex. 70, World Health Organization, "Health Effects of Particulate Matter Policy implications for countries in eastern Europe, Caucuses, and central Asia" at 6 (2013), available at http://www.euro.who.int/__data/assets/pdf_file/0006/189051/Health-effects-of-particulate-matter-final-Eng.pdf ("The health effects of inhalable PM are well documented. They are due to exposure over both the short term (hours, days) and long term (months, years) and include: • respiratory and cardiovascular morbidity, such as aggravation of asthma, respiratory symptoms and an increase in hospital admissions; • mortality from cardiovascular and respiratory diseases and from lung cancer.").

[151] Ex. 69, Raun et. al, at 73.

[152] *Id*. at 75.

[153] Ex. 71, New York State Dept. of Health, *Metal Recycling Industry Project*, available at

Again, experience with RMG-SCPM indicates that torch cutting activities at the facilities are generating significant air pollution and have been occurring in violation of local and likely state requirements. As described elsewhere in these comments, in late June 2019, CDPH Deputy Commissioner Dave Graham described to Meleah Geertsma an inspection during which he observed the use of large stationary torches at Reserve Marine Terminal to disassemble railcars in the yard, resulting in large black plumes of smoke. At the time, these torches were not registered with the City, nor did RMT have a state air permit or other approval for its operations as a whole, nor was it employing an pollution controls for the open-air torch cutting.

Despite these well-known hazards of torch cutting, and the likelihood that GIII will depend on torch cutting conducted somewhere at 11600 S. Burley or an adjacent property to process its 1,000,000 tons of scrap, nowhere does the GIII application or Draft Permit include torch cutting. Instead, the application simply notes in a vague and suspect way that "[t]he following activities, potentially associated with the operation of metal recycling facilities, are not included in this permit application: Torch Cutting…".[154] At the same time, the RMG FESOP application for the 11600 S. Burley RMG-SCPM facilities that do and will conduct torch cutting (a) omits any discussion of increased torch cutting expected as a result of the GIII, and (b) asserts that torch cutting is an "exempt activity" pursuant to 35 IAC 201.146(aa).[155] RMG did include torch cutting in its estimate of PTE, but even those estimates were faulty.[156] RMG considered only emissions from burning of fuel for the torch, and did not consider the volatilization of metals from the torching itself, which as described above poses the greatest health hazard to the nearby community as demonstrated by field monitoring studies.[157]

Moving forward, IEPA must address in this permitting action whether GIII's operation will require additional torch cutting to be conducted by facilities encompassed in the single source at 11600 S. Burley. In addition, the applicant and IEPA must properly estimate emissions from torch cutting at the single source taking account of the impacts of volatilization of metals and not simply gas combustion.

Limited data is available on the more complete emissions from torch cutting. One available emission factor is 0.06 lb/hr for cutting clean steel, based on ISRI data, which has been employed by the Ohio EPA in permitting a metals recycling facility.[158] The Draft Permit again omits torch cutting entirely, and so from the hours of operation limits in Condition 12(a). Without any formal limits on when torch cutting is allowed to occur, we made an assumption that torch cutting/sizing operations will in fact occur 25% of the time, *i.e.*, for 2,190 hours per year. Again because the Draft Permit is silent on torch cutting and given evidence that torch cutting at the RMG facilities occurs outside, we also assume that all torch cutting occurs outdoors – *i.e.*, not indoors, subject to some type of "control" efficiency. Using this calculation,

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https://www.health.ny.gov/environmental/workplace/metal_recycling/metal_recycling_report.htm.

[154] September GIII Application at p 19, Section 2.7, "Excluded Activities."

[155] *See* Ex. 63, RMG FESOP Application, at 5.

[156] *See id.*, at Appendix A, Section A5.

[157] *Id.*

[158] *See* Ex. 52, Omnisource Permit.

the estimate of PM emissions for torch cutting associated with the proposed GIII facility (assumed to be PM10 and PM2.5) is 131.4 lb/year or 0.066 tons/year, substantially higher than the amount provided in the RMG FESOP application. At the same time, it is possible that, with multiple torch cutting stations or operations, the actual hours per year of torch cutting at GIII may be considerably greater than the 2,190 hours/year assumed above, and thus PM and metals emissions from torch cutting may be substantially higher as well.

After having properly estimated emissions from torch cutting, the applicant and IEPA must include in the Draft Permit control and compliance measures for torch cutting that will occur at the single source as a result of GIII. Contrary to RMG's assertion, torch cutting should not be treated as exempt under 35 IAC 201.146(aa). Torch cutting is distinct from simple "cutting," which is potentially exempt under Section 201.146(aa) (if additional conditions are met) and considered a presumptively "insignificant" activity under Section 201.210. Unlike other forms of cutting, torch cutting of metals results in significant emissions of hazardous air pollutants. On this basis alone, Illinois regulations recognize that the activity is significant. *See* Section 201.210(a)(2) and (3), listing as potentially insignificant emission units that emit below certain lbs/hr and tpy thresholds "*and* that do not emit any air pollutant listed as hazardous" (emphasis added). Furthermore, the regulatory history of Section 201.210 points to insignificant activities being minor sources of air pollution that do not contribute significantly to the health and environmental goals underlying Title V of the Clean Air Act. *See* 415 ILCS Section 5/39.5(5)(w).[159] In contrast, as detailed above, torch cutting at recycling facilities contributes significant hazardous air pollution in communities located nearby, and research indicates that increased fine size particulate matter generated by torch cutting increases cancer risk in those communities. Further, testimony during the IPCB Rulemaking by an Illinois EPA representative strongly suggested that even presumptively insignificant activities that in fact have a significant environmental impact may and should be controlled as part of IEPA permitting.[160]

Nor again can IEPA defer addressing torch cutting to some later post-construction date, as steps for minimizing torch cutting implicate the overall design of the facility.[161] One control measure for torch cutting is to prohibit onsite torch cutting at the single source given its location within a dense residential and environmental justice community, which would require outsourcing of cutting to a facility that is located further from residential areas and/or that itself has indoor facilities or otherwise more robustly controlled facilities for such cutting.[162] Other specific

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[159] *See also* Illinois Pollution Control Board Rulemaking R94-14 (June 1994) ("IPCB Rulemaking") available at https://pcb.illinois.gov/Cases/GetCaseDetailsByID?caseID=4982.

[160] *Id.*, Ex. 72 Testimony of Christopher Romaine *during* IPCB Rulemaking at 8-9 (June 1994) ("Based on the list of insignificant activities submitted in a CAAPP application, the Agency or USEPA may find during the course of permitting that an activity should not qualify as insignificant.")

[161] *See, e.g.*, Ex. 73, Metal Air Pollution Partnership Study, 2018 MAPPS Report for South Park near Allied Alloys, at 7 (discussing voluntary steps to reduce torch cutting from facility identified as posing an elevated cancer risk to the community, including adding additional processing equipment to reduce torch cutting and outsourcing majority of torch cutting while evaluating other technology to further reduce metal emissions), available at https://sph.uth.edu/research/centers/swcoeh/mapps/MAPPS_Layreport_AA_F103118.pdf.

[162] *See id.*

controls that must be considered are a requirement to conduct torch cutting indoors onsite, except in exceptional, pre-defined, circumstances; a requirement that the structures in which torch cutting is conducted be fully enclosed, well-ventilated, and fitted with robust air pollution controls[163]; requirements related to fire prevention and control[164]; and reporting and monitoring requirements, including continuous ambient monitoring of PM and HAPs in the vicinity of torch cutting activities to ensure compliance with the prohibition on air pollution and mandated, at least monthly public reporting of such monitoring.

E. IEPA Must Impose Additional Permit Conditions to Prevent Fires and Explosions.

As set forth in our comments on CDPH's proposed rules for Large Recycling Facilities, which we incorporate in full in these comments to IEPA, metals facilities in general are prone to fires and explosions, which in turn can have profound negative impacts on air quality immediately surrounding these facilities and at even greater distances, in addition to posing other safety hazards.[165] This industry-wide problem stands on its own as reason for IEPA to include additional terms in the Draft Permit to address risk of fire and explosion and their impacts on air quality.

The need for additional measures for preventing and minimizing the impacts of fires and explosions is bolstered by General Iron's and RMG's history of such events. On May 18, 2020, a major explosion and fire occurred at General Iron.[166] This is not the first explosion or fire at General Iron. Just a few months ago in February 2020, there was an explosion in the shredder, leading to a citation of unauthorized air pollution.[167] When CDPH responded to the scene, they were told by General Iron Environmental Manager Jim Kallas that such explosions are "a common occurrence."[168] In 2015, there was an incident involving loud explosions and a fire, sending huge plumes of smoke into neighboring communities.[169] According to CDPH, the fire

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[163] Of note, the Ohio EPA has issued a permit-to-install to Reserve FTL for a torch cutting area at one of its other facilities, consisting of a three-walled enclosure equipped with baghouse. *See* Ex. 74, Ohio EPA, Final Permit to Install issued to Reserve FTL, LLC, DBA Reserve Iron Ohio, issued May 7, 2012 (naming Dennis Stropko, also associated with the 11600 S. Burley facilities), available at http://web.epa.state.oh.us/dapc/permits_issued/589801.pdf. We present this permit not as a full endorsement of its terms (as noted above, other facilities have outsourced torch cutting almost entirely where they were located in a dense residential EJ community), but to show that permit control requirements and limits can be applied to torch cutting operations like those that are occurring and will occur at 11600 S. Burley.

[164] *See id*. At 1(b)(2)(d)(ii) (requiring good operating practices to minimize accidental fires, which "shall" include (but are not limited to) "cutting metal that is clean of any oils(s) [sic] or other combustible fluids, the minimization of flame impingement with the ground, and the use of appropriately sized cutting torches.")

[165] See Ex. 5, NGO Large Recycling Rule Comments, at p4-5 https://www.chicago.gov/content/dam/city/depts/cdph/InspectionsandPermitting/Comment_NRDC_SETF_SSCBP_LVEJO_6-21-19.pdf

[166] Ex. 75, Hannah Alani, Colin Boyle, "Major Explosion at General Iron Scrap Plant Rocks Neighborhood, Company Suggests 'Potential Sabotage,'" Block Club Chicago (May 18, 2020, 9:33 A.M.), https://blockclubchicago.org/2020/05/18/major-explosion-and-fire-at-general-iron-scrap-plant-rocks-neighborhood/.

[167] Ex. 23, CDPH Inspection Reports for 1909 N. Clifton, Inspection ID 10929879 (Feb. 11, 2020).

[168] *Id*., Inspection Report, Inspection ID 10929879 (Feb. 11, 2020).

[169] Ex. 76, Alex Nitkin and Alisa Hauser, "After Explosions at Extra-Alarm Scrap Yard Fire, Ald. Calls for Its Closure," dna info Chicago (Dec. 6, 2015, updated 6:49 P.M.), https://www.dnainfo.com/chicago/20151206/lincoln-park/lincoln-park-fire-causes-explosions-dark-plumes-of-smoke-sunday-morning.

was caused by a spontaneous combustion of a materials pile[170]; as described in our rulemaking comments to CDPH, such fires can have profound negative impacts on short-term air quality. And in 2002, an open fire released smoke at the General II site, leading to a liability finding that the facility had unlawfully released air pollution.[171]

In 2019, a truck caught fire as it entered the site gate.[172] Another 2015 incident involved a fire in a trailer.[173] CDPH inspectors have also documented unsafe storage conditions at the General Iron site and issued numerous warnings.[174] In 2010 inspections, an inspector noted dangerous storage of fuel, explosive material, propane tanks, exposed batteries, etc. General Iron has also had several warnings about how to properly store pressure vessels and has repeatedly done this incorrectly.[175]

The Draft Permit is decidedly lacking in any terms to address these very real threats to air quality from fires and explosions. Additional measures should include a mandate to employ infrared cameras that can sense hot spots in material piles and other operations before fires occur, to aid in fire prevention. The Draft Permit should also require detailed and objective requirements with respect to sorting of incoming material and storage of pressure vessels. Given the recent explosion that knocked out the RTO, destroyed buildings and equipment and ignited fires at the site, the Draft Permit should also require incorporation of the manufacturers' specifications and safety protocols for operating the RTO, accompanied by enforceable conditions mandating compliance with these specifications and protocols. This information furthermore should be reported at least monthly to IEPA and IEPA should commit to creating online, timely access to the data (*i.e.*, post all reports within 2 weeks of receipt). Air quality modeling should also reflect the short-term impacts on air quality from fires at metals facilities, particularly with respect to daily- and sub-daily time periods.

F. IEPA Must Impose Conditions that Prevent Odors.

The Draft Permit cannot issue as written due to its failure to ensure compliance with the prohibition on air pollution, which, as set forth elsewhere in our collective comments, specifically encompasses odors. Odors are one of the regularly occurring complaints of neighbors of metals recycling facilities. To quote one resident, "… people around here know the scent of shredded metal. Anyone who lives with it on a daily basis knows it's a heavy, putrid smell."[176]

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[170] Ex. 23, CDPH Inspection Reports for 1909 N. Clifton, Inspection ID 804947 (Dec. 7, 2015); ID 802128 (Dec. 6, 2015).
[171] Ex. 21, City Enforcement Data for 1909 N. Clifton, violation dated 1/2/2002.
[172] Ex. 23, CDPH Inspection Reports for 1909 N. Clifton, Inspection ID 8429665 (Apr. 1, 2019).
[173] *Id*., Inspection Report, Inspection ID 805587 (Dec. 11, 2015).
[174] *Id*., Inspection Reports: Inspection ID 842777 (Apr. 25, 2016); ID DOEINS41724 (Dec. 21, 2010); ID DOEINS41696 (Jan. 19, 2010).
[175] *Id*., Inspection Reports: Inspection ID 1479398 (Jan. 9, 2020); ID 1268331 (June 28, 2018); ID 1239682 (May 9, 2018); ID 830775 (Mar. 31, 2016).
[176] Ex. 77, Marissa Evans, *North Minneapolis residents welcome shutdown of metal shredder*, Minneapolis Star Tribune, September 30, 2019, available at https://www.startribune.com/north-minneapolis-residents-welcome-shutdown-of-metal-shredder/561642752/.

General Iron is no exception to these odor issues. The facility has generated strong metallic odors in the community on many occasions, often leading residents and CDPH inspectors alike to complain that the odors are so strong they impair breathing. On many occasions, including *after* installation of air pollution controls required by the U.S. EPA enforcement action, CDPH has observed strong odors on site at the General Iron facility and in the surrounding neighborhoods.[177] Many times, these odors are so strong that they cause discomfort and difficulty breathing.[178] CDPH's recurring description of the odor is "a pungent odor of sweet metal that burns my nostrils" and on several occasions the inspector has noted that the odor "makes it uncomfortable and difficult for me to fully inhale,"[179] or "uncomfortable to breathe in."[180] On one occasion, an inspector noted that the odor "burned and inflamed my nostrils to the point of throbbing inside my nostrils."[181] CDPH inspectors have continued to cite uncomfortable odors during some of their most recent inspections in May 2020, as described earlier in these comments. General Iron has generated countless complaints from nearby residents about strong odors emanating from the facility. This record demonstrates that such odors meet the definition of air pollution, in that they are injurious to human health and unreasonably interfere with the enjoyment of life or property.

Given the general issues with odors associated with metal shredding facilities, and the history of odor issues at General Iron, IEPA must impose additional permit conditions to ensure that Southeast Side neighbors, including those that use the Calumet River, are not subjected to odors that impact their health and wellbeing. Full enclosure of facility operations as set forth above, including the shredder and various handling processes (functionally creating prohibitions on conducting various operations outdoors) will likely address sources of odors to some degree as well.[182] In addition, IEPA should include specific odor management provisions in the Draft Permit, including use of available odor monitoring systems.

Failure to control odors from the proposed GIII as air contaminants also undermines the Clean Water Act's "national goal" to achieve, "wherever attainable," water quality which provides "for

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[177] Ex. 23, CDPH Inspection Reports for 1909 N Clifton: Inspection ID 11152408 (Mar. 26, 2020); ID 11124169 (Mar. 20, 2020); ID 10929879 (Feb. 11, 2020); ID 10881195 (Jan. 31, 2020); ID 10836335 (Jan. 23, 2020); ID 10767158 (Jan. 10, 2020); ID 10759746 (Jan. 9, 2020); ID 10746578 (Jan. 7, 2020); ID 10716916 (Dec. 31, 2019); ID 10708652 (Dec. 29, 2019); ID 10706274 (Dec. 27, 209); ID 1494955 (Dec. 18, 2019); ID 10639264 (Dec. 11, 2019); ID 10573289 (Dec. 2, 2019); ID 10578242 (Dec. 2, 2019); ID 10462386 (Nov. 15, 2019); ID 10287548 (Oct. 28, 2019); ID 10208629 (Oct. 18, 2019); ID 10103209 (Oct. 7, 2019); ID 10103782 (Oct. 7, 2019); ID 10039135 (Oct. 1, 2019); ID 10047093 (Oct. 1, 2019); ID 10022352 (Sept. 30, 2019); ID 9935709 (Sept. 19, 2019); ID 9935298 (Sept. 19, 2019); ID 9901819 (Sept. 17, 2019); ID 9839788 (Sept. 10, 2019); ID 9839718 (Sept. 10, 2019); ID 9807607 (Sept. 6, 2019); ID 9808727 (Sept. 6, 2019); ID 9802564 (Sept. 5, 2019); ID 9747470 (Aug. 29, 2019); ID 9495131 (Aug. 1, 2019).

[178] *See id.*

[179] *Id*., Inspection Report, Inspection ID 11142508 (Mar. 26, 2020).

[180] *See, e.g., id.,* Inspection Reports: Inspection ID 10881195 (Jan. 31, 2020); ID 11124169 (Mar. 20, 2020).

[181] *Id*., Inspection Report, Inspection ID 9495131 (Aug. 1, 2019).

[182] *See, e.g*., Ex. 78, Rebecca Plevin, *Air district takes action against smelly Paramount metal plant*, Southern California Public Radio KPCC, June 14, 2017 (describing steps taken to address odors, including stopping outdoor grinding and sealing the grinding building), available at https://www.scpr.org/news/2017/06/14/72900/air-district-takes-action-against-smelly-paramount/.

recreation in and on the water." *See* 33 U.S.C. § 1251(a) and (c).[183] The odors from metals recycling facilities like the proposed GIII that are located on the waterfront directly impact air quality over and around waterways, acting as a deterrent of recreational water users.[184] The Calumet River in fact is used for recreational purposes, such as boating, despite the heavy industrial use of the River. It is highly likely that recreational users of the Calumet River – which is already negatively affected by waterfront odors – will be even more severely limited by the additional uncontrolled odors from the GIII facility and related operations. Conversely, recreational use of the Calumet River would be substantially higher if odors from industrial uses on the waterfront were reduced, which in turn would drive improvements in water quality under the Clean Water Act and yet more recreational use. Ensuring equitable recreational use of the Calumet River is also an environmental justice issue, given that ejection of industrial users along the North Branch of the Chicago River is enabling more recreational use on that other part of the Chicago Area Waterways System, creating further disparities in achievement of the Clean Water Act's goals.

V. IEPA Cannot Issue the Draft Permit Because the Applicant's and Agency's Own Air Quality Modeling Demonstrates the Proposed GIII Will Violate the Prohibition on Air Pollution – Even Without Correcting for Numerous Deficiencies in the Modeling and Health Assessments.

IEPA cannot issue the Draft Permit because, using the applicant's and IEPA's own air quality modeling on which the permit relies to model omitted PM_{10} and short-term manganese impacts, the proposed GIII will result in unacceptable impacts to air quality in violation of the prohibition on air pollution.[185] Moreover, the air quality modeling analysis fails to reflect the enforceability and other shortcomings described above and in this section – instead assuming exceedingly high levels of control and so low emissions that are neither in keeping with practical reality nor required by the Draft Permit in practicably enforceable terms – and contains unsupported and/or inappropriate assumptions as discussed below, further rendering the Draft Permit unsupported. These issues are taken up in reverse order in the following comment. In addition, there are numerous shortcomings in the overall assessment of health risks from the proposed GIII above and beyond this modeling critique that further render the Draft Permit unsupported.

[183] This same undermining of the Clean Water Act also occurs due to PM and metals air pollution over the River more broadly, especially with regards to short-term exposures that can have significant impacts on health.
[184] For example, in early May 2018, Meleah Geertsma of NRDC experienced putrid odors from metal scrap handling by a facility or facilities located at 106th St. and the Calumet River. The smell was a mix of strong metallic odors and other chemical smells. A representative of Senator Durbin's office was on the boat as well, along with a community resident and an NRDC colleague of Meleah's. *See* Ex. 79-82, Photographs of metal scrap loading along the Calumet River, taken by Meleah Geertsma, May 2, 2018.
[185] Air quality modeling expert analysis for these comments was provided by Todd Cloud, *see* Ex. 83, Resume of Todd Cloud, March 2019.

A. Emissions Estimates Used by the Applicant and IEPA in the Air Quality Modeling Demonstration are Unsupported and Otherwise Inappropriate.

Shredder fugitive emissions. As discussed elsewhere in these comments, the proposed hammermill shredder will not be a completely enclosed operation. Therefore, the applicant's assumption that 100% of the particulate matter generated will be captured and controlled is not correct.[186] As described above, a significant portion of the particulate matter generated will escape the openings in the shredder enclosure and capture hood. Our revised engineering estimate of shredder emissions that should be used in revised air quality modeling is (at least) 27 tpy of unaccounted for particulate matter emissions. *Unless and until the shredder fugitive emissions are quantified and included in the metals and particulate matter modeling, the application materials before the agency cannot be relied upon for permit issuance.*

Conveyor emission factors. The applicant provided detailed particulate matter emission calculations regarding the ferrous material processing emissions.[187] These particulate matter emission calculations largely rely upon AP-42, Section 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing. The emission factor tables in AP-42, Section 11.19.2 provide two factors (controlled and uncontrolled) with controlled factors applicable to operations utilizing wet suppression. The controlled factors reflect an approximate 95% reduction in emissions due to wet suppression. The applicant (in a series of footnotes to Table A-2) assumes that a natural moisture content above 1.5% allows the use of the controlled factors without wet suppression equipment in operation. The reviewer does not concur with this approach. There is nothing magical about a 1.5% moisture content that immediately affords 95% reduction in fugitive dust emission generating potential equivalent to wet suppression. Depending on the material involved, significant fugitive dust emission generating potential can exist at moisture contents significantly in excess of 1.5%. *Unless and until the conveyor emission calculations are corrected and the revised estimates included in the metals and particulate matter modeling, the application materials before the agency cannot be relied upon for permit issuance.*

DC01 grain loading. The non-ferrous material processing system includes a fines processing system controlled by four dust collectors. Three of the dust collectors vent indoors with the fourth venting to atmosphere. The applicant estimates particulate matter emissions from the fourth dust collector (DC-01) utilizing the potential airflow and an assumed exit loading of 0.005 grains per cubic foot (gr/cf).[188] A more appropriate grain loading to estimate particulate matter emissions from DC-01 is in the range of 0.04 gr/cf, nearly 8 times higher than the applicant proposes. The applicant's proposed 0.005 gr/cf factor is simply not tenable given the type of collection systems in use at these types of operations nationwide. The applicant's proposed 0.005 gr/cf factor represents the pinnacle of particulate control from a state of the art, brand new baghouse equipped with polyester filter bags and reverse jet pulse cleaning. Absent substantial justification and documentation, the usual and customary factor of 0.04 gr/cf should

[186] *See* Revised Air Dispersion Modeling Report, February 12, 2020, at Table A-2.
[187] *See id.*
[188] *See id*. at Table B-4a.

be utilized. *Unless and until the DC-01 emission calculations are corrected and the revised estimates included in the metals and particulate matter modeling, the application materials before the agency cannot be relied upon for permit issuance.*

Vehicle traffic emissions. In most (if not all) particulate matter modeling demonstrations involving vehicle traffic, satisfactory results depend almost entirely upon the manner in which wind driven particulate matter emissions emanating from erodible surfaces are (a) calculated and (b) modeled. The original modeling report describes in general terms the manner in which vehicle traffic emissions were calculated. See Section 2.4, Air Dispersion Modeling Report (January 24, 2020). The revised modeling report describes in general terms the manner in which the vehicle traffic emissions were modeled. See Section 3.9.2, Revised Air Dispersion Modeling Report (February 12, 2020). The actual emission calculations themselves are found in Section 3.5 of the September 2019 application (Table 3-5A).

First, it is not appropriate here to distinguish among paved roads, unpaved roads, and other erodible surfaces. As discussed above, due to their inherent nature, including movement of heavy duty vehicles, it is very difficult to maintain intact (i.e., paved) surfaces at shredder operations unless they are all concrete or similarly lined. Compacted earth and asphalt paving cannot usually withstand the constant wear and tear without significant and ongoing maintenance, further exacerbated by weather such as at the Chicago location. As a result, even paved areas can deteriorate and become sources of fugitive dust, especially under increasing wind conditions.

Second, vehicle traffic emission factors are complex and involve multiple assumptions and caveats regarding wind speeds, silt loading, efficacy of watering or other dust control measures, frequency of maintenance, etc. A more robust and appropriate approach given general engineering knowledge/experience, the history of failed paving at General Iron and the RMG-SCPM facilities and the vagueness of pavement-related requirements in the Draft Permit and FPOP is to use a simplified fugitive dust estimate, taken from AP-42 Section 13.2.3 Heavy Construction Operations. In the aggregate, operations at a typical shredder are not dissimilar, in terms of the ability to generate dust from exposed sources, including unpaved and partially paved/deteriorated surfaces. The recommended emission factor is 1.2 tons/acre/month. Annual emissions can be therefore estimated using estimates of potentially erodible acreage. To allow for a portion of the area which might be paved (assumed to be 20%), we suggest that this emission factor be applied to the rest (i.e., 80%) of the total GII acreage at the rate of 1.2 tons/acre/month. *Unless and until the vehicle traffic emission calculations are provided for review and comment, the application materials before the agency cannot be relied upon for permit issuance.*

B. Modeling Inputs/Assumptions Used by the Applicant and IEPA are Unsupported and Otherwise Inappropriate.

Meteorological datasets. Two National Weather Service (NWS) meteorological datasets were used in the modeling demonstration. Surface data was taken from the Midway Airport (Station ID 14819) in conjunction with coincident air sounding data from Davenport, Iowa (Station ID

94982) for the years 2012 through 2016. In general, use of one year of onsite meteorological data is the preferred approach in U.S. EPA modeling guidance. Use of five years of "off-site" meteorological datasets may be used *unless* (1) specific terrain, coastal proximity, or other unique geographical issues make such data unsuitable and/or (2) "on-site" meteorological datasets are available. In this case, given the proximity of the site to Lake Michigan and the Calumet River (and all of the unique wind patterns that result therefrom) and the availability of surface data from three meteorological stations in close proximity to the site (KCBX[189], S.H. Bell[190], and Watco Terminal[191]), use of the surface data from the Midway Airport (Station ID 14819) cannot be supported. *Unless and until the modeling is revised to include the surface data from the local meteorological stations, the application materials before the agency cannot be relied upon for permit issuance.*

Volume source representations. With the exception of the regenerative thermal oxidizer (RTO) and DC-01, all of the proposed emission generating activities are treated as a volume sources.[192] Volume source representation for air dispersion modeling purposes is a complex combination of location, release height, initial lateral dimensions, and initial vertical dimensions. However, because the applicant redacted the process flow diagrams from the original modeling submittal, this reviewer cannot vet the volume source representations so made. The applicant based its process flow diagram redactions on trade secret grounds, which as discussed above is in conflict with federal Clean Air Act policy on treatment of "emission data," even assuming the validity of the trade secret claim (which is dubious). And while the applicant does provide some information about the location of the haul roads, the depiction is spartan at best.[193] *Unless and until all volume source representations can be fully vetted, the application materials before the agency cannot be relied upon for permit issuance.*

Co-located sources. In a letter report dated March 13, 2020, emissions were identified and quantified for no less than four (4) operations co-located with the applicant's proposed operations. Collectively referred to as the South Chicago Property Management (SCPM) operations, the March 13, 2020 letter report identifies and quantifies over 15 tpy of additional particulate matter emissions not modeled for the proposed GIII, the vast majority of which are vehicle traffic emissions. Given the fact that it is the wind driven particulate matter emissions emanating from erodible surfaces that are largely driving the modeled NAAQS violations (described below), the deplorable condition of the roads at these facilities as evidenced in CDPH's inspections database and as reflected in the revised modeling presented here, and

[189] *See* Ex. 84, USEPA, KCBX Fenceline Air Monitoring Data, available at https://www.epa.gov/petroleum-coke-chicago/kcbx-fenceline-air-monitoring-data#meteo.
[190] *See* Ex. 85, USEPA, S.H. Bell Chicago Air Monitoring Data, available at https://www.epa.gov/il/sh-bell-chicago-air-monitoring-data.
[191] *See* Ex. 86, USEPA, Watco Terminal and Port Services, available at https://www.epa.gov/il/watco-terminal-and-port-services#data.
[192] *See* Revised Air Dispersion Modeling Report, February 12, 2020, at Section 3.9.1.
[193] *See* Air Dispersion Modeling Report, January 24, 2020, at Appendix C-1.

furthermore that IEPA should have considered these SCPM facilities and possibly others together with the proposed GIII as a "single source" as set forth elsewhere in these comments, the failure to include these emission along with the proposed GIII's emissions cannot go unresolved. *Unless and until all particulate matter emissions from the co-located operations are included in the modeling, the application materials before the agency cannot be relied upon for permit issuance.*

C. Based on the Applicant's Own Emissions Estimates and Modeling, the Proposed GIII Will Result in Exceedances of the PM_{10} NAAQS and Unacceptable Short-Term Manganese Impacts, Even Without Correcting for the Above Deficiencies.[194]

Manganese. Based on the applicant's own emission calculations and modeling approach, and setting aside all of the above-enumerated necessary revisions, impacts of manganese (Mn) exceed the 8-hour Reference Exposure Level (REL) of 0.17 micrograms per cubic meter (ug/m3) established by the California Office of Environmental Health Hazard Assessment (OEHHA).[195] **See Figure 1.**[196] *Unless and until Mn impacts (including regional sources such as the significant known sources of fugitive manganese along the Calumet River that are not reflected in IEPA's inventory) can be shown to reside below 0.17 ug/m3 (8-hour average), the application materials before the agency cannot be relied upon for permit issuance. This is especially true given the long history of manganese issues in this environmental justice community.*

24-hour PM_{10} NAAQS. The applicant and IEPA completely omitted PM air quality modeling without explanation, despite the prohibition on air pollution, which encompasses causing or tending to cause air pollution in violation of the National Ambient Air Quality Standards. Based on the applicant's own emission calculations and modeling approach, and setting aside all of the above-enumerated necessary revisions, impacts of particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) (added to background) exceed the 24-hour National Ambient Air Quality Standard (NAAQS) of 150 ug/m3. **See Figure 2.**[197] *Unless and until PM10 impacts (including background) can be shown to reside below 150 ug/mg (24-hour average), the application materials before the agency cannot be relied upon for permit issuance.*

Other air toxics. The applicant proposes to control emissions from the hammermill shredder with a combination roll-media particulate filter and regenerative thermal oxidizer (RTO) followed by a packed tower scrubber. The presence of the RTO indicates high levels of volatile organic compounds (VOC), organic hazardous air pollutants (HAP), and other air toxics not

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[194] For modeling files supporting this analysis, *see* Ex. 87 for PM_{10} and Ex. 88 for manganese.
[195] *See* Ex. 89, California Office of Environmental Health Hazard Assessment, TSD for noncancer RELs, Appendix D. Individual Acute, 8-hour, and Chronic Reference Exposure Level Summaries, December 2008 (updated July 2014) ("OEHHA REL for Manganese"), at p429, available at https://oehha.ca.gov/media/downloads/crnr/appendixd1final.pdf.
[196] Ex. 90, Figure 1, Mn Impact Contour Plot, 8-hour average of 0.17 ug/m3.
[197] Ex. 91, Figure 2, PM_{10} Contour Plot, 24-hour average of 150 ug/m3.

considered in the modeling demonstration on file. The HAP and air toxics emissions emanate from the paints and solvents and other organic material on the metals fed to the shredder. *Unless and until all reasonably identified HAP and air toxics are identified, quantified, and modeled, the application materials before the agency cannot be relied upon for permit issuance.*

D. **Additional Deficiencies in the Health Assessment Undertaken by the Applicant and IEPA Render the Assessment Unsupported and Otherwise Insufficient to Ensure Protection of Air Quality**.

In addition to such deficiencies in the air quality modeling presented above, we provide these comments on the use of the modeling data to assess risks to health and well-being posed by the proposed GIII. We support IEPA's investigation into the air toxics impacts of this facility on air quality and health, which we believe is solidly grounded in, and indeed generally necessary to fulfill, the agency's duty to ensure that the proposed facility will not result in air pollution in violation of 415 ILCS 5/9(a). However, in addition to omitting PM_{10} modeling without explanation, nowhere does the applicant or IEPA explain the rationale for selecting Wisconsin's air toxics approach among the many state air toxics programs available, including those that are more current, comprehensive/robust, and protective of public health. Nor does IEPA take account of multiple other aspects of risks to health and welfare that are needed to assess impacts from the proposed GIII in this particular setting.

A full analysis of the approach taken by the applicant and IEPA and available alternatives was not feasible within the allotted comment period, especially in light of the dual COVID-19 and civil rights emergencies. We provide the following short list of high-level issues identified in the health analysis:

- As discussed above, failure to assess PM_{10}
- Failure to fully justify use of the Wisconsin approach for air toxics, versus other available approaches for assessing air toxics in states such as Michigan, Minnesota, Ohio, California, and Texas
- Failure to assess the combined impacts of multiple metals and other hazardous air pollutants ("HAPs") from the proposed GIII, with respect to the facility itself and in the context of the overburdened Southeast Side[198]
- Failure to take into account non-cancer impacts of HAPs
- Failure to assess the impacts of VOCs along with metallic HAPs
- Failure to account for the toxicity of hexavalent chromium
- As discussed above, failure to evaluate available short-term health thresholds for certain HAPs, such as the 8-hour manganese threshold of 0.17 ug/m^3 discussed above[199]

[198] *See, e.g.*, Ex. 92, Michigan Department of Environmental Quality, 48217 Community Air Monitoring Project, April 27, 2018 (discussing an additive approach for assessing combined impacts of HAPs), available at https://www.michigan.gov/documents/deq/deq-aqd-amu-48217_air_monitoring_report_621859_7.pdf.
[199] *See* Ex. 89, OEHHA REL for Manganese.

- Failure to accurately account for fugitive emissions from nearby facilities, given shortcomings in the state's emissions inventory for such sources
- Failure to take into account the mobile source-related emissions from the many trucks, trains and barges that will accompany the proposed GIII and related sources
- Failure to evaluate other proposed and/or in-construction nearby sources of air pollution, such as a proposed new SCPM recycling facility immediately to the East of GIII[200] and large warehousing facilities by developer NorthPoint that are slated to substantially increase heavy duty diesel truck emissions in the vicinity[201]
- Failure to take into account the multiple pollutant exposures via air, water and soil; historic and existing health burdens; and sociodemographic characteristics of the impacted population, as they pertain to the overall cumulative vulnerability to impacts from air pollution that would be emitted from the proposed GIII[202]

IEPA must address at least these shortcomings in a revised assessment of whether the proposed GIII will run afoul of the prohibition on air pollution.

VI. Conclusion.

In sum, based on the above comments and others being submitted on behalf of SETF, the Coalition to Ban Petcoke and NRDC as well as other environmental and public health groups, the Draft Permit for the proposed massive new metal shredding facility in this already-overburdened environmental justice community cannot issue.[203] IEPA owes a duty of care to all Illinois residents to ensure each person's constitutional right to a healthful environment. It also has duties to uphold civil rights and equal protection of the law that require the agency to do more for overly burdened communities to ensure equitable enjoyment of that right. As set forth above, IEPA has ample authority to proactively protect the Southeast Side and must do so in this case in order to fulfill its many obligations under the Illinois Environmental Protection Act and other state and federal laws.

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[200] *See* Ex. 93, City of Chicago Department of Buildings, Chicago of Chicago DOB New Applications for Ward 10, March 11, 2020 (describing application for construction of a new $9,000,000 Class IV-A recycling facility at 11554 S. Ave. O, proposed by Hal Tolin of SCPM).

[201] *See* Ex. 94, Alby Gallun, *Why this industrial developer is making a big – and risky – bet on the city*, Crain's Chicago Business, March 22, 2019 (describing and providing map of new industrial park between 116th and 126th streets and Avenue O and the Calumet River), available at https://www.chicagobusiness.com/commercial-real-estate/why-industrial-developer-making-big-and-risky-bet-city.

[202] *See* Ex. 95, Rachel Morello-Frosch, et.al., Understanding the Cumulative Impacts of Inequalities in Environmental Health: Implications for Policy, Health Affairs 30, No. 5 (2011): 879-887, available at https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2011.0153.

[203] In addition to the above comments and cited sources, we are submitting additional correspondence with IEPA relevant to this permitting action to ensure a more complete record. *See* Ex. 96, various emails and attachments between IEPA and NRDC, SETF, and/or Coalition representatives.

Sincerely,

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(Joined by the Southeast Environmental Task Force and the Southeast Side Coalition to Ban Petcoke)