Comments to Proposed Rules for Reprocessable Construction-Demolition Material Facilities

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To: envcomments <envcomments@cityofchicago.org>

[Warning: External email]

To whom it may concern,

Please see Ozinga's comments to the Proposed Rules for Reprocessable Construction/Demolition Material Facilities.

Contact me if you have any questions.

Mike Saldarelli

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OZINGA®

October 27, 2021

Chicago Department of Public Health
333 South State Street #200
Chicago, IL 60604
Submitted via email: envcomments@cityofchicago.org

Re: Proposed Rules for Reprocessable Construction/Demolition Material Facilities
Comments to Proposed Rules

To whom it may concern:

Ozinga Materials appreciates the opportunity to comment on the Proposed Rules for Reprocessable Construction/Demolition Material Facilities. Ozinga fully appreciates the City of Chicago's goals for cleaner air for all neighborhoods. However, the methodology of stringent rules for Reprocessable Construction/Demolition Material Facilities seems excessive and will not have any impact on air quality. This is due to the low potential and actual emissions from crushing operations and the nature of emissions.

The Clean Air Act requires the USEPA to set National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants. These criteria air pollutants are carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. Currently, Chicago is in attainment status for all of these pollutants except for ozone (2015 8-hour standard).

Slide 10 of the Proposed Rock Crusher Rules Presentation shows the location of the Crushing Facilities throughout the city. The majority of these sites are located where the Air Quality Index is in the lower percentile of clean air standards. The Air Quality Index is a composite standard based on the measurements of the following pollutants:

- Ground-level ozone
- Particle pollution (also known as particulate matter, including PM-2.5 and PM-10)
- Carbon Monoxide
- Sulfur Dioxide
- Nitrogen Oxide

It should be noted the majority of these lower percentile areas are located near the Kennedy Expressway, the Eisenhower Expressway, the Stevenson Expressway, and the Dan Ryan Expressway. Volatile organic compound (VOCs) and nitrogen oxide (NOx) emissions, both of which are emitted from cars, are precursors for ozone pollution levels. In addition, there are a number of facilities in these areas which either possess a Title V/CAAPP or FESOP Air Permit for their VOC and NOx emissions. As stated earlier, the Chicago region is currently in Non-Attainment status for Ozone. According to USEPA Region V's Southeast Chicago Ambient Air Quality Analysis of 2021, only two of ten ozone monitors in the Chicago area met the 70-ppb standard. Considering these factors, the major causes of poor Air Quality Indexes in the City of Chicago are VOCs and NOx emissions. Please note that volatile organic compounds and nitrogen oxides are not emitted from crushing operations.

The major pollutant generated from crushing operations is particulate matter. There is a small fraction of these emissions which classifies as particulate matter less than 10 microns (PM-10). A series of

PurpleAir air monitors is stationed throughout the city to monitor air quality. These monitors measure various pollutants, including PM-10. According to the previous year's data, each monitor had no more than 10 days which exceeded the Air Quality Index of 50 for PM-10, thus showing a high level of air quality for this pollutant standard. In addition, according to USEPA Region V's Southeast Chicago Ambient Air Quality Analysis of October 2021, Chicago is in attainment status for all NAAQS PM-10 standards.

PM-2.5 is also a pollutant of concern in all areas of the nation, not just in the City of Chicago. In fact, each PurpleAir monitor shows an average of 100 days in which the PM-2.5 AQI standard exceeds the Air Quality Index of 50. While PM-2.5 emissions can come from manufacturing sources, the pollutant can also be formed from VOC and NOx emissions. Despite these findings, the USEPA Region V's Southeast Chicago Ambient Air Quality Analysis of 2021 shows that all Chicagoland monitors meet or exceed all PM-2.5 standards. Crushing operations are hardly a source of PM-2.5 emissions. According to AP-42 Emission Factors (Table 11.19.2-2, Emission Factors for Crushed Stone Processing Operations), one ton of processed crushed stone emits no more than 0.00022 lbs of PM-2.5 emissions. The Ozinga Lumber Street Site emitted no more than 50 pounds of PM-2.5 emissions in 2020.

Currently, there are only six crushing operations throughout the City of Chicago. Most of these operations emit little PM and PM-10 emissions. In 2020, Ozinga's Lumber Street Crushing Operations emitted 0.79 tons of Particulate Matter, 0.35 tons of which were PM-10 emissions, and about 50 pounds of which were PM-2.5 emissions. The emissions from crushing operations from all active sites in the City of Chicago are minute.

As of now, the Illinois EPA does not require the majority of the requirements listed in these new regulations. In addition, the Illinois EPA does not require continuous monitoring and recordkeeping for the majority of Title V/CAAPP facilities, even in Environmental Justice Areas. It should also be noted that USEPA reviews every issued Title V/CAAPP Permit before it is finalized. Therefore, it seems arbitrary to require excessive monitoring and recordkeeping for sites which emit low levels of pollutants.

Ozinga does understand the need for preserve clean air for our communities. Incidents such as the demolition of the Crawford Coal Plant Site in the Little Village neighborhood of Chicago cannot occur in the future. The six crushing operations in the City of Chicago emit a small fraction of the particulate matter emissions in the City of Chicago. If the potential emissions from all crushing operations in the City of Chicago were summed, it would not even be classified as a FESOP source. There has also been no study performed showing the direct correlation of air quality with crushing operations. The facts listed above would surely demonstrate there is no impact on air quality from crushing operations. Therefore, the use of specific regulations for Reprocessable Construction/Demolition Material Facilities is unnecessary and provides no environmental benefit to the City of Chicago.

The following are specific comments concerning the proposed regulations:

3.8.21.1.1. An emissions and air dispersion modeling study ("Study") of the Facility and its operations, using USEPA's AERMOD software or other software approved by the Commissioner. The Study shall evaluate airborne emissions from each Point Source and Fugitive Source. The Study shall evaluate PM10 emissions that may be generated at the Facility from sources such as, but not limited to, Processing equipment, diesel engines, and emissions from roadways, stockpiles, and material

handling cutting activities. Diesel emissions from on-road mobile sources are not required to be included in the modeling study.
The Applicant shall submit all emission calculation and air-modeling files. The AERMOD file shall be provided in .inp EPA format.

Response: An emission and air dispersion modeling study is an excessive practice for facilities which perform crushing operations. The majority of facilities which crush material currently operate under an Illinois EPA-granted Lifetime Operating Permit or a Registration of Smaller Source (ROSS). On occasion, the Illinois EPA requires emission and air dispersion modeling for the following sites:

- *CAAPP (Title V Air Permit) sites*
- *Sites which must adhere to the Toxic Air Contaminant requirements listed in 35 IAC 232*
- *Facilities required to pursue a Prevention of Significant Deterioration/New Source Review Permit*

The Illinois EPA does not request Emission and Air Dispersion Modeling Studies for ROSS Facilities. In addition, the 2020 actual annual emissions from the crusher at Ozinga's Lumber Street facility are less than one ton per year in particulate matter and less than 0.5 tons per year in particulate matter less than ten microns. Performing a modeling exercise for an emission release this low in magnitude does not provide any environmental benefit.

3.8.21.1.3. A calibration plan that ensures all PM10 monitors, and weather stations will be calibrated prior to being placed in service, and annually or at a frequency recommended by the manufacturer thereafter. For Facilities using light-scattering nephelometers to monitor PM10, the calibration plan shall include periodic determination of a site-specific correlation factor that calibrates the instruments' readings against concentrations determined by gravimetric sampling using EPA IO 3.1, NIOSH 0500, or other methods approved by CDPH. The site-specific correlation factor shall be calculated using mathematical formulas provided by the equipment manufacturer.

Response: The installation of PM-10 monitors is excessive for crushing operations. The majority of crushing operations possess Lifetime or ROSS permits with Illinois EPA. The state agencies under the authority of USEPA Region V, including Illinois EPA, rarely mandate continuous particulate matter monitors for Title V Permitted sites. In addition, Illinois EPA does not require PM-10 monitors for ROSS or Lifetime Operating Permit sites.

Furthermore, PM-10 monitors do not account for the source of dust. Particulate matter detected by a monitor can either be from the permitted site, a neighboring site, a roadway, or even an open field. PM-10 monitors can trigger a number of false positives when detecting dust from a permitted site. According to these regulations, a facility is considered in violation of a regulation even if the dust came from an outside source.

Due to their excessive nature and potential inaccuracies, PM-10 monitors should not be required for crushing operations.

3.8.21.1.4. As part of the calibration plan in 3.8.21.1.3, the Operator shall determine the fraction of harmful contaminants that may be in the PM10. Specifically, air samples shall be collected at all monitored locations for analysis of the following pollutants:

a. Lead using NIOSH Method 7300, 7302, or 7303;

b. Asbestos fibers using NIOSH Method(s) 7400 and/or 7402;
c. Silica using NIOSH Method 7500 or 7602;
d. Respirable particulates using NIOSH Method 0600; and
e. Total dust using NIOSH Method 0500.
The Commissioner may approve alternate test methods or require the use of EPA methods, depending on site-specific factors. The Commissioner may also require the air sampling of other contaminants that may be emitted from the Facility.

Response: Ozinga finds the use of PM-10 monitors excessive and unreliable, as stated in the response to 3.8.21.1.3. However, testing for the components listed above should not be required if a Safety Data Sheet shows there are no levels of a component in the crushed material.

For example, the Ozinga Lumber Street site only crushes leftover Ozinga-produced concrete product. Asbestos would not be found in the crushed concrete since there was no asbestos-containing material in the original production of the concrete. Therefore, Ozinga proposes the exclusion of certain testing requirements if documented proof is given that a component is not present in the product.

5.4.2. The surface moisture content of all Reprocessable Construction/Demolition Material stockpiles shall be 1.5% or more by weight. To demonstrate compliance, a representative sample shall be tested weekly using ASTM Procedures (C566-97) for total moisture content of the materials, or subject to Commissioner approval, the use of real-time bulk material moisture meters. The above moisture content testing is not required over weeks when the average daily temperature is below freezing.

Response: The measurement of moisture contents is an excessive requirement for the maintenance of dust control. Due to the high relative humidity in Chicago (approximately 70%), the moisture content of stone, concrete, and practically all construction materials will easily exceed 1.5 % by weight. The weekly sampling of the material would become an unnecessary practice.

5.6 The Owner and/or Operator shall test reprocessed materials generated at the Facility. A composite sample of each aggregate product shall be collected and tested for extractable lead using SW846 Test Method 1311-Toxicity Characteristic Leaching Procedure (TCLP) and EPA Method 6010, 6020, or 7000.
The Commissioner may require the testing of additional constituents as a special condition of the permit. The frequency of the testing shall be every (2) two months or as specified in the permit and shall not exceed (6) six times per calendar year unless the Commissioner expresses sufficient cause in written form to the Owner and/or Operator.
The sample results shall be submitted to CDPH within 10 days from the Operator's receipt of the laboratory results. In the event a sample exceeds EPA's hazardous waste criteria, the submittal shall include a narrative explaining the circumstances of the exceedance, the amount of product impacted, the actions the Permittee has undertaken or will take to properly handle, store, and dispose of the impacted material, and protocols that will be adopted to ensure such exceedances do not occur in the future.

Response: The tests required in this subpart are unnecessary since crushed stone and concrete do not have lead. Ozinga proposes an alternative means of compliance for this requirement. If a company submits a Safety Data Sheet for a finished product which shows no lead of lead compounds, the facility shall be exempt from this requirement.

5.8.7. Air Monitoring Requirements: The Facility shall conduct dust and wind monitoring as follows:

5.8.7.1.1. Continuous PM10 Monitoring. Install, operate, and maintain continuous PM10 monitors around the perimeter of the Facility in accordance with the dust monitoring plan prepared under subsection 3.8.21 of these rules. These instruments must be designated as Federal Equivalent Method (FEM) by EPA or meet the requirements for a Near Reference PM10 Monitor as defined in these rules.
5.8.7.1.2. CDPH may require the installation of additional air monitors or the relocation of existing air monitors if the Facility causes a dust nuisance or if CDPH determines that the current number or placement of air monitors at the Facility is ineffective or inadequate.
5.8.7.1.3. Additional monitoring. The Department may require the Facility to install, operate, and maintain other monitoring methods, including, but not limited to, video recording and one or more filter-based monitoring sites, when PM10 monitoring does not provide sufficient information regarding Fugitive Dust for the Commissioner to adequately assess the health impacts of such emissions. Any additional monitoring methods shall meet the specifications set forth in the dust monitoring plan prepared under subsection 3.8.21 of these rules. In the event that additional monitoring is required, the Department will provide a reasonable time period for equipment installation.

Response: The installation of PM-10 monitors is excessive for crushing operations. The majority of crushing operations possess Lifetime or ROSS permits with Illinois EPA. The state agencies under the authority of USEPA Region V, including Illinois EPA, rarely mandate continuous particulate matter monitors for Title V Permitted sites. In addition, Illinois EPA does not require PM-10 monitors for ROSS or Lifetime Operating Permit sites.

Furthermore, PM-10 monitors do not account for the source of dust. Particulate matter detected by a monitor can either be from the permitted site, a neighboring site, a roadway, or even an open field. PM-10 monitors can trigger a number of false positives when detecting dust from a permitted site. According to these regulations, a facility is considered in violation of a regulation even if the dust came from an outside source.

Due to their excessive nature and potential inaccuracies, PM-10 monitors should not be required for crushing operations.

5.8.7.1.4. Continuous Weather Monitoring. Install, operate, and maintain, according to manufacturer's specifications, a weather station, or other permanent device to monitor and record wind speed and wind direction, along with the corresponding temperature, precipitation, and relative humidity at the Facility. Such readings shall be taken at an unobstructed, unsheltered area, centrally positioned in relation to the storage piles and dust-causing activities, and at a minimum height of (10) ten meters above ground level, unless another height is appropriate pursuant to applicable US Environmental Protection Agency protocols and guidance.

Response: The installation of a weather station is an unnecessary practice. The use of local weather sites provides more than adequate data of weather conditions.

5.8.7.1.5 Data-logging. A data logger shall be attached to all air monitors and weather stations to record readings from the monitors. All data collected shall be consistent with units in the National Ambient Air Quality Standards for PM10, and ambient monitoring practices must comply with current EPA protocols and guidance for ambient air quality monitoring, including but not limited to those for data completeness, calibration, inspection, maintenance, and site and instrument logs.

Response: See response for Section 3.8.21.1.3. In addition, Illinois EPA does not require continuous monitoring and recordkeeping for the majority of Title V/CAAPP facilities, even in Environmental Justice Areas. It should also be noted that USEPA reviews every issued Title V/CAAPP Permit before it is issued. Therefore, it seems arbitrary to require excessive monitoring and recordkeeping for sites which emit low levels of pollutants.

5.8.7.1.6. Reportable Action Level (RAL). The PM10 RAL is the concentration of PM10 measured at any monitoring location at the Facility that will trigger response activities under the contingency plan required under subsection 5.8.7.1.12. The PM10 RAL shall be 150 micrograms per cubic meter averaged over a 15-minute period unless a different concentration or averaging time is specified by CDPH in the permit. In cases where there is an upwind PM10 monitor present, the upwind PM10 concentration may be subtracted from the downwind PM10 concentration in determining a PM10 RAL exceedance. CDPH may require a different or multiple site-specific RALs based on the potential emissions of pollutants from the Facility, ambient background concentrations of PM10, adjacent offsite sources of PM10, the Facility's compliance history and level of housekeeping, and/or other pertinent factors.

5.8.7.1.7. Additional RALs. The Department may set forth different or additional RALs in the permit for wind speeds, PM2.5, VOCs, and other pollutants based on the information contained in the application, the Facility's compliance history, the occurrence of dust nuisance and health complaints, and/or other factors.

5.8.7.1.8. Alternate RAL. The Applicant may propose an alternate PM10 RAL concentration or PM10 RAL averaging time to CDPH. Such proposal shall Demonstrate the following:
a. The current PM10 RAL is not reliable due to offsite ambient PM concentrations beyond the control of the Operator;
b. The proposed PM10 RAL is protective of human health and the environment. This Demonstration shall include filter-based sampling showing the air concentration of lead, asbestos, silica, and pollutants handled at the Facility; and

c. The proposed RAL does not violate any applicable local, state, or federal air quality standards or requirements.
The Department may reinstate the RAL in subsection 5.8.7.1.6 should it find the alternate RAL insufficient in preventing nuisances and negative impacts on human health and the environment.

Response: The use of a Reportable Action Level is not necessary for crushing facilities. The site is already performing daily visual monitoring. In addition, RAL's can only be enforceable with the use of continuous PM-10 monitors. As stated before, the use of PM-10 monitors is excessive and not necessary for a site with little PM-10 emissions.

5.8.7.1.9. Monthly Data Reporting. All data collected pursuant to subsection 5.8.7.1.5 must be submitted to CDPH within 14 days of the end of the month in which the data was collected via email to envwastepermits@cityofchicago.org, in a format specified by the Department.

Response: As stated before, the use of PM-10 monitors is excessive and not necessary for a site with little PM-10 emissions. However, any alternative means to assure compliance can be listed in the Quarterly Reports listed in Section 5.8.16.

5.8.7.1.10. RAL Notification. When a reportable action level is exceeded, the Operator shall use telemetry instruments or other means to notify CDPH by email at envwastepermits@cityofchicago.org within fifteen minutes or within the timeframe specified in the permit. The subject line of such email shall contain the words "RAL Alert Condition - " followed by the Facility's permit number. The notification shall include the following information recorded at the time the RAL occurred:
a. The date and time of the RAL exceedance;
b. The average wind speed and wind direction recorded over a 15-minute period;
c. The concentrations of PM10 recorded by all monitors over the same 15-minute period; and
d. The latitude and longitude coordinates in decimal degrees of all monitoring locations.

5.8.7.1.11. RAL Recording. Within 24 hours of a RAL exceedance, the Operator shall record the following information in the Operating Record:

a. The date and time of the exceedance;
b. The recorded wind speed and PM10 concentration(s) at the time of the RAL;
c. The onsite and/or offsite source(s) of the emission;
d. A description of the mitigative action(s) taken;
e. A description of any operational impact as a result of the RAL incident; and
f. A description of any preventive measure(s) to reduce or eliminate future occurrence.

Response: The use of a Reportable Action Level is not necessary for crushing facilities. The site is already performing daily visual monitoring. RAL's can only be enforceable with the use of continuous PM-10 monitors. As stated before, the use of PM-10 monitors is excessive and not necessary for a site with little PM-10 emissions.

In addition, the response time of 15 minutes is not nearly enough time to identify the source of a RAL exceedance. All the information listed above shall be recorded, but if the source of the dust has ceased and is no longer an issue, reporting to the City of Chicago is unnecessary.

5.8.7.1.12. Contingency Plan. The Owner or Operator shall prepare a contingency plan describing mitigative actions that will be taken when the monitors detect PM10 or other parameters that exceed the RAL under these rules or in the permit. The response activities should consist of a range of increasingly aggressive measures appropriate to different levels of exceedance and take into account whether the source is determined to be onsite or offsite.

Response: In addition to the previous objections concerning RALs, a Contingency Plan is unnecessary since a Dust Monitoring Plan provides adequate guidance in dust mitigation.

Ozinga understands the need for open discussion for these proposed regulations. If there are any questions concerning these comments, please contact me at michaelsaldarelli@ozinga.com.

Sincerely,

Michael J. Saldarelli Jr. PE
Director of Environmental Compliance