DEPARTMENT OF PUBLIC HEALTH
CITY OF CHICAGO

May 24, 2018

Cheryl Sikorski, General Manager
Calumet River Terminal, Ltd.
10740 S. Burley Avenue
Chicago, IL 60617

RE: Calumet River Terminal, 10740 S. Burley Avenue
Response to Fugitive Dust Plan

Dear Ms. Sikorski,

The Chicago Department of Public Health ("CDPH") is in receipt of the March 2018 updated Fugitive Dust Plan for Calumet River Terminal, Ltd. ("CRT"), submitted pursuant to CDPH's Rules and Regulations for Control of Emissions from the Handling and Storage of Bulk Material Piles ("Bulk Material Regulations"), as well as your April 9, 2018 letter regarding "Material Handled and Incident reporting" at the above-referenced facility.

Section 3.0(3) of the Bulk Material Regulations provides that:

> If the Commissioner finds that the submitted Fugitive Dust Plan is missing any required information or is insufficient to ensure compliance with these Regulations, the Commissioner may disapprove the Fugitive Dust Plan and request submission of a modified Fugitive Dust Plan.

At this time, the Commissioner finds that CRT's March 2018 Fugitive Dust Plan is missing some required information and needs to be modified to ensure compliance with the Bulk Material Regulations. In addition, CDPH has a number of questions regarding portions of the dust plan that require clarification. Accordingly, CDPH requests that CRT submit a modified Fugitive Dust Plan (the "Modified Dust Plan") addressing each of the points set forth below. Please submit the Modified Dust Plan within thirty (30) days of the date of this letter.

Additionally, CDPH notes that the variance request submitted by CRT on June 12, 2014, and supplemented on February 24, 2015, does not reflect current operations at the facility.

Therefore, CDPH requests that CRT also submit, within thirty (30) days, a revised variance request, together with the Modified Dust Plan requested above.

Handling of Manganese

As an initial matter, CDPH notes that CRT's handling and outdoor storage of manganese-containing materials are of particular concern given the potential health risk from inhalation of manganese-containing dust. Please be advised that, on April 18, 2018, CDPH issued proposed regulations to amend the Bulk Material Regulations. Among other things, the proposed amended rules include a new section that addresses manganese-bearing materials, including a requirement for full enclosure and/or filter-based metals monitoring at facilities that handle manganese. Accordingly, as further described below, CDPH requests that CRT move its stockpiles of manganese-bearing materials indoors and reflect this change in its Modified Dust Plan and updated variance request.

Questions and Comments on the March 2018 Fugitive Dust Plan

For ease of reference, underlined subject headings and page numbers refer to those used in the March 2018 Fugitive Dust Plan ("FDP").

1. Introduction (page 3)

Section 3.0(3)(d) of the Bulk Material Regulations requires the facility's capacity calculation to be certified by signature of an authorized representative. While the facility's storage capacity is stated on page 6 of the FDP, the manager's certification in the Introduction does not mention the capacity calculation. Therefore, please provide the required certification in the Modified Dust Plan.

2. Source Descriptions (page 5) and Site Layout Plan (Figure 1)

In Section 3.1 of the FDP, regarding Bulk Solid Materials, CRT states that it receives and stores a number of bulk commercial metals "such as" certain ferroalloys, as well as manganese-containing materials that "include" ferromanganese alloys, silicomanganese alloys, electrolytic manganese, and manganese ore. The terms "*such as*" and "*include*" imply that the list of materials is representative, rather than complete. In the Modified Dust Plan, please provide and confirm a complete list of all materials handled at the facility.

Further, regarding materials handled, CDPH disagrees with CRT's assertion that blast furnace iron (pig iron), hot briquetted iron (HBI), and direct reduced iron (DRI) are not bulk solid materials under the City's regulations. While ingots of iron may be heavier than other materials, CDPH disagrees that this material does not produce dust. Indeed, it is commonly understood that these materials have the potential to produce dust, which is why they are routinely watered during transport, handling, and storage. One of the concerns with pig iron is its tendency to corrode. During storage and shipping, oxides of iron (rust) form on the surface and may slough or scale off the material during handling. Therefore, please include information about the storage, handling, and dust control of pig iron, HBI, and DRI in the Modified Dust Plan.

In addition, in the Modified Dust Plan, please include a site map that clearly depicts all items required under Section 3.0(3)(a) of the Bulk Material Regulations, including all buildings, internal roads, and utilities on the property, as well as the locations of all potential emissions points at the facility, including a depiction of the footprints of all Bulk Solid Material storage piles. Please ensure the site map is large enough so that all words and figure on the map are legible. While the March 2018 FDP includes a site layout plan, it is too small to tell if all required components are included.

3. BSM Stockpiles (pages 5 – 6 and 8)

The FDP refers to two outdoor "long-term storage" stockpiles but does not provide enough information about what is in the piles, how large they are, how often they are disturbed, and how dust is controlled at the piles. [1] On page 6 of the FDP, it states that one outdoor pile, on the west side of the building, is approximately 15 feet in height. Then it states there is another pile on the south side of the building, but the height of this pile is not mentioned. Reference is made to Figure 1; however, there is no legible notation of any stockpiles on the site map submitted to CDPH.

Further, the Introduction to the FDP states that the dust plan "addresses changes in the operation of the facility, including moving the majority of outdoor storage of bulk solid materials

[1] The April 9, 2018 letter also notes, without details, that, "Virtually all material handling is done indoors, with only two nearly undisturbed stock piles stored outdoors, ¼ mile gravel entrance ingress owned by adjacent property owner and limited activity." CDPH requests more information about the "two nearly undisturbed stockpiles stored outdoors," as explained above.

(BSM) indoors" and the "tarping of outdoor piles of manganese-affected materials." (March 2018 FDP, page 3). However, there is no mention of tarping stockpiles anywhere else in the FDP. In fact, on page 8 of the FDP, the "Dust Control Plan" section states that "control of fugitive emissions during storage, loading, and unloading of BSM stockpiles is controlled through operational and source control methods." There is a list of operational controls used during loading and unloading, but no mention of dust controls, such as watering or tarping, during storage of bulk solid materials. Please note that Section 5.0(5) of the Bulk Material Regulations requires operation of a dust suppressant system that is "able to dispense water, water-based solutions, and/or Chemical Stabilizers at all times unless all bulk storage material piles are covered."

Therefore, in the Modified Dust Plan, with regard to materials stored outdoors, please answer the following questions: i) What do these piles contain? ii) What is the potential for dust from these materials to become windborne? In other words, what is the size and composition of such material? iii) How is dust controlled during outdoor storage of materials? iv) How often are the piles disturbed?

Finally, with respect to manganese, please provide a plan, together with a reasonable timeline, for the removal of all outdoor piles of manganese-containing material. Future storage of such material should be within a fully-enclosed building.

4. Loading and Unloading (pages 5 - 6 and 8 - 9)

With regard to material that ships out in trucks, the FDP states that "Loading is typically done indoors, by a front-end loader, moving it from where it is stored to a truck or railcar, dropping it over the side into the truck bed." In the Modified Dust Plan, please describe the indoor loading process in greater detail, with particular attention to dust control methods and means of ventilation.

Further, please explain under what circumstances loading would occur outside and how dust is controlled in those circumstances. Note that Section 3.0(11) in the Bulk Material Regulations requires that outdoor truck loading and unloading occur in compliance with the requirements for transfer points, set forth in Section 3.0(7) of the Regulations. The options are a) Total enclosure; b) Water spray system sufficient to control Fugitive Dust emissions during operations; c) Vented to air pollution control equipment which is in full operation and permitted

by the Commissioner; or d) Transfer only Moist Material and conduct such transfer in a manner that minimizes the exposed drop. *Id.* The FDP indicates that "Railcar and truck loading is done with minimum drop disturbances [sic]" and that "Watering is utilized, based on the weather and material considerations. (March 2018 FDP, page 9). However, there is no indication that minimizing drop distances is performed in conjunction with the handling of Moist Material[2] and no explanation of how and when watering is applied, or how watering is affected by "material considerations." Therefore, in the Modified Dust Plan, please further explain how dust is controlled during loading and unloading of all materials and in all conditions.

As with truck loading and unloading, the Bulk Material Regulations require that railcar loading and unloading and barge unloading be conducted in compliance with the requirements for Transfer Points described above. (See Section 3.0(12) and Section 3.0(13), respectively.) According to the March 2018 FDP, on page 5: "The facility has a dock siding on the canal to receive material by barge and a track siding to receive/ship materials by rail; however, currently only trucks are used to receive and ship." In addition, your April 9, 2018 letter states that "All operations for the past two years have been handled by truck traffic only."

If CRT intends to use rail or barge in the future, the Modified Dust Plan must include more robust and detailed dust control measures to ensure compliance with the Bulk Material Regulations. However, if the company can commit to continuing its operations without the use of barge or rail, <u>especially with regard to manganese-bearing material,</u> this detail should be added to both the Modified Dust Plan and the revised variance request.

5. <u>Crushing, Bagging, and Screening (page 6 – 7 and 9)</u>

The FDP, on page 6, notes that "crushing and bagging equipment are operated to contain particles within the product for transfer." However, the FDP goes on to state that the equipment has "no exterior exhaust." The FDP further notes, on page 7, that indoor screening operations "have the potential for fugitive dust to be released when material is deposited onto the screens." However, other than the operations being conducted indoors, and the mention of low drop heights on page 9, there is no description of any measures to prevent fugitive dust from leaving the building during these operations. Please note that crushing, bagging, and screening

[2] The Bulk Material Regulations define Moist Material as "material with a moisture content of 3% by weight as determined by ASTM analysis, unless another standard is established by an applicable State Permit, Law Rule or Regulation." See Section 2.0(15) of the Bulk Material Regulations.

operations require pollution control devices to prevent or reduce the emission of air contaminants to the outdoor atmosphere. Accordingly, in the Modified Dust Plan, please explain how emissions are controlled to ensure compliance with Section 11-4-720 of the Municipal Code and relevant State regulations.

Further, the FDP also states that, when "sustained wind speeds exceed 25 miles per hour," "the overhead doors at each end of the building are to remain closed (except when trucks are entering or exiting)." (March 2018 FDP, page 8-9). This implies that doors may be open when winds are below sustained speeds of 25 miles per hour. Aside from the fact that the Bulk Material Regulations define *High Wind Conditions* to mean periods when "average wind speeds exceed 15 miles per hour over two consecutive five minute intervals of time," it is not clear how well the plan set forth in the FDP will work in practice, considering that the facility does not have on-site wind monitors[3] and relies, instead, on "the local weather service." (March 2018 FDP, page 12).

Therefore, in the Modified Dust Plan, please explain how the building where material is stored and handled is sealed to prevent the escape of dust during storage, handling, and processing activities. Do trucks pass through overlapping flaps or sliding doors? Can a sealed garage-type door be used? What other methods of dust control are used during indoor processing? Are facility personnel trained to ensure the doors are closed whenever the screener is in operation, and that the control system or device is operating whenever the crusher and/or screener is running?

6. Roadway Drag-out (page 7 and 9-10)

With regard to roadways, the FDP states that the "majority of plant roadways within the facility are paved or under roof." (March 2018 FDP, page 7). Please note that the Bulk Material Rules require paving of, not a majority, but "all Internal Roads within the Facility that are used for transporting or moving material." (Bulk Material Regulations Section 3.0(14); Emphasis added.) In the Modified Dust Plan, please confirm compliance with the paving rule.

In addition, CRT states that "the right of way that provides access to the site is an unpaved gravel road" and acknowledges that this "could lead to potential dust emissions on-site

[3] CRT submitted a request for a variance from the wind monitoring requirement. The updated variance request should explain how CRT's alternate method for compliance will ensure no adverse impacts on the surrounding community and environment.

if it is tracked onto the facility." (March 2018 FDP, page 9). Therefore, CRT undertakes a program of street sweeping within the facility boundaries to address material that might be tracked in from off-site. However, there doesn't seem to be a similar program with respect to cleaning of paved roadways within one quarter mile of the perimeter of the facility as required under Section 3.0(15) of the Bulk Material Regulations.[4] In the Modified Dust Plan, please include details to show CRT's compliance with Rule 3.0(15).

CRT also stated that the gravel access road cannot be paved because it is owned by an adjacent property owner. Please provide documentation regarding who owns the unpaved access road and why it cannot be paved.

Finally, Section 3.0(8) of the Bulk Material Regulations requires that: "All outgoing material transport trucks, whether loaded or empty, pass through a wheel wash station and pass over rumble strips that will vibrate the trucks and shake off loose material and dust, unless the approved Fugitive Dust Plan specifies other measures to ensure that the trucks will not cause any track-out of materials onto the public way." The FDP notes that truck drivers will adhere to posted speed limits and verify that the trucks are free of loose materials, and further states that: "Trucks will be visually observed by CRT employees at the weigh scale station for loose material prior to exiting the facility." (March 2018 FDP, page 10). However, the FDP does not explain how the trucks are cleaned. Accordingly, CDPH requests that rumble strips be installed at the facility and that the Modified Dust Plan include a section regarding the cleaning of outgoing trucks.

7. Recordkeeping (page 12)

The FDP notes that "On a quarterly basis, facility environmental personnel prepare a written summary of incidents of visible dusts and actions taken during the prior quarter." However, there is no mention of quarterly opacity and visible emissions testing as required under the Bulk Material Regulations.

Section 3.0(2)(a) of the regulations provides that facility owners and operators "shall not cause or allow any Fugitive Dust that is visible beyond the property line of the Facility," and Section 3.0(2)(b) sets an opacity limit that applies to every "Bulk Solid Material storage pile,

[4] While the FDP states that the main access road is unpaved, it is not clear that this is the only roadway within one quarter mile of the facility used by trucks entering or exiting the facility.

Transfer Point, roadway [and] parking area." To assure compliance with these restrictions, Section 3.0(2)(d) requires, on at least a quarterly basis, periodic tests of visual fugitive dust and opacity "in accordance with the protocol set forth in the approved Fugitive Dust Plan." However, the March 2018 FDP does not specify any protocol for this testing.

Accordingly, the Modified Dust Plan must include a protocol for the required opacity readings, which must be conducted by a trained and certified professional opacity reader, and should identify multiple locations for opacity observations that include field-determined process-specific activities where dust is potentially generated. Please note that, while the Bulk Material Regulations require testing during a range of weather conditions (per Section 3.0(3)(f)(ii)), this should be understood to mean a range of conditions, including temperature and wind conditions, that will still allow for compliance with Method 9. Thus, as Method 9 recommends that a blue sky background be present for black plumes, rainy days should be avoided for the opacity testing. The Modified Dust Plan must also set forth in detail the protocol for conducting the required quarterly testing of visual emissions. The results of both the visual and opacity testing must be included in the facility's recordkeeping logs, as required by Section 3.0(17)(f) of the Bulk Material Regulations.

Please contact the undersigned at (312) 745-4034 if you have any questions regarding this letter.

Sincerely,

Dave Graham
Assistant Commissioner

cc: Mort Ames, DOL