



November 13, 2017

Julie Morita, M.D.
Commissioner, Department of Public Health & Environment
333 South State St., 2nd Floor
Chicago, IL 60604

Re: Amendment to Request for Variance from the Rules and Regulations for Control of Emissions from the Handling and Storage of Bulk Solid Materials - Watco Companies

Dear Commissioner Morita:

On July 31, 2017, Watco Transloading LLC, (“Watco”) submitted a request for variance (“Watco’s Variance Request”) for its facility (the “Facility”) pursuant to Section 8.0 of Article II, Part E of the City of Chicago Department of Public Health’s (the “Department”) Rules and Regulations for Control of Emissions from the Handling and Storage of Bulk Solid Materials (the “Bulk Solid Materials Rules” or “Rules”). Specifically, Watco is seeking a variance from Section 3.0(4) of the Rules, which requires facilities that have not obtained a variance to install PM-10 monitors. On October 16, 2017, a comment on Watco’s variance request was filed jointly by the Natural Resources Defense Council, the Southeast Environmental Task Force, and the Southeast Side Coalition to Ban Petcoke (the “NRDC Comment”). S.H. Bell Company (“S.H. Bell”) filed a separate comment (the “S.H. Bell Comment”).¹ These comments include inaccurate or unsupported assertions concerning the Watco variance request. Watco is providing this response and is updating the Department regarding changes at its Facility since July 2017 which further demonstrate that Watco has satisfied the criteria for granting the requested variance.

Just in the last few months, Watco has made significant progress in implementing additional dust suppression equipment and practices. This Amendment serves both to describe progress made towards goals described in Watco’s variance request and to note the completion of several key projects. Notably, Watco is moving forward with its plans to install a “Dry Fogger” system that will help suppress fugitive dust during barge transfer operations.

Watco also appreciates the opportunity to respond to the public comments in this case. This Amendment identifies key mistakes and misstatements in both the NRDC Comment and the S.H. Bell Comment. Critically, the NRDC Comment has repeatedly accused the Watco Facility of violating a 10% opacity standard for barge unloading operations at the Facility. But, in fact,

¹ Southeast Regional Task Force filed a separate comment which consists primarily of pictures of the Virgil Grissom Elementary School, located several blocks south of Watco’s Facility. The Department also received a comment from “Moms Clean Air Force.” Neither comment contains a substantive review of the facts supporting Watco’s variance request, so no detailed reply to these comments is included in this response. Watco does note that there is no evidence that Watco has caused manganese pollution at the Virgil Grissom Elementary. In fact, there is no evidence that any manganese contamination (much the less contamination at levels posing a risk to human health) has been found at this school or in children that attend the school.

those operations are subject to a 20% opacity standard. The 20% standard is established by the Bulk Solids Materials Rules, the Department's guidance documents on those Rules and State emissions regulations. The NRDC did not do due diligence on advising the Department of the relevant standard here.

The evidence before the Board shows that there is no evidence that Watco is meaningfully responsible for manganese emissions in southeast Chicago. Watco has invested significant resources in ensuring that its manganese-containing materials (which are only 29% of the materials it handles) are stored indoors, and transferred according to Best Management Practices. Furthermore, the available evidence indicates that manganese has not been found at levels that would pose a nuisance or adversely impact the surrounding community. This meets the conditions that the Rules outline for variance relief.

I. Additional Improvements to Watco's Facility Further Demonstrate that a Variance from the PM-10 Monitoring Requirement Should be Granted.

Since purchasing the Facility in February 2017, Watco has been building upon the fugitive dust suppression efforts implemented by Kinder Morgan. (See 2014 Kinder Morgan Variance Request). These improvements have continued since the filing of Watco's variance request. They include acquiring a new fogger system to further reduce dust emissions in its dock area; purchasing an overhead door for Building F to prevent fugitive dust emissions during indoor loading of trucks, installing a weather station to monitor for high wind events, resurfacing the dock area and new roadway paving work to enhance removal of residual dust by sweeping trucks, and augmenting the equipment used to unload barges to minimize the potential for dust emissions. Each of these additional improvements is described in more detail below.

A. New Dry Fogger System for Dock Area

Watco's variance request noted that it was looking closely at a relatively new, state-of-the-art, "dry fogging" system that promised water-based dust suppression for moisture-sensitive materials like those handled by the Facility. Watco has proceeded to full implementation of this new system. Based on an estimated purchase price of \$33,690, Watco has issued a purchase order to the vendor Dust Solutions, Inc. to acquire the "dry fogging" system. (See Dust Solutions, Inc. Order Acknowledgment dated October 18, 2017, Appendix P). This new system will provide a means to supply dust-suppressing moisture during barge unloading operations, which will further reduce the potential for fugitive emissions during such transfer operations.

B. Overhead Door

Building F at the Facility is used to store bulk solids, including some bulk solids that contain manganese. Watco is purchasing the high-speed overhead door for Building F that was under review at the time of Watco's variance request. At a cost of \$85,240, Watco ordered the high-speed overhead door from Paul Reilly Company on October 13, 2017. (See Purchase Order #137886, Appendix Q). Additional work will be needed to provide power to the high-speed door and to upgrade lighting around the door will cost approximately \$20,050. (See Purchase Order #137489, Appendix R).

The purpose of the high-speed door is to further minimize the potential for fugitive dust emissions when trucks are loaded inside Building F and when they exit the building. Building F has always had an overhead door and has always kept that door closed when trucks are being loaded or unloaded. The high-speed door will significantly reduce the time that this exterior door will be open while trucks are preparing to exit the building with bulk solid material. Because the indoor truck loading process can generate fugitive dust emissions within the building, the high-speed door helps to ensure that any interior dust emissions remain inside the building. The new, high-speed door will work in conjunction with the interior dust collector in Building F that captures fugitive dust during the actual truck loading process. It is expected to take six-to-eight weeks to fabricate the door.

With the addition of the high-speed door, Watco's indoor storage and truck loading process for bulk alloys will be protected from fugitive dust emissions by three systems: (1) enclosure of the bulk alloys within Building F; (2) the dust collector which captures dust emissions during the indoor truck loading operation; and (3) the high-speed overhead door to minimize any residual dust emissions remaining upon completion of the truck loading process. Thus, Watco is investing over \$85,000 just to make one of those three systems moderately more efficient than it already is. This fits with Watco's mission of completing the transformation of the Chicago Arrow Facility into a state-of-the-art materials handling center.

C. New Weather Station Installed at the Watco Facility

On August 15, 2017, shortly after Watco submitted its variance request, Watco installed a weather monitoring station at the Facility. The weather monitoring station automatically notifies Facility personnel when wind levels reach action levels of 15 mph. (See Example of High Wind Alert, Appendix S.) This automatic notification system ensures the efficiency of the Facility's Best Management Practices, by immediately notifying station personnel when wind conditions require the implementation of additional dust suppression efforts. A copy of the purchase order for the weather monitoring station, showing a final cost of \$6,031.30, is attached. (Purchase Order #4500136311, Appendix T). Additional costs were incurred to install and power the station. A photo of the installed station is provided below.



Image 1 - Picture of Weather Station (installed)

D. Resurfacing of the Dock Area and Roadways

The work of resurfacing of the dock area described in Watco's variance request is now complete, at a final cost of \$362,800.

This reinforced concrete slab, requiring 860 cubic feet of material, covers 22,000 square feet of the Facility's waterfront. (See Hasse Construction Company Proposal, Appendix U.) The extensive resurfacing work has improved the efficiency of the sweeper and water trucks that remove residual material from the dock area after loading operations. The risk that such residual material may become airborne, particularly in dry weather, has been significantly reduced. In October 2017, Watco also spent \$82,827 paving 19,374 square feet of roadway within the Facility. (Pavement Systems Invoice, Appendix V.) This paving project improved Facility internal roads and, consequently, improved sweeper and water truck operations in removing residual material. The revised Fugitive Dust Plan confirms that approximately 90% of in-plant roadways are now paved, with the remaining 10% being constructed of a slag and gravel mix that generates minimal dust.

E. Clamshell Bucket

Watco's variance request described plans to purchase a clamshell bucket attachment for loading and unloading bulk solids from barges.² The clamshell shields the bulk alloys from all

² Watco's variance request noted that, as an additional limitation on fugitive dust, Watco directs all barges to keep their lids closed during transit until unloading operations begin. (Watco's Variance Request, at 11). During high-wind loading operations, the barges remove only the minimum number of lids necessary to access the material. This description was intended to apply only to bulk alloy shipments, which would include all shipments involving

sides during barge unloading more effectively than the previously used bucket scoop equipment. A copy of the sales agreement that documents the clamshell bucket purchase at a cost of \$95,787.00 is attached as Appendix W.

S.H. Bell's comment on Watco's variance request makes the counterintuitive claim that the clamshell bucket will actually serve to make dust suppression efforts less effective. (S.H. Bell Comment, at 2.) It contends that the clamshell bucket will require a higher drop height when depositing material into trucks without providing any factual support for this contention. S.H. Bell wrongly speculated that the clamshell bucket would be too large to fit into the truck bed, requiring a greater drop height. But, as the attached purchase order shows, the clamshell bucket Watco purchased is specifically designed to "fit into trucks." Therefore, the clamshell bucket will not require a higher drop height to deposit material into trucks.

The new clamshell bucket and the improved procedure by which barges are unloaded at the Facility will significantly reduce fugitive dust generated from past practices. In the 1990s, barges were unloaded by a crane that would place a dump box in the barge and a front-end loader inside the barge would fill the box with material. Once full, the dump box would be removed from the barge and dumped onto the dock surface, where a second front-end loader would pick up the material from the dock before dumping the material into a truck. The old method had at least four transfer points (each of which had the potential to generate dust): (1) The dumping of bulk solids into the dump box; (2) the dumping of bulk solids onto the dock surface; (3) removal by the front-end loader; and (4) deposition into a truck. By comparison, today there is essentially one significant transfer point—the bucket (or clamshell bucket) that removes the bulk solids from the barge and places it directly into a truck.

F. Employee Training

Watco's variance request discussed the Facility's Best Management Practices (BMPs) for dust suppression, but had relatively little information on the training that employees receive for implementing all these practices. All new employees that play a role in materials handling receive training on the applicable BMPs. This training is reinforced by the inclusion of a decision tree for handling operations in each employee's operations binder. In addition, posters are regularly placed in areas where employees will see them, reminding them how to properly implement various dust control measures. An example of these posters is attached in Appendix X.³

G. Sweeping/Washing Logs

Watco's variance request noted that the Facility is now logging the particular activities of its street-sweeping truck and its water truck in separate activity logs. This changed was implemented to ensure that the Department personnel are now able to review those records and confirm that the Facility is in compliance with the applicable street sweeping/cleaning

manganese-containing materials. This is not standard practice for shipping pig iron or aggregate, because these materials are not as prone to generating fugitive dust.

³ Following a site visit by Department personnel on September 1, 2017, Facility employees received re-training on the operation of the dust collector during loading and unloading operations.

requirements. Representative pages of the two separate logs, confirming this new recordkeeping procedure, are attached as Appendix Y.

H. Vehicle Coverings and Other Dust Controls

As stated in Watco's variance request, all transport vehicles are required to cover or enclose bulk material before leaving the Facility. (Watco's Variance Request, at 16.) Watco's Fugitive Dust Plan includes requirements for the covering of certain transport vehicles within the Facility as well. Whenever a transport vehicle is loaded with non-packaged bulk material inside of a storage facility, it is required to cover those materials prior to exiting the building. Approximately 1% of these vehicles have a tarp system that cannot be properly used inside of the loading buildings; these vehicles are required to cover their non-packaged bulk material immediately upon leaving the building.⁴ These covering requirements go beyond what is required in the Bulk Solid Materials Rules. See Section 3.0(9)(a).

II. Watco's Responses to Public Comments

A. The Opacity Test Results show Compliance with the Applicable Standards.

Watco's Variance request included data gathered using U.S. EPA Method 9 during barge unloading operations.⁵ (May 2017 Opacity Observations, Attachment G to Watco's Variance Request). The NRDC Comment repeatedly misinforms the Department on the significance of this testing, claiming that the testing is proof that Watco violated the 10% opacity limit found in Section 3.0(2) the Rules. (NRDC Comment, at 1-2, 12-14.) The applicable opacity standard under both State of Illinois air regulations and the Department's Bulk Solid Materials Rules for the subject Facility is 20% opacity, not a 10% opacity standard as the NRDC Comment erroneously states.

Section 3.0(2)(b) of the Bulk Solids Rules provides as follows:

The Facility Owner or Operator shall not cause or allow any Fugitive Dust within the property line of the Facility at any Bulk Solid Material storage pile, Transfer Point, roadway or parking area that exceeds 10% opacity, *or other applicable opacity standard* set forth in an applicable State Permit, Law, Rule or Regulation, including but not limited to the Environmental Protection Act and 35 Ill. Admin Code Part 212.

(emphasis added.)

⁴ Watco does not currently have a tarping requirement for transport vehicles moving pig iron and aggregate within the Watco Facility. This is because the 8-mph speed limit enforced within the Facility is adequate to prevent these materials from generating significant amounts of fugitive dust.

⁵ The NRDC Comment bizarrely refers to these as "best-case site conditions for emissions," despite documented wind speeds of 21 miles per hour. (Compare NRDC Comment, at 13, with Watco's Variance Request, Appendix G.)

The use of the word “or” in Section 3.0(2)(b) is critical to correctly interpreting the CDPH’s opacity limit requirements. It means that the 10% opacity standard only applies if there is not an otherwise applicable and existing opacity standard under state law.

Here, there is an applicable Illinois 20% opacity standard under the Part 212 air regulations—the Illinois regulations that are specifically referenced in Section 3.0(2)(b) of the Department’s Bulk Solids Materials Rules. The Facility is subject to the specific state regulations for the Lake Calumet Area that are set forth in 35 Ill. Admin Code Part 212:

Section 212.316 Emission Limitations for Emission Units in Certain Areas

a) Applicability. This Section shall apply to those operations specified in Section 212.302 of this Subpart and that are located in areas defined in Section 212.324(a)(1) of this Part.⁶

....

f) Emission Limitation for All Other Emission Units. Unless an emission unit has been assigned a particulate matter, PM-10, or fugitive particulate matter emissions limitation elsewhere in this Section or in Subparts R or S of this Part, no person shall cause or allow fugitive particulate matter emissions from any emission unit to exceed an opacity of **20 percent**.

35 Ill. Admin Code 212.316(a) and (f). (emphasis added).

It is true that an opacity standard lower than 20% would apply if the tests cited by the NRDC Comment had been obtained from a different part of the Facility, such as the parking lot or the storage piles. *See* 35 Ill. Admin Code 212.316(c)-(d). But, as the NRDC Comment concedes, this testing occurred at the Facility’s barge unloading area.

There is no doubt that the drafters of Part 212 would agree with marine terminals such as Watco’s inclusion in the 20% opacity standard of Section 212.316(f). The drafters were aware of marine terminals as a potential source of visible emissions—this is clear because Section 212.316(e)(2) sets specific limits on “Marine Terminals” in the Granite City area. Yet, the fact that Section 212.316 contains no other reference to marine terminals means that the drafters intended for all marine terminals outside of Granite City to be covered by the 20% standard established in 212.316(f).

The NRDC Comment insists that Watco’s reading of the plain language of the Rules turns a “blind eye” to the history of those Rules. (NRDC Comment, p. 2). The exact opposite is true. It is the NRDC that has conveniently ignored the Department’s express explanation of the opacity standards in its Rules. The Department has previously noted that the opacity standards in its Rules were intended to “maintain consistency with State rules” and that the 10% opacity standard found in Section 3.0(2) of the rules would apply “unless applicable State law sets a different opacity standard.” These are direct quotes (underlining added) from the Department’s

⁶ The Facility is located within the Lake Calumet area defined in 35 Ill. Admin Code 212.324(a)(1)(B).

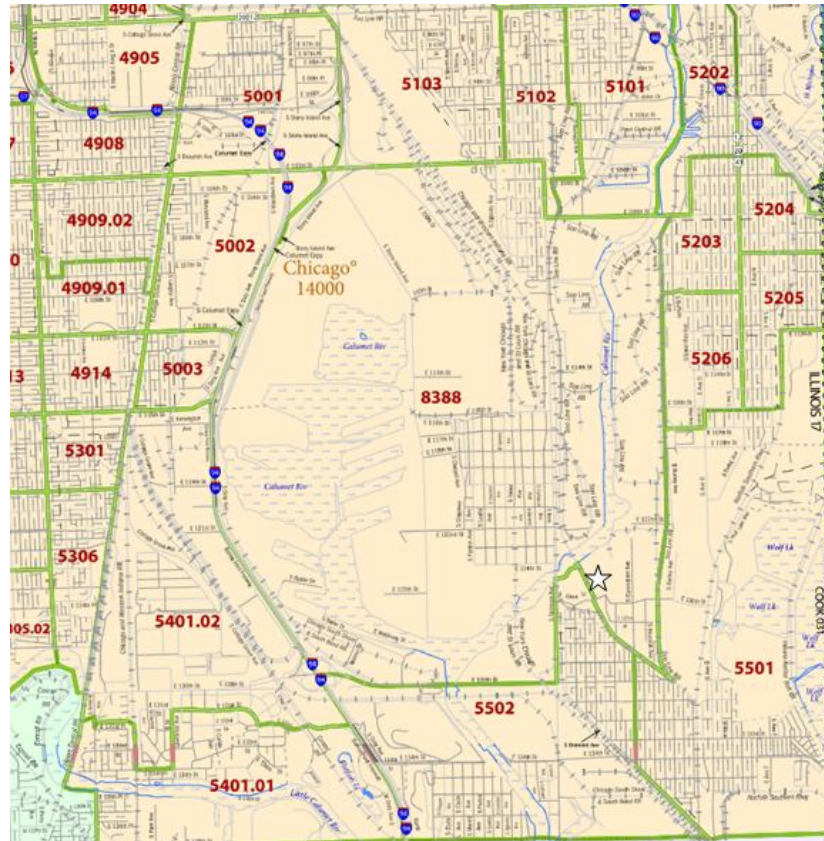
“Official Response to Public Comments” on the Rules—a document that the authors of the NRDC Comment were fully aware of and included as an exhibit. (CDPH Official Response to Public Comments, dated March 13, 2014, pp. 14, 25, attached as Exhibit 4 to the NRDC Comment). Yet the NRDC Comment does not acknowledge this language which directly contradicts its mistaken claim that the 10% opacity standard in Section 3.0(2) of the Bulk Solids Rules was intended to override all applicable State standards.

In sum, Watco did not admit to noncompliance with the applicable opacity standards. Watco reasonably expects that future opacity testing, once it has implemented its new “dry fogger” system and improved surfacing of the dock area, will find even less opacity.

B. Watco’s Defined “Potentially Affected Communities” Satisfies the Requirements for Granting its Variance Request.

Section 8.0(2)(b) of the Bulk Solid Material Rules requires parties seeking a variance to provide “[a] description of the process or activity for which the variance is requested, including pertinent data on location, size, and the population and geographic area affected by, or potentially affected by, the process or activity.” When Kinder Morgan applied for several variances in 2014, it acknowledged these requirements, and provided information on the area around it, with that area being its zip code. (Kinder Morgan Variance Request, at 6-7). The Department raised no objection to this characterization of the surrounding community, and granted two of the variances that Kinder Morgan requested.

Watco’s variance request concerns the same Facility, and describes the same geographic area “potentially affected by” fugitive dust from the Facility in language that is nearly identical to the language used by Kinder Morgan. The NRDC Comment now insists that the area was not adequately defined and that the “potentially affected” population should include all individuals within two-to-four miles of the Facility (NRDC Comment, at 9). They do not provide any basis for their pure speculation that fugitive dust from the Facility would be likely to disperse, in meaningful amounts, over an area that large. Yet, without this unsubstantiated contention that significant amounts of fugitive dust could travel that far, the NRDC Comment would be forced to admit that the Watco Facility is primarily bounded by industrial areas as shown in the following map of Census Tracts near the Watco Facility. The NRDC Comment arbitrarily set a dispersal radius of two-to-four miles in order to back their claim that Tracts 5101, 5102, 5202, 5203, 5204, 5205, and 5206 are all “affected communities.”



Watco's Facility is marked with a star.

The residential neighborhoods in the southeast part of Tract 5501 and the eastern part of 5502 are closer the other tracts listed by the NRDC Comment. But, as the Xact Metals Study notes, the winds at the Watco Facility are predominantly from the south-southwest to west-southwest direction, blowing away from these neighborhoods. (Watco Variance at 28).

C. The NRDC Comment Includes Irrelevant and Incomplete Information on Watco's Financial Condition that should be disregarded by the Department.

Section 8.0(2)(e)(ii) of the Bulk Solid Material Rules calls for a demonstration that the PM-10 monitoring requirement would impose an "arbitrary or unreasonable hardship." The NRDC Comment attempts to reframe this requirement as a requirement that the person seeking the variance prove a financial inability to comply with the regulations. (NRDC Comment, at 15.) The NRDC Comment appears to argue that a large company can never obtain a variance from the Rules, no matter how arbitrary or unnecessary a particular provision might be as applied to that company's operations. This is not the standard for granting a variance established by the Department's Rules. The NRDC's financial condition argument should be disregarded by the Department.

Variance relief is not dictated by the size, profitability, or annual revenues of the company seeking variance relief. Despite having several provisions related to information that must be provided to the City, the Rules do not ask for the disclosure of financial information

sufficient to satisfy the analysis demanded in the NRDC Comment. Nor is there any indication that the variance provisions are intended to disfavor companies that are successful and favor companies that are nearly defunct.

Indeed, the Department has never indicated that the size or financial wellbeing of the company requesting the variance plays any role in the decision to grant a variance. The Department granted two Section 8.0 variances to Kinder Morgan earlier this year, with no reference to the fact that Kinder Morgan is the largest energy infrastructure company in North America and is a component company of the Standard & Poor's 100 Index. (See CDPH Determination, at 15-16). The NRDC Comment includes financial information taken out of context in the hope that the Department will break from its past practice and invent new requirements that do not appear in the Rules.⁷ The same financial viability that allowed for over one-million dollars to-date in dust suppression efforts at the Facility would form the basis for denying appropriate relief.

The bottom line is whether the regulatory provision from which a variance is sought would be "arbitrary or unreasonable" in view of the costs of the project and its anticipated benefits. In this case, there is no indication that the six-figure price of installing PM-10 monitors is justified by expected benefits to human or environmental health. Watco already utilizes a EPA-developed method for collecting information on airborne dust. Furthermore, the manganese-containing materials that the NRDC Comment cites as a purported threat to human health are always stored indoors at Watco's Facility. Watco has invested significant amounts of time and money in minimizing the potential for those materials to become airborne during transfer operations. And, even though the Commenters have not established a causal link between the Facility and the levels of manganese in local communities (levels that are steadily decreasing)⁸, the levels found in the Xact metals study they reference are below the exposure standards adopted to be protective of human health. Requiring the installation of expensive equipment would be unreasonable under these conditions.

D. Watco has Satisfied the "Quantity and Types of Materials" Requirement for a Variance.

Section 8.0(2)(c) of the Bulk Solid Materials Rules requires that persons seeking a variance under the Rules "detail . . . the quantity and types of materials used in the process or activity in connection with which the variance is requested, as appropriate." Watco acknowledged this requirement in its variance request, but indicated to the Department that it would prefer to submit this information under the rules that the City adopted for confidential business information. (Watco's Variance Request at 4 n.3.) However, because the variance request primarily relates to the Facility's efforts to prevent manganese from leaving the facility,

⁷ The conclusions that the NRDC Comment draws from the financial data it lists are dubious. The Comment notes Watco's gross revenues of \$638 million, without noting any of the costs that offset that income. Indeed, the Comment includes an article entitled "Moody's changes Watco's ratings outlook to negative," which would tend to undermine their claim that Watco can easily bear any regulatory costs that the Department might impose. And, although Watco has recently purchased several facilities from Kinder Morgan, the NRDC Comment gives no reason to assume that this means that Watco has a greater ability to suffer arbitrary costs than a company that is not expanding.

⁸ Watco's Variance Request, at 32.

Watco did disclose that approximately 29% of the tonnage processed at the facility contains manganese, and that annually it handles approximately 650,000 tons of bulk materials per year. The 29% percentage includes manganese-containing materials that are transported while encased in fabric “Super Sacks.” (Id. at 6-7)

The information already provided by Watco is significantly more comprehensive than the information that Kinder Morgan submitted to the Department in its 2014 variance request. (Kinder Morgan Variance Request, at 12-13.) The Department apparently felt that information was adequate to satisfy the Rules’ Section 8.0(2)(c) requirement because it granted two of the variances sought by Kinder Morgan. Watco plans on providing additional information to the Department in its response to the Manganese Survey distributed by the Department on September 28, 2017.

Even so, the NRDC Comment insists that the information provided by Watco’s variance request is inadequate. It does not, however, explain what would be proven if more information were included in the request, or why that information could not be submitted to the Department under a confidentiality agreement (which Watco has indicated that it is willing to do, if needed). At this time, Watco has no reason to believe that the Department would be unable to reach a decision based on the information on materials and quantities contained in Watco’s variance request.

E. The Xact Metals Study Did Not Find Manganese at Levels that Would Pose a Risk to the Community on an Acute Basis.

The NRDC Comment makes several claims regarding the threat to public health from manganese dust. Watco’s variance request acknowledges the minimal risk level (MRL) for manganese, established as a chronic duration of exposure, and the measurements of manganese from both the EPA’s Xact Metals Study⁹ and the longstanding Illinois EPA monitor at the nearby Washington High School (Washington HS).¹⁰

The NRDC Comment attempts to shift the Department’s focus to whether the Xact Metals Study found manganese levels that pose risks to the community on an *acute* basis. The Comment concedes that there are “few studies” that could reliably answer this question, and so it offers “anecdotal case studies” that “lack quantitative exposure values needed for derivation of an acute screening level.” (NRDC Comment, at 8).

But, the NRDC Comment does little to apply the anecdotal studies they urge the Department to consider. For instance, the NRDC Comment relates highlights an anecdotal case study finding that “short-term exposures to elevated manganese levels resulted in measurable neurological outcomes, *e.g.*, ‘a spectrum of exposure-related changes in biochemical markers of neurotoxicity in various regions of the exposed monkeys.’” (NRDC Comment at 8, citing ATSDR Toxicological Profile for Manganese, September 2012, p. 21.¹¹) Watco notes that this

⁹ Xact Metals Study: Southeast Chicago, Region 5 Air and Radiation Division, December 12, 2014 – July 23, 2015, referred to as the ‘Xact Metals Study’. (Appendix D to Watco’s Variance Request).

¹⁰ The monitor is located at 3535 E 114th Street (southeast of the intersection of E 114th Street and Avenue O), and is identified as Illinois EPA Monitor Id 17-031-0022.

¹¹ Available at <https://www.atsdr.cdc.gov/toxprofiles/tp151.pdf>.

cited reference consisted of exposure to monkeys at concentrations of 0.06, 0.3, or 1.5 milligrams per cubic meter (mg/m³), or 60, 300, or 1500 micrograms per cubic meter (µg/m³) continuously for 6 hours per day for 65 days, or approximately 2 months' time. Even the minimum level of exposure cited reference material (60 µg/m³) is far higher than any hourly data recorded by EPA during their Xact metals study, with the *maximum* hour of those results indicating a manganese concentration of 4.353 µg/m³.¹² Thus, the exposure concentration and duration of the cited reference is enormously larger than that recorded in the Xact metals study.

Similarly, the NRDC Comment flags “[r]ecently published research on the impact of exposure to manganese fumes among welders, in addition, [which] shows an approximately linear dose-response curve.” (NRDC Comment, at p. 8, n.21). The NRDC Comment does not disclose that the study was looking at people with exposure levels of 140 µg/m³ over durations of nearly fifteen years. The 1-hour maximum manganese concentration per the Xact Metals Study (4.353 µg/m³) is 3% of this welder-exposure value. Even the highest data sample from the ongoing manganese monitoring effort at the SH Bell facility is well below this welder-exposure concentration.¹³ Thus, the exposure concentration and duration of manganese exposure used in the primate study dwarfs the levels recorded by Xact Metals.

In fact, reviewing all of the ATSDR acute inhalation exposure data, no acute concentration levels, either as a “no-observed-adverse effect level” (NOAEL) or as a “lowest-observed-adverse-effect level” (LOAEL) have been established at anywhere near the 1-hour maximum manganese concentration (4.353 µg/m³) as recorded by the Xact Metals Study.¹⁴

The NRDC Comment also calls for the Department to consider the risks posed over the course of 24-hour exposure periods, but does not offer much guidance. (NRDC Comment at 8, “CDPH should not only be concerned with annual and longer-term exposure to elevated manganese, but also shorter term daily and monthly exposures”) Watco’s advises that the Department should consider the previous health consultation performed by the ATSDR in southeast Chicago, which used an acute comparison value of 2 µg/m³ as a 24-hour average.¹⁵ While the Xact Metals Study report does not include the 24-hour average concentrations, a review of the data in Table 3 of the Xact Metals Study report (detailing the peak 1-hour manganese concentrations recorded at the Xact Metals Study location) would suggest that no 24-hour periods would have exceeded this acute comparison value for manganese. And, as the NRDC Comment concedes, 11 of 34 of the highest 1% of the hourly manganese concentrations recorded during the Xact Metals Study occurred when the wind is blowing from a direction

¹² See Xact Metals Study Table 3, pg 11 of 13. The 4.353 µg/m³ concentration occurred on the hour ending 10 am on 2/24/15. That result may have been an outlier: The next highest concentration was 3.685 µg/m³ on a different time on a different day.

¹³ Per <https://www.epa.gov/il/sh-bell-chicago-air-monitoring-data> the highest 6-day manganese concentration recorded at the SH Bell monitoring location has been 1.23 µg/m³.

¹⁴ ATSDR Toxicological Profile for Manganese, September 2012, see Table 3-1. Considering all of the acute and intermediate duration exposures (ranging from 1 hour to 90 days) of rats, mice, guinea pigs, monkeys, and pigeons, across various studies from 1976 through 2008, the lowest value where an impact was recorded on the studies species was 9 µg/m³, and the duration of this exposure was for six hours per day, 5 days per week, over a 90-day period.

¹⁵ ATSDR, *Health Consultation: Review of Analysis of Particulate Matter and Metal Exposures in Air (KCBX)*, 37, tbl.6 (Aug. 22, 2016), available at https://www.atsdr.cdc.gov/hac/pha/KCBXPetroleumCoke/KCBX_Petroleum%20Coke_HC_508.pdf

other than the direction of the Watco operations from the Xact metals study monitor. (NRDC Comment, at 17).

F. The Xact Metals Study's Claim that the Watco Facility is a Source of Manganese Emissions Rested on an Incomplete Picture of Manganese Use in Southeast Chicago.

Watco noted in its variance request that the Xact Metals Study singled out the Watco Facility even though the Study's authors did not seem to have investigated other businesses in the vicinity that use manganese. This would tend to undermine the conclusions of that Study. Watco understands that since the filing of its variance request, the CDPH, the City of Chicago Department of Business Affairs and Consumer Protection, and the City of Chicago have commenced outreach to industries in southeast Chicago with a detailed questionnaire to identify manganese use in the area. The purpose of the study is to "identify the scope, source, and potential health impacts of manganese emissions. The study will allow us to make data-informed decisions about the City's response to this important issue."¹⁶ Watco believes that the City is attempting to do the investigative work that the Xact Metals Study failed to perform, and this is a further reason why the conclusions of the Xact Metals Study do not follow the data gathered in that study. The NRDC Comment's charge that the Watco Facility "is the main contributing source of manganese in this area" is premature pending the results of the City's study. (NRDC Comment, at 17.)

The NRDC Comment also accuses Watco of "focusing" on the Xact Metals Study's failure to discuss the Defense Logistics Agency (DLA) facility to the east of the Watco Facility. (NRDC Comment, at 18.) Watco's reference to this facility, which like several companies near the Watco Facility, handles significant quantities of manganese-bearing materials, was for a limited purpose. Even if the DLA facility was not directly relevant to the Watco Facility, its absence from the Xact Metals Study illustrates the kinds of facilities that the Study was unaware of when it attempted to assign blame for manganese emissions in southeast Chicago. The Xact Metals Study was conducted, in its own words, to determine "whether residents of the South Deering neighborhood are potentially exposed to lead . . . above acute and chronic health comparison levels."¹⁷ (Xact Metals Study, p. 2.) Thus, the Study's conclusions about sources of manganese should not be given serious weight, because the Study was not even designed to gather the data needed to reach such a conclusion.

¹⁶ Per September 27, 2017 cover letter from Julie Morita, Commissioner CDPH, to one of the Southeast Chicago sources.

¹⁷ As noted in Watco's Variance Request, the study looked at potential exposure to manganese and its data showed that manganese was present in levels that are well below the "Minimal Risk Level," or "MRL." (See Watco's Variance Request, at 24-25.)

G. The Xact Metals Study Found Manganese at Levels That Are Not Likely to Cause Harmful Health Effects.

The NRDC Comment accuses Watco of “belittling” the Department by noting the Xact Metals Study’s use of an outdated RfC standard to overstate the implications of the manganese they found in their studies. (NRDC Comment, at 19.) Watco emphasized that the MRL standard of 300 ng/m³ (0.3 µg/m³) was the more relevant criteria, and noted that the Xact Metals Study had found manganese levels of 108 ng/m³, which is significantly below the MRL standard.

This data is critical in evaluating whether the variance that Watco is requesting would cause a nuisance or adversely affect the surrounding community and it shows that the variance would produce no adverse effects. As ATSDR notes, the MRL standard was devised to provide a standard for “daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse noncancer health effects over a specified route and duration of exposure.”¹⁸ This is the standard that EPA uses to evaluate when human health is at risk (S.H. Bell 2014 Notice of Violation, at ¶26,) ¹⁹ and that the ATSDR used when advising the City on windblown-coke in southeast Chicago.²⁰ The potential exposure levels found by the Xact Metals Study are significantly below this standards and this provides further reason to grant the requested variance.

H. S.H. Bell’s “Correction of Misstatements” is Incorrect.

In its initial variance request, Watco noted that S.H. Bell processes a greater percentage of manganese-bearing materials than the Watco Facility does. S.H. Bell’s Comment insists that Watco mischaracterized its inventory and that “nowhere near” 90% of that inventory included manganese-bearing materials. S.H. Bell implies that it is unaware of where this 90% figure came from, but the number appears in a Notice of Violation that S.H. Bell received in 2014: “S.H. Bell performs crushing, screening, loading and unloading operations of various materials, 90% of which are manganese-based alloys.” (2014 Notice of Violation to S.H. Bell, at ¶11.) Watco admits to having no knowledge of the current composition of S.H. Bell’s inventory, and S.H. Bell’s most recent Notice of Violation, from August of this year, does not update the 90% figure. (2017 Notice of Violation to S.H. Bell, Appendix Z.)

S.H. Bell also insists that Watco “completely mischaracterizes” the nature of the lawsuit that EPA filed against them in the Northern District of Illinois. (S.H. Bell Comment, at 4.) Yet, S.H. Bell does not identify any inaccuracy in Watco’s statement that the EPA issued a Notice of Violation against S.H. Bell’s facility in 2014 and “soon followed that up with a civil action against S.H. Bell.” (Watco’s Variance Petition, p. 33, n.2.) In fact, the suit specifically

¹⁸ U.S. EPA Risk Assessment Forum, *A Review of the Reference Dose and Reference Concentration Processes*, December 2002, Section 2.1.5.

¹⁹ Attached to Watco’s Variance Request as Appendix O.

²⁰ ATSDR, *Health Consultation: Review of Analysis of Particulate Matter and Metal Exposures in Air (KCBX)*, at 37, tbl.6 (Aug. 22, 2016), available at https://www.atsdr.cdc.gov/hac/pha/KCBXPetroleumCoke/KCBX_Petroleum%20Coke_HC_508.pdf

references the 2014 Notice of Violation, which ended in a settlement order requiring S.H. Bell to pay \$100,000 in civil penalties.²¹ The Watco variance request accurately presented these facts.

S.H. Bell next insists that “some unknown reason” stopped the EPA from sending a Section 114(a) request to the Watco Facility—this does not, however, stop S.H. Bell from accusing the EPA of a “lack [of] appropriate enforcement” (S.H. Bell Comment, at 4.) It is hard to understand how S.H. Bell failed to connect the dots here. The EPA inspected S.H. Bell’s facility in 2014. The facility’s permit required them to treat “normal traffic pattern access areas surrounding storage piles, and throughout the property . . . with water oil or other chemical dust suppressants. S.H. Bell had failed to do this. The facility’s permit also required them to maintain an opacity limit of 10% for dust coming off of their storage piles—S.H. Bell’s storage piles “reached 80% during the 6-minute average,” and the final 10.4% total average also violated the facility’s permit. This resulted in the EPA issuing a Notice of Violation.

By contrast, neither Watco nor Kinder Morgan has ever received a Notice of Violation from EPA related to the Facility. And Facility personnel present at EPA’s July 8, 2015 visit to the Watco Facility report that the EPA inspector “found no cause for concern” during that trip.²² The “unknown reason” that S.H. Bell refers to is, in truth, the reason that Watco provided in its variance request: The Facility has invested substantial sums of money to effectively control fugitive dust emissions, has a good history of compliance, handles far fewer manganese-containing materials, and is not as close to residential neighborhoods as the S.H. Bell facility. These are the reasons why granting Watco a variance from Section 3.0(4)’s PM-10 monitoring requirement would not cause a nuisance or adversely affect the surrounding community.

Another key difference between the two facilities is that Watco does not store manganese-containing materials outdoors. Watco’s variance request emphasized that the S.H. Bell facility has significantly less indoor storage capacity than the Watco Facility and highlighted S.H. Bell’s past efforts to avoid disclosing whether it stores manganese-containing bulk solids outdoors. (Watco’s Variance Request, at 6, n.5). S.H. Bell’s Comment makes no effort to deny this point.

Outdoor storage of manganese-containing materials poses a much greater risk of fugitive dust than indoor transfer and storage activities. Outdoor transfer activities are episodic; the Watco Facility does not conduct nighttime transfer operations and is not active on weekends. However, outdoor storage piles (like those at the S.H. Bell facility) are exposed to the elements constantly. Contrary to S.H. Bell’s false accusations, the Watco Facility is significantly different, and those differences create the necessary distinction from which to grant Watco’s variance request.

S.H. Bell also asks whether Watco uses a covered conveyor for loading of covered hopper railcars. (S.H. Bell Comment, at 3) This point was already addressed during Kinder

²¹ This document is available on the website EPA created to house the key documents related to fugitive dust at S.H. Bell’s Chicago Facility. <https://www.epa.gov/il/sh-bell-chicago-facility>. EPA maintains a separate website regarding manganese pollution at S.H. Bell’s facility in East Liverpool, Ohio. <https://www.epa.gov/oh/east-liverpool-ohio-and-glasgow-borough-pennsylvania-air-monitoring-data>.

²² Representatives from EPA Region 5 visited the Watco Facility on September 1, 2017. The representatives did not bring any environmental violations to Watco’s attention during or after the visit.

Morgan's variance petition process. Kinder Morgan completed installation of a cover to its railcar loading conveyor on July 15, 2014, and sent notice to the Department immediately thereafter, including photos.²³ The Watco Facility continues to use a covered conveyor for railcar loading.

Only a fraction of the bulk alloys received at the Watco facility arrive by truck. Of that portion, most are unloaded indoors. Both S.H. Bell and the Commenters focus on a subset of transfers that occur outdoors on a concrete transfer pad when the vehicle's dimensions prevent it from unloading indoors. (NRDC Comment at 14; S.H. Bell at 3.)

What both groups seem to miss in their criticism of this uncommon procedure is that these transfer operations are conducted under a conditional variance that the Department granted to Kinder Morgan earlier this year. As Watco noted in its variance request, the Department has allowed the Facility to conduct transfer operations of moisture-sensitive materials—transfers that would otherwise violate Section 3.0(7)'s requirement that all transfers take place indoors. (Watco's Variance Petition, at 9-10). Under the variance, Watco is required to assign personnel to monitor for visible dust at all transfer points during freezing operations and immediately shut down any operations that are seen to be causing visible dust.²⁴ Thus the Department has already evaluated Watco's transfer-pad operations and concluded that these activities do not pose a public nuisance and do not adversely impact the surrounding area, surrounding environment, or surrounding property uses. The Department should not allow the Commenters to relitigate this issue this late in the process.

III. Conclusion

Watco appreciates the opportunity to update the Department on interim progress that has been made at the Facility since July. Although some of the comments received by the Department express doubt about whether Watco was serious when it said that it was committed to implementing additional dust suppression measures at the Facility, the purchase orders and finished projects documented in this Amendment speak for themselves. Beyond capital projects, Watco also invests significant amounts of man-hours, both in training (and retraining) employees in how to follow the Facility's Best Management Practices, and in the longer times that it takes to complete some transfer tasks because of those Practices.

The Bulk Solid Materials Rules were written with the understanding that the PM-10 monitoring requirement was not for everyone, and could be unnecessary at facilities with strong dust suppression practices in place. Unlike some of its competitors, Watco stores all of its manganese-containing materials indoors. It has received no complaints, formal or otherwise, from its neighbors. It has acted quickly to address all concerns noted by City and EPA inspectors during visits to the Facility, and has not received a Notice of Violation from any regulator. S.H. Bell's efforts to put itself in the same position as Watco are not supported by the facts.

²³ https://www.cityofchicago.org/content/dam/city/depts/cdph/environmental_health_and_food/SupVarReqKinderMorganChgoArrTerm2926E126thSt.pdf

²⁴ Watco has complied with these provisions and integrated them directly into their BMP decision tree.

Those are the background reasons for granting the variance. But, Watco also meets the specific criteria from Section 8.0 of the Rules. As applied to Watco, the PM-10 monitoring requirement is arbitrary and unreasonable: There has been no evidence presented to the Department showing that the six-figure cost of the PM-10 monitors is justified by a corresponding benefit to the public. Rules Section 8.0(2)(e)(i). That’s because there is no evidence that granting this variance would pose either a nuisance or adversely impact the surrounding area: The Xact Metals Study found potential manganese exposure levels that are well below the MRL standard that was established to protect public health. Rules Section 8.0(d).

The NRDC Comment is centered around its claim that Watco has made an “unwitting reporting of a violation” (NRDC Comment, at 2.)²⁵ As the Department’s own comments on the subject show, the 10% opacity standard in Section 3.0(2) of the rules applies to facilities in Cook County “unless applicable State law sets a different opacity standard.” And State law and regulations set specific opacity standards for the Lake Calumet area—where the Watco Facility is located—and they establish a 20% opacity standard. This was the standard that Watco used in its Variance Request. (Watco’s Variance Request, at 18.) The NRDC Comment applies the wrong standard and reaches the wrong conclusion. 35 Ill. Admin Code 212.316(f).

Respectfully submitted,



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²⁵ See also *id.* at 19-20 (arguing that the Xact Metals Study’s unsupported conclusions regarding the Watco Facility have been vindicated because “Watco’s opacity testing results show [that it] has violated the Rules’ opacity limit”).