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Please Refer to:

SHB08-
GN0016

March 3, 2015

VIA MESSENGER

Otis Omenazu
Chief Air Engineer
Chicago Department of Public Health
333 South State Street
Room 200
Chicago, Illinois 60604

RE: S.H. Bell Company
10218 South Avenue O
Chicago, Illinois

Response to January 26, 2015 Request for Additional Information
Relating to Variations from Air Pollution Control Rules and Regulations
For Control of Emissions from the Handling
and Storage of Bulk Material Piles

Dear Chief Omenazu:

As you are aware, our firm represents S.H. Bell Company ("S.H. Bell Co.") in relation to its request to the Chicago Department of Public Health ("CDPH") for certain Variations from the City of Chicago's Rules and Regulations for Bulk Materials Storage promulgated March 13, 2014 (the "Regulations"). S.H. Bell Co., a small family-owned business, operates a materials warehouse facility located at 10218 South Avenue O, Chicago, Illinois (the "Facility"). S.H. Bell Co. does not process, store or transfer coal, petroleum coke, or metallurgical coke. S.H. Bell Co.'s Variation Request was submitted to the Chicago Department of Public Health (the "Department") on June 10, 2014. We recently received a letter from you dated January 26, 2015 requesting additional information relating to the Variation Request. Your letter requested a response from S.H. Bell Co. within 30 days. However, because we did not receive your letter in the mail until January 30, 2015, counsel for the CDPH, Jennifer Hesse, approved our request for

a short extension of time, making S.H. Bell Co.'s response due today, March 3, 2015 (the CDPH office was closed on March 2, 2015 in honor of Casimir Pulaski Day).

As a preliminary matter, since the submission of its Variation Request, S.H. Bell Co. has revised its Fugitive Operating Program/Fugitive Dust Plan to further address any concerns regarding opacity or visible emissions from storage piles and material handling located at the Facility and plans to further revise its Fugitive Operating Program/Fugitive Dust Plan as set forth below. S.H. Bell Co. will submit a copy of its revised Fugitive Operating Program/Fugitive Dust Plan within the next 45 days. S.H. Bell Co. has also purchased and installed, among other things, a meteorological station to measure wind speed and direction; two monsoon mobile misting equipment devices (i.e., water spray misting control) and a mobile baghouse for dust control (which as needed is relocated to various transfer points); and will be installing baghouses for truck load-out operations at two buildings at the Facility. S.H. Bell Co. has therefore taken additional steps during the pendency of its Variation Request to enhance its dust control efforts.

These additional measures have come at significant cost to S.H. Bell Co. totaling \$1,202,589, which is an extremely significant sum for this small family-owned business. Below is a summary of the costs incurred by S.H. Bell Co. relative to enhanced control measures since May 2014:

Enhanced Water Truck (May 2014)	\$ 63,000
Buffalo Turbine Monsoon Unit #1	14,309
Buffalo Turbine Monsoon Unit #2	15,954
Brine System for Roadways	17,000
Portable Dust Collector	136,920
Barge Dock Truck Load-Out Building	24,906
Purchase of new Sweeper Truck	238,000
	(delivery pending)
Railcar Conveyor Covers	3,500
Dry Fog System (estimated)	84,000
	(delivery pending)
Two Ryerson/Norcon Baghouses (pre-bid vendor estimates)	605,000

With these enhanced measures, S.H. Bell Co. no longer seeks a variation from Sections 3.0(5); 3.0(7); 3.0(11); 3.0(12); 3.0(13) and 3.0(15). However, as explained below, a modest extension of time is required for S.H. Bell Co. to receive and implement a wet sweeper truck in connection with Section 3.0(15) (estimated to be operational by the end of April 2015) and a dry fogging unit in connection with Sections 3.0(7) and 3.0(13) (estimated to be operational within six months). Until such equipment is operational, S.H. Bell Co. will employ its existing

measures, which, as discussed below, have proven effectiveness at controlling fugitive dust emissions.

Accordingly, S.H. Bell Co. now seeks a variance from only two requirements from its original Variance Application, Sections 3.0(4) and 5.0(3), requiring installation of FEM real-time PM10 monitors and a 50 feet setback from any waterway for outdoor storage piles. As discussed below, even though a variance is sought from these two requirements, the facility will ensure that intent and goals of these two provisions are met through current and planned revisions to its Fugitive Operating Program/Fugitive Dust Plan, which as noted below will be provided within 45 days. In other words, the measures S.H. Bell Co. has and is putting in place will ensure that (1) no fugitive particulate matter is leaving the facility boundary and (2) no harm will come to waterways from outdoor material storage. On the other hand, if CDPH does not grant the requested variances from these two requirements, there will be devastating impacts to the Facility operations and revenue making it likely that S.H. Bell Co. could be forced to shut down operations at the Facility. In other words, as discussed fully below, S.H. Bell Co. believes that it can meet the intent/goals of these two requirements related to monitoring and protection of waterways through alternative measures that will not be fatally detrimental to Facility operations and revenue.

I. S.H. BELL CO.'S RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION RAISED IN JANUARY 26, 2015 LETTER RELATED TO CONTINUED VARIANCE REQUESTS

S.H. Bell Co. first responds to the comments related to the only two variance requests that it now seeks from its original Variance Application.

1. Section 3.0(4): Fugitive Dust Monitoring

Section 3.0(4) of the Regulations requires the Facility to “install, operate and maintain, according to manufacturer’s specifications, permanent, continuous Federal Equivalent Method (“FEM”) real-time PM10 monitors around the perimeter of the Facility” in accordance with certain specified requirements, one of which is that “[d]uring the first year of monitoring, at least one monitor shall be placed along each side facing the four cardinal directions” around the Facility. S.H. Bell Co. requested a complete variance from this Regulation because it imposes unreasonable hardship and is duplicative of measures already taken by S.H. Bell Co. as part of its Fugitive Operating Program to exercise effective control of dust emissions.

You requested evidence of the effectiveness of S.H. Bell Co.’s Fugitive Operating Program, including any scientific studies or reports and site-specific technical evaluations, as well as detailed evidence that installing the monitors would cause an unreasonable hardship. As previously discussed, since its initial submission, S.H. Bell Co. has twice revised its Fugitive Dust Plan. As discussed in its initial Variance Application, S.H. Bell Co. prefers to dedicate its resources to dust control, rather than monitoring. The expansive dust monitoring process required by the Regulations is inherently flawed because there is no assurance that dust monitored and corrective actions taken in response to “action levels” reached are based on S.H. Bell Co.’s operation.

Additionally, S.H. Bell Co. has three main objections to the required use of the FEM PM10 themselves, including: (1) the FEM monitors are not intended for measuring fugitive particulate matter; (2) the FEM monitors are scientifically inaccurate in measuring fugitive particulate matter; and (3) the exorbitant cost to install and maintain such matters greater outweighs any benefit.

The first objection is that FEM monitors are designed to assess compliance with National Ambient Air Quality Standards (NAAQS) rather than fugitive particulate matter. Such monitors are not necessary in this location in order to assess compliance with the NAAQS, as Cook County, the specific geographic area described, is presently designated as attainment with NAAQS for PM10 and PM2.5 in accordance with 40 CFR 81.314. Additionally, applicable provisions of the federally-approved Illinois state regulations require fugitive particulate matter to be assessed through proven EPA Test Methods, Method 9 and Method 22 observations, to measure opacity. 35 Ill. Adm. Code 212.301; 35 Ill. Adm. Code 212.316. FEM monitors do not measure opacity, but rather mass concentrations, and thus such monitors are not rationally related to the fugitive particulate matter emission standard applicable to the S.H. Bell Co. Facility. In fact, these CDPH Regulations themselves recognize that Method 9 and Method 22 are the appropriate methods for testing for visible emissions and opacity of fugitive particulate matter, through the required quarterly testing. *See* Regulations Section 3.0(2).

S.H. Bell Co. also objects to the use of FEM monitors because they are scientifically inaccurate. Published peer-reviewed papers have indicated that such monitors could potentially provide readings higher than actual levels by as much as 70-700% when used in situations where the mass median diameter of the source particulates is larger than PM10. Studies by M. D. Buser, C. B. Parnell, Jr., B. W. Shaw, R. E. Lacey (“Particulate Matter Sampler Errors Due to the Interaction of Particle Size and Sampler Performance Characteristics: Ambient PM10 Samplers” Transactions of the American Society of Agricultural and Biological Engineers, 2007, Vol. 50(1): p. 229–240) showed that when FRM (or FEM) samplers are used in a situation where they are exposed to predominantly a single source type of emissions (as is the case at the S.H. Bell Co. facility) and the mass median diameter (MMD) of the particulate matter being sampled is slightly larger than PM10 (*e.g.*, 20 microns MMD), that oversampling of larger particles due to the nature of the sampler inlet cutpoint could result in concentrations that are 70-700% higher than would be expected for an aerosol that was more typical of the thoracic penetration curve that the sampler inlet is designed to mimic. Fugitive dust sources such as storage piles, loading operations (such as those performed at the S.H. Bell Co. facility), *etc.*, generally have particle size distributions that tend towards larger particles (and thus are more likely to have a larger MMD).

Similarly Wang, Wanjura, Parnell, Jr., Lacey, and Shaw showed in a paper entitled “Performance Characteristics of Low-Volume PM10 Inlet and TEOM Continuous PM Sampler” and presented at the 2003 American Society of Agricultural Engineers (ASAE) Annual International Meeting in Las Vegas, Nevada, USA 27- 30 July 2003 that:

“The co-located TSP/PM10 sampler testing results indicate that PM10 samplers over-sample when exposed to ambient PM having mass median diameters (MMD’s) larger than 10 µm aerodynamic

equivalent diameter (AED) and under-sample when exposed to ambient PM with MMD smaller than 10 µm. The over-sampling / under-sampling rates varied with the change of MMD and the dust loading (TSP concentration). The cut-points and slopes of the PM10 preseparator changed with the change of MMD's of inlet particulate matter (PM)."

Finally, in addition to the likely bias and inaccuracies and the fact that such monitors were not designed or required for fugitive particulate monitoring, S.H. Bell Co. objects to the use of FEM monitors due to the exorbitant cost to install and maintain such monitors, which greatly outweighs any potential benefits especially given these technical concerns. The budgetary estimate for the installation, operation and data reporting of four continuous PM10 monitors is \$137,000, with annual estimated operating costs of \$75,000 to \$100,000. A true and correct copy of the budgetary estimate from Ambient Air Quality Services, Inc. is attached as Exhibit 1.

Thus, due to the technical limitations of the FEM monitors, and the fact that they are not needed to satisfy any specified particulate matter limitations, and the nature of S.H. Bell Co.'s operations, detecting whether fugitive particulate matter is leaving the facility boundary, is better accomplished through more frequent Method 9 and Method 22 observations than the quarterly requirement in the Regulations, which S.H. Bell Co. has already committed to conduct on a daily and almost continuous basis in the Fugitive Operating Program. The effectiveness of the Fugitive Operating Program is best demonstrated through S.H. Bell Co.'s records showing the frequency of visible emissions observed at the property line; the results of Method 22 testing conducted; and the frequency of operations being curtailed or delayed due to the presence of dust. True and correct copies of daily observation reports from October 24, 2014 through February 23, 2015; sample Method 22 reports from February 18, 2015 through February 23, 2015; and sample Method 9 reports from February 19, 2015 through February 23, 2015 are attached hereto as Group Exhibit 2(a)-2(c).

Accordingly for all the reasons above, S.H. Bell Co. continues to request a complete variance from Section 3.0(4)'s requirement to install FEM PM10 monitors. The goal of this requirement, which is confirmation of "no off-site visible emissions," is better accomplished through the more frequent Method 9 and Method 22 observations S.H. Bell Co. is undertaking under its Fugitive Operating Program. Alternatively, as described below, S.H. Bell Co. is willing to conduct an alternative monitoring study for one year to further demonstrate no off-site visible emissions by demonstrating as effective the additional measures that the Facility is taking as part of the revisions to the Fugitive Operating Program/Fugitive Dust Plan. S.H. Bell Co. will commit to revisit the issue of monitors at the end of this one year study. We note, as discussed in Section III below, that such a study is consistent with the intent of the comments made by Natural Resources Defense Council ("NRDC") and the Southeast Environmental Task Force ("SETF") in response to the S.H. Bell Co.'s Original Variance Request for the FEM PM10 monitors.

If the goal of the CDPH program is "no off-site visible emissions" and not NAAQS compliance, then monitoring of dust emissions from the site could be evaluated using simpler but equally effective mechanisms for evaluating emissions from fugitive sources. Such approaches

could include more frequent VE evaluations or if continuous evaluation is required, use of devices such as the TSI DustTrak DRX. The DustTrak monitors can be operated remotely, continuously, provide notification when levels exceed a specified threshold, and are significantly more economical than FEM PM10 monitors.

Accordingly, while S.H. Bell Co. believes that its Fugitive Operative Program is and will be effective in demonstrating the purpose of “no off-site visible emissions” in Section 3.0(4), S.H. Bell Co. is willing to install DustTrak DRX monitors at the Facility boundary instead of the FEM PM10 monitors in order to conduct the one year monitoring study described above and has already installed a meteorological station costing approximately \$19,000 to collect wind speed and wind direction data as offered in the original Variance Request.

2. Section 5.0(3): Protection of Waterways

Section 5.0(3) requires that “[o]utdoor storage piles be set back at least 50 feet from any waterway.” S.H. Bell Co. requested a partial variance from this Regulation to permit the Facility’s current setback of 20 feet. As set forth in S.H. Bell Co.’s Variance Request, 50 foot setbacks would severely limit S.H. Bell Co.’s ability to store any bulk materials outdoors. (*See* photos which show the effect of the 50 foot setback, previously submitted as Exhibit B to S.H. Bell Co.’s June 10, 2014 Variance Request). As discussed in the original Variance Request, compliance with this 50 foot setback requirement would reduce annual revenue by 20% due to the severe limitations on outdoor storage locations and construction of indoor storage for these materials would be economically infeasible at a cost of at least \$5.2 million. In other words, absent a variance from this setback requirement, S.H. Bell Co. will likely be forced to shut down the Facility, resulting in a loss of jobs and revenue to this community.

It is important to note that S.H. Bell Co. is not requesting a complete variance from this requirement, but only a modified setback of 20 feet instead of 50 feet from waterways for outdoor storage piles and only in limited areas of the Facility, namely the strip of land adjacent to the Middle Slip and the Southwest Shoreline as indicated in the Facility diagram Exhibit 3.¹ The 20 foot setback from waterways in these limited areas in combination with S.H. Bell Co.’s stormwater containment measures, which meet or exceed recognized industry standards for stormwater controls, under its required Stormwater Pollution Prevention Plan (SWPPP) and its revised Fugitive Operating Plan, including that the materials stored outside are not water soluble; the use of absorbent material (*e.g.*, dirt, rock and gravel) along the perimeter of the storage areas; the use of a containment wall; storage of material on impervious/paved surfaces to prevent migration into subsoil/groundwater; and steel piling barriers between site activities and the river, adequately and effectively prevents materials from falling blowing, or running off into waterways. Notably, S.H. Bell Co.’s existing 20 foot setback was approved by the Chicago Department of the Environment in 2008. A true and correct copy of the Governmental Inspection Report dated July 11, 2008 is attached as Exhibit 4.

¹ Exhibit 3 identifies the typical bulk storage pile locations, all of which are setback at least 20 feet from the waterway.

Description of Measures to Prevent Materials from Entering Waterways

S.H. Bell Co. operates under its Stormwater Pollution Prevention Plan (SWPPP), which was last updated in October 2012. The facility storm sewers discharge to the combined sewer system of the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). This current SWPPP was updated to comply with the facility's General Permit for Stormwater Discharges from Industrial Activities (ILR006291) as part of Illinois Environmental Protection Agency's administration of the National Pollutant Discharge Elimination System (NPDES). The facility is required to comply with the Illinois General Permit based on its Standard Industrial Classification (SIC) of 4225: General Warehousing and Storage. As stated in the General Permit, the SWPPP should identify "potential sources of pollution which may be expected to affect the quality of stormwater discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in stormwater discharges." The current stormwater best management controls and practices (BMPs) employed at the Facility, as reflected in the SWPPP, meet recognized industry standards. *See USEPA Developing Your Stormwater Prevention Plan, A Guide for Industrial Operators (February 2009).*

Below is a description of the stormwater controls that S.H. Bell Co. is currently implementing at the Facility, which is taken from the best management practices (BMPs) contained in the current SWPPP (dated October 31, 2012), those BMPs implemented subsequent to the last SWPPP update, and those BMPs contained in the Fugitive Operating Program pertinent to waterways protection:

Best Management Practice	Site-Specific Description
Minimize exposure	Only store materials outdoors that are not water soluble, non-hazardous, and not susceptible to being windblown (predominately greater than ½" diameter in size); utilize indoor storage capacity as much as practical and outdoor storage piles must be setback at least 20 feet from all waterways.
Identification of Responsible Personnel	Facility has designated the Facility Terminal Manager, as having authority and oversight over implementing and maintaining best management practices. Employees are trained on SWPPP requirements in conjunction with the SPCC Plan.
Good housekeeping	Facility grounds are kept free of debris and refuse and waste is properly disposed. <i>See also</i> minimize dust generation/roadway cleaning.
Preventative maintenance	SPCC regulated equipment is inspected monthly, including containment structures, fill

	nozzles and hoses, and above ground storage tanks, for signs of cracks, leaks, or other deterioration; facility vehicles and equipment maintained in accordance with manufacturer's recommendations, unless a more stringent program is deemed necessary based on vehicle use.
Materials Compatibility	The materials used in the construction of designated storages areas are compatible with materials stored. Facility's personnel check shipping manifests of all incoming loads of materials to assure proper identification prior to unloading and materials are directed to the appropriate storage locations.
Spill prevention and response	Performed in accordance with S.H. Bell Co.'s SPCC Plan, which is incorporated by reference into S.H. Bell Co.'s SWPPP.
Storm Tracking/Testing	Each quarter, the facility tracks whether there was a storm event, if there was runoff, and if a sample was taken (if applicable).
Erosion and sediment controls	Vegetation, geotextile materials, gravel, rock, concrete or riprock will be used to stabilize and protect any eroding areas, as deemed necessary
Management of runoff	Storage tanks maintained with secondary containment; drums located on containerized pallets or within buildings which provide containment; spill kits are adjacent to tanks and drums, to be used to immediately cleanup any noted spill or leak; storm sewer manholes and catch basins are maintained as follows: 1) storm sewer catch basins inspected at least annually for accumulated material and, if necessary, the material will be removed, 2) the sump of the catch basins will be pumped out immediately after any uncontrolled release of significant material has entered the structure; upgraded shoreline along southwest portion of facility by adding a secondary containment recessed steel plate wall and concrete barriers
Employee training	Yearly training on SPCC Plan and SWPPP requirements; yearly training on Fugitive Dust

	Plan; training as part of orientation for new employees
Minimize dust generation/roadway cleaning	All roads swept and/or watered daily, except during inclement weather; salt/brine solution utilized in wintertime, as necessary; “small particle” piles stored outdoors are either tarped or sprayed with dust suppressant until crusted and are inspected daily to ensure adequacy of control measures; materials stored outside are placed away from the riverbank whenever possible. If materials are stored near the riverbank, adequate clearance is provided from the riverbank and/or materials are placed behind concrete barricades to prevent accidental spillage of material into the river; control measures for active storage piles include minimizing drop heights, dampening of material (as possible) and use of water spray system in the form of mobile misters or dry fogging system.
Quarterly Inspections	Comprehensive visual inspection of the facility for evidence of, or the potential for, pollutants entering the drainage system in order to confirm that potential pollution sources are properly being controlled.
Annual Inspections	Annual comprehensive and detailed facility inspections to assess the overall effectiveness of the SWPPP, to verify all elements of the SWPPP are accurate, and to modify or improve the SWPPP, where appropriate.

These measures are intended to prevent material from falling or running off into waterways. The materials that are stored outdoors are not water soluble, which prevents storage piles from eroding into the waterway. Additionally, as can be shown from above, the additional measures that S.H. Bell Co. already has in place in its SWPPP, which are consistent with standard and approved industry practices, are effective in making sure that no falling or running off occurs into waterways.

Currently, S.H. Bell Co.’s Facility Terminal Manager (or designee) conducts a quarterly visual inspection of the facility for evidence of, or the potential for, pollutants entering the drainage system. The purpose of the visual inspection is to confirm that potential pollution sources are properly being controlled. Additionally, each quarter, the facility tracks whether

there was a storm event, if there was runoff, and if a sample was taken (if applicable). No runoff has been observed by S.H. Bell Co. during quarterly inspections. Annual facility inspections are also conducted to assess the overall effectiveness of the SWPPP, to verify all elements of the SWPPP are accurate, and to modify or improve the SWPPP, where appropriate. Recent quarterly and annual inspections have shown no shortcomings with either the SWPPP or SPCC. Records pertaining to the aforementioned inspections are maintained at the Facility.

To clarify the stormwater controls for materials stockpiled outdoors in the limited areas of the Facility for which the variance is sought for a 20 foot setback from waterways, S.H. Bell Co. will amend the existing SWPPP to incorporate existing sweeping / roadway cleaning requirements from the Fugitive Operating Program / Fugitive Dust Plan and add the following practices:

- Install signage/posting of allowable materials.
- Limit the types of materials stored adjacent to the “middle slip” and Southwest Shoreline to those that are predominantly greater than ½” diameter in size and which are not water soluble;
- Establish criteria for the designated storage areas as follows:
 - o The maximum side slopes for storage piles will not exceed 2H:1V to minimize potential for stockpile sloughing and erosion;
 - o Materials will not be stockpiled against the existing concrete barriers in a manner by which the barrier provides structural support for the stockpile;
 - o The maximum height of the pile shall not exceed 30 feet in accordance with the CDPH Regulations
- Conduct more frequent visual inspections during loading / unloading activities to assess the need for timely sweeping of the storage area

In sum, the combination of physical barriers, such as concrete blocks, steel pilings, earthen berms, rip-rap, *etc.*, a minimum 20 foot setback from the waterway, the use of best management practices such as roadway sweeping and the observance of SPCC protocols effectively prevents the potential for stockpiled material from entering local waterways in the limited areas that S.H. Bell Co. requests a variance from the 50 foot setback requirement. In addition, the materials stored in this limited area where the variance is sought are not susceptible to being windblown because the materials stored outdoors in these limited areas are predominately greater ½” diameter in size. Further, as per the Fugitive Operating Plan and the CDPH Regulations, these outdoor material storage piles cannot be greater than 30 feet tall, which further reduces any chance of these materials being windblown. Therefore, based on effective implementation of the SWPPP, and subsequent implementation of further stormwater and fugitive dust control measures, S.H. Bell Co. is confident that it meets current stormwater management and water quality requirements (as well as fugitive dust requirements) in terms of recognized industry best management practices. Accordingly, S.H. Bell Co. believes a variance granting the modified setback of 20 feet instead of 50 feet from waterways for outdoor storage piles is warranted in the limited areas of the Facility as indicated in Exhibit 3, namely the strip of land adjacent to the Middle Slip and the Southwest Shoreline.

II. S.H. BELL CO.'S RESPONSE TO ADDITIONAL SPECIFIC ISSUES RAISED IN JANUARY 26, 2015 LETTER

Even though S.H. Bell Co. is no longer seeking a variance from the following requirements, we take this opportunity to respond to additional comments and request for information raised by CDPH to demonstrate the numerous actions the Company has taken to ensure a robust and effective Fugitive Operating Plan.

1. Section 8.0(2)(b): Variance Requirements

Section 8.0(2)(b) of the Regulations requires “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.” You requested additional detail regarding the specific location and description of each activity for which a variance is requested (*e.g.*, storage areas, conveyors, *etc.*), as well as specific information about the surrounding area, including maps, diagrams, and any other pertinent supporting information.

In response, attached hereto as Exhibit 3 is a Facility Diagram which identifies the specific location of all processes and activities at the Facility. As previously discussed, Exhibit 3 also identifies the typical bulk storage pile locations, all of which are setback at least 20 feet from the waterway.

Based on the 2010 Census, the total population surrounding the Facility is 84,155.² The median age of the population is 36.1; 77.4% of the population have attained high school diplomas or higher; the median household income is \$38,845; and 72.9% of the population is above the poverty line.³ The area features robust commerce to which S.H. Bell Co. is a vital contributor.

2. Section 3.07: Transfer Points

Section 3.0(7) of the Regulations requires the Facility to “maintain all material transfer points” such that Fugitive Dust does not exceed a 10% opacity limit by employing one of four options: (a) total enclosure; (b) water spray system; (c) vented to air pollution control equipment; or (d) transfer of only Moist Material in a manner that minimizes the exposed drop. “Transfer Points” are defined as “the location at or within a facility where material being moved, carried, or conveyed is dropped or deposited.” S.H. Bell Co. originally requested a partial variance from this Regulation because full compliance at every Transfer Point imposes unreasonable hardship and is duplicative of measures already taken by S.H. Bell Co. as part of its Fugitive Operating Program. However, notwithstanding the hardship (*see* Cost Summary at p. 2, *supra*, identifying the costs of compliance incurred by S.H. Bell Co. since May 2014), S.H. Bell Co. is committed to compliance with one of the four options at each transfer point and thus no longer seeks a variance from the requirements of Section 3.07.

² http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

³ 2009-2013 American Community Survey 5-Year Estimates.

Attached hereto as Exhibit 5 is a Summary of the Transfer Points and the Control Measures implemented at each Transfer Point. Notably, S.H. Bell Co. is purchasing a dry fogging unit to be used at certain transfer points when temperatures are below freezing. The estimated cost of the dry fogging unit is \$84,000 and it will be operational within the next six months due to time required for manufacturing, delivery, and installation. Until the dry fogging unit is implemented, S.H. Bell Co. will continue to employ the control measures identified in Exhibit 5, which are proven to be effective.

3. Section 3.0(11): Truck Loading and Unloading

Section 3.0(11) of the Regulations requires the Facility Owner or Operator to ensure that truck loading and unloading occurs in compliance with one of the four options provided under Section 3.0(7). As discussed *supra*, Exhibit 5 sets forth in detail the control measures implemented for truck loading and unloading at each transfer point in accordance with Section 3.0(7).

You requested that S.H. Bell Co. demonstrate why the Facility's partial enclosure could not be retrofitted with air pollution equipment or a water spray system. S.H. Bell Co. has already committed to compliance with this requirement. S.H. Bell Co. will be installing baghouses at the Facility's two truck loadout locations, *i.e.*, the Norcon and Ryerson buildings (*see* Exhibit 3 (Facility Diagram) for location of the truck loadout buildings). S.H. Bell Co. estimates these baghouses will be installed within 30 weeks of obtaining utility service and approvals, as well as City of Chicago building and environmental permits. To that end, S.H. Bell Co. has already begun working with the utility company to assess the type of service that can be provided. *See* Exhibit 6 (e-mail correspondence with utility).

4. Section 3.0(13): Barge Unloading

Section 3.0(13) of the Regulations requires barge unloading to be conducted in accordance with one of the four transfer point options provided under Section 3.07. You requested that S.H. Bell Co. explain why it cannot comply with one of the four options for barge unloading and provide evidence of the effectiveness of its alternative measures.

Again, Exhibit 5 identifies the specific control measures implemented for barge unloading which comply with Section 3.0(7). S.H. Bell Co. has added two mobile misting units which may be used for barge unloading and is purchasing a dry fogging unit for use during barge unloading when temperatures are below freezing. Further, as discussed in S.H. Bell Co.'s Variance Request, S.H. Bell Co. uses excavators to minimize drop heights. As discussed in detail below, this is highly effective at controlling emissions during barge unloading, as well as at other transfer points. For illustration purposes Exhibit 7 hereto are photographs of the excavator dumping from a barge into a 6 wheeler dump truck.

S.H. Bell Co. has evaluated descriptions of minimum drop height to be included in a further revision to the October 2014 Fugitive Dust Plan. The Fugitive Plan is not included herein as there are additional updates required and the drop height information noted below will be incorporated into the forthcoming revision. The Company will revise the description in the Fugitive Dust Plan for the following operations:

- Bulk Barge Unloading: Bulk barges are unloaded via large dock excavator. Material is removed from the barge and placed directly into the bed of a truck. The excavator bucket is placed as far into the truck bed as possible to ensure that material drop height is minimized.
- Bulk Barge Loading: Bulk barges are loaded with material removed from either indoor or outdoor storage. The truck containing material to be loaded will drive to the appropriate location near the barge to create a temporary pile. Based on the nature of truck dumping, there is no need to minimize drop height as the material is essentially choke fed to the ground; the driver typically has to pull forward in order to ensure that all material is discharged from the truck. From the temporary pile, an excavator is used to transfer material into the barge. The excavator is able to reach fully into the barge to contain the material drop within the barge.
- Railcar Unloading: Railcars are unloaded via bottom discharge into a below grade pit which functions like choke feeding. There is no need to minimize drop height as material cannot be discharged from the railcar until there is space available in the pit.
- Railcar Loading: Covered hopper (CHOP) railcars are loaded with material removed from either indoor or outdoor storage. Material is choke fed from a front end loader into the hopper which then feeds the material to the covered conveyor. The conveyor is positioned to minimize the drop height from the top of the conveyor into the railcar. The conveyor height is adjustable and is set to just above the height of the railcar to allow for material transfer. Further, there is a loading spout at the transfer point from the conveyor to the railcar. Open top railcars are loaded directly with a bucket loader. Drop height is minimized by placing the hinge pin of the bucket as near as possible to the top of the side of the railcar which results in the bottom portion of the bucket being inside the railcar when the bucket is dumped.
- Outdoor Storage Loading to Truck: Materials stored outdoors are loaded into trucks with a front end loader. Drop height is minimized by placing the hinge pin of the bucket as near as possible to the top of the side of the truck bed which results in the bottom portion of the bucket being inside the truck bed when the bucket is dumped.

5. Section 3.0(15): Roadway Cleaning

Section 3.0(15) of the Regulations requires that the Facility “use a street sweeper to clean any paved road that is used to transport material inside or within one quarter mile of the perimeter of the Facility;” that the street sweeper “be equipped with a water spray, for use during non-freezing weather” and a “vacuum system;” and that “not more than 4 hours elapse [] between each street sweeper cleaning or after every 100 truck material receipts or dispatches.” S.H. Bell Co. requested a partial variance from this Regulation to the extent it requires sweeping one quarter mile of the perimeter outside of the Facility. S.H. Bell Co. no longer seeks a variation and is committed to full compliance with this requirement.

To that end, S.H. Bell Co. has purchased a Pelican Industrial Sweeper with water spray bar at a cost of approximately \$238,000. S.H. Bell Co. estimates, based on vendor information, the sweeper will be in place in April 2015. Until then, S.H. Bell Co. will use its existing dry vacuum filtered sweeper which has proven effective at controlling emissions. S.H. Bell Co.'s other existing measures are robust. Every vehicle entering and exiting the facility must traverse rumble strips and all dry bulk material trucks must be tarped once loaded. The Facility continues to implement its ongoing program of sweeping the entrance of the Facility to collect any loose debris which is tracked out from the Facility on an as needed basis. Material track out from the facility has not been observed to be an issue.

S.H. Bell Co.'s existing fugitive dust measures are designed to significantly reduce fugitive particulate matter and are sufficient to address the track out of any loose debris which emanate from the facility. These measures are, and have been, implemented on an as needed basis based on observation. In S.H. Bell Co.'s experience, these measures, while infrequently needed, have occurred in very close proximity to the facility entrance or immediately adjacent thereto.

F. Sections 3.0(5) and 3.0(12)

S.H. Bell Co. previously requested extensions of time to comply with Sections 3.0(5) (Wind Monitoring) and 3.0(12) (Railcar Loading and Unloading). Since the submission of its Variance Request, S.H. Bell Co. has purchased and installed a meteorological station to monitor wind speed and direction in compliance with Section 3.0(5) and a water spray system (discussed in detail above) to control emissions during railcar loading and unloading in compliance with Section 3.0(7). No further extensions of time are required relative to these items.

III. S.H. BELL CO.'S RESPONSE TO PUBLIC COMMENTS

In addition to the above, your letter invited S.H. Bell Co. to respond to any public comments regarding its Variance Request. S.H. Bell Co. appreciates the opportunity to respond to public concerns relating to its operations. We believe the comments submitted by the Natural Resources Defense Council ("NRDC") and the Southeast Environmental Task Force ("SETF") on September 2, 2014 lack merit and demonstrate a fundamental misunderstanding of S.H. Bell Co.'s business.

First, NRDC's and SETF's reliance on the U.S. EPA's Notice of Violation (the "NOV") dated July 15, 2014 is misplaced. The NOV contains unproven allegations, misstated facts and incomplete statements. For example, contrary to the assertions in the NOV, Direct Reduced Iron or "DRI" is not a manganese-based material. Moreover, the NOV presents no direct evidence that the emissions observed emanated from the S.H. Bell Co. facility. Likewise, the standard used to measure the emissions is unclear. True and correct copies of S.H. Bell Co.'s detailed Response to the NOV dated August 26, 2014 and follow up e-Mail dated January 16, 2015 are attached hereto as Exhibit 8. Because of the preliminary unverified nature of the allegations it is inherently flawed, and the NOV should not form the basis for the CDPH's decision on S.H. Bell Co.'s Variance Request.

Second, the Illinois Pollution Control Board (“IPCB”) proceeding in March 2012, cited by NRDC and SETF, is irrelevant to S.H. Bell Co.’s Variance Request. The complaint in that proceeding did not allege that S.H. Bell Co. had violated emissions limits. Rather, the complaint was premised on S.H. Bell Co.’s operation of the facility with an expired Federally Enforceable State Operating Permit while its application for a permit renewal was pending with Illinois EPA.

Under the terms of the Stipulation and Proposal for Settlement entered on March 30, 2012 with the Illinois Attorney General, S.H. Bell Co. is authorized to operate its facility in compliance with the terms of its expired permit until it obtains a FESOP renewal permit.⁴ A true and correct copy of the Stipulation and Proposal for Settlement is dated March 30, 2012 is attached as “Exhibit Two” to the NRDC’s and SETF’s Public Comments dated September 2, 2014. S.H. Bell Co.’s FESOP renewal permit application, which was submitted on February 11, 2011, remains pending with the Illinois EPA.

Third, NRDC and SETF cite the demographic makeup of the area surrounding S.H. Bell Co.’s facility. As discussed above in Section I.1, the majority of the area is not economically disadvantaged. S.H. Bell Co. is a vital contributor to the community’s robust commerce, providing numerous jobs and infusing approximately \$6 million annually into the local economy. The purpose of the Regulations is to protect the public, “not to put law-abiding companies out of business.” *See* City of Chicago Response to Comments (“The City understands that different types of materials and different material handling operations may call for different dust-control measures. Therefore, while still requiring strong protections and accountability on the part of all bulk storage material facility owners and operators, the Revised Rules build in more flexibility for businesses to implement measures that make sense for their operations.”). Strict application of the Regulations to businesses such as S.H. Bell Co. which do not pose a significant risk of harm to the community will result in their shutdown, an outcome clearly not intended by the CDPH in promulgating the Regulations.

With regard to the specific Variance Requests, NRDC’s and SETF’s arguments should be rejected. NRDC and SETF contend that S.H. Bell Co. has not met the standard for variance from Section 3.0(4) requiring FEM PM10 Monitoring which, according to them, requires that the Facility owner establish that its operations do not result in off-site fugitive dust emissions as a

⁴ A brief history of the permit correction and renewal process, which demonstrates S.H. Bell Co.’s diligence, is as follows:

- Feb. 11, 2011: S.H. Bell Co. submits FESOP application / Construction Permit Application
- May 4, 2011: IEPA issues construction permit
- May 5, 2011: IEPA issues a preliminary draft of the FESOP
- May 26, 2011: S.H. Bell Co. submits comment to IEPA on the preliminary draft of the FESOP
- Oct. 10, 2011: IEPA provides calculations used to create emission limits in the preliminary draft of the FESOP
- Oct. 26, 2011 – Feb. 1, 2012: E-mail exchanges between S.H. Bell Co.’s environmental consultant, AMEC, and IEPA regarding emissions calculations
- Sept. 26, 2012: IEPA issues Draft FESOP
- Nov. 13, 2012: S.H. Bell Co. comments on Draft FESOP
- 1st Qtr 2013: AMEC, sends e-mail and phone messages to IEPA seeking input on 11/13/12 comments and control efficiency references
- Feb. 2015: No response from IEPA to date

result of any of its activities. The standards for a variance are set forth in Section 8.0 of the Regulations and they apply equally to the Regulations. Contrary to NRDC's and SETF's assertions, there is no heightened standard for a variation from Section 3.0(4). As set forth in detail in Section I.2 above, S.H. Bell Co.'s Fugitive Dust Plan and cascade of controls already installed ensure that there will be no significant off-site fugitive dust emissions. As the public comments recognize, the purpose of dust monitoring is to ensure that fugitive dust control measures are working.

The reports attached as Group Exhibit 2 demonstrate the effectiveness of S.H. Bell Co.'s controls. NRDC's and SETF's suggestion that S.H. Bell Co. first expend the resources to install the monitors and then request a variance after the monitors demonstrate no off-site emissions for a representative period of time places "the cart before the horse." As previously discussed, S.H. Bell Co. would rather dedicate its limited resources to controlling emissions. It has done so by investing in a cascade of controls which provide an effective alternative to PM10 monitoring. Nonetheless, as discussed above in Section I.A, S.H. Bell Co. has proposed an alternative that implements NRDC and SETF's suggestion of monitoring over a representative period of time and range of conditions by conducting a one year monitoring program with the use of DustTrak monitors. The Variance Request as originally requested or the alternative request for a one year monitoring program should be granted.

Next, NRDC and SETF object to S.H. Bell Co.'s request for extensions of time to comply with 3.0(5) (Wind Monitoring) and 3.0(12) (Railcar Loading and Unloading). These objections are moot. As discussed above, S.H. Bell Co. has already installed a meteorological station in compliance with Section 3.0(5) and a mobile mister/water suppression system for railcar loading and unloading in compliance with Section 3.0(12), thus obviating the need for extensions.

Next, NRDC and SETF object to a variation from Section 3.0(11) (Truck Loading and Unloading) because of the purportedly speculative nature of S.H. Bell Co.'s request. Again, this objection is moot because, as discussed in Section I.4 above, S.H. Bell Co. has already committed to constructing truck loadout sheds at the Norcon and Ryerson buildings. The construction on such sheds will be completed within 30 weeks of obtaining all final approvals and environmental and building permits from the City.

Next, NRDC and SETF object to the partial variation from Section 5.0(4) (High Wind Events) which requires a suspension of operations when average wind speeds exceed 15 mph. According to NRDC and SETF, S.H. Bell Co.'s variance request to 20 mph is not as "protective of human health and the environment" as 15 mph. The objections are unfounded and unsupported. Section 5.0(4) of the Regulations provides that activities need not be suspended even in high wind conditions if "alternate measures are implemented to effectively control dust in accordance with the approved Fugitive Dust Control Plan." Here, S.H. Bell Co. has a robust cascade of controls set forth in its Fugitive Operating Program which address this issue.

Next, NRDC and SETF object to S.H. Bell Co.'s request that its water suppression system not be required to be operable at below freezing temperatures per Section 5.05 (Dust Suppressant System) of the Regulations. NRDC and SETF argue that S.H. Bell Co. has not explained why it cannot employ "a misting or heating system (by contrast to a spraying system)"

at these temperatures. To address this concern, S.H. Bell Co. is purchasing a dry fogging unit which will be implemented and operational once delivered by its vendor.

Next, with regard to the off-site roadway cleaning required by Section 3.0(15) of the Regulations, S.H. Bell Co. is already committed to compliance as set forth in Section I.6 above, thus once again mooted NRDC's and SETF's objections on this point.

Next, NRDC and SETF claim that S.H. Bell Co. should be required to implement a 50 foot setback from the waterways for all material piles under Section 5.03 of the Regulations, instead of the 20 foot setback with which it currently operates. NRDC and SETF contend that 50 foot setbacks "prevent leachate and runoff from being discharged from material piles into waterways." However, NRDC and SETF fail to articulate why the 20 foot setback with the controls currently in place at the facility would not accomplish the same objective. S.H. Bell Co. has thoroughly supported its request for a partial variance from this requirement in Section I.7 above.

Finally, NRDC and SETF object to S.H. Bell Co.'s request for a variance from Section 3.0(13) requiring dust suppression during barge unloading. Pig iron is the only material that can be wet safely. S.H. Bell Co. wets down pig iron materials. S.H. Bell Co. has provided ample evidence in Section I.5. above that its use of an excavator and minimized drop heights in conjunction with the phalanx of additional controls are effective at controlling dust emissions for all other materials handled.

For all of these reasons, S.H. Bell Co. respectfully requests that its Variance Application for Sections 3.0(4) and 5.0(3) be granted. I would be happy to answer any additional questions you may have.

Very truly yours,

TAFT STETTINIUS & HOLLISTER LLP


Kim R. Walberg

KRW:kmm
Enclosure

cc: Commissioner Julie Morita, M.D. (via messenger)
Alderman John A. Pope (via messenger)
John M. Bell (via e-mail)
Scott Dismukes, Esq. (via e-mail)
Jack Guthman, Esq. (via e-mail)
Edward Kus, Esq. (via e-mail)

TABLE OF CONTENTS OF EXHIBITS TO MARCH 3 RESPONSE

EXHIBIT NO.	DESCRIPTION
1.	Dust Monitoring Budgetary Estimates from Ambient Air Quality Services
2.	(a) Daily Observation Reports from 10/24/14-2/23/15; (b) Sample Method 22 reports from 2/18/15-2/23/15; (c) Sample Method 9 Reports from 2/19/15-2/23/15
3.	Facility Diagram
4.	Governmental Inspection Report dated 7/11/08
5.	Summary of the Transfer Points and the Control Measures
6.	E-mail Correspondence with Utility
7.	Photos of Excavators Unloading Barge
8.	S.H.Bell Response to USEPA NOV dated 8/26/14 and follow up e-mail dated 1/16/15



Ambient Air Quality Services, Inc.

Ambient Air Quality Services, Inc. (AAQS)
 107 Hidden Fox Drive
 Suite 101A
 Lincoln University, PA 19352
 (484)224-6218
 mailbox@aaqsinc.com

Proposal

Date	Proposal No.
04/03/2014	1055
	Exp. Date

Address
Eckerts/2014/TEOM Monitoring 600 Grant Street, 44th Floor Pittsburgh, PA 15219-2788

Activity	Quantity	Rate	Amount
April 2014			
• Budgetary Estimate for the installation, operation and data reporting for 4 TEOM Continuous PM10 monitors (US EPA Designated samplers)			
• Thermo Scientific 1405 Monitor System Includes: TEOM Instrument, Accessories, Pump, Consumable Pack, Accessory Package, Appropriate Tubes and Connectors and Outdoor Shelter with Tripod	4	30,000.00	120,000.00
• Mobilization and Installation	1	5,000.00	5,000.00
• Monthly Data Reports	12	1,000.00	12,000.00
		Total	\$137,000.00

Other Terms and Conditions of this quotation are contained in AAQS, Inc. General Terms and Conditions of Contract which are attached and hereby incorporated into this quotation.

Accepted By _____

Accepted Date _____

