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May 1, 2015

Via U.S. Mail and Email

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

Re: Second Supplemental Response of Kinder Morgan/Chicago Arrow Terminal, 2929 E. 126th Street, to CDPH's Request No. 2 of the CDPH's Request for Information related to Chicago Arrow's Request for Variances from Air Pollution Control Rules and Regulations for Control of Emissions from Handling and Storage of Bulk Material Piles

Dear Mr. Omenazu:

Kinder Morgan/Chicago Arrow Terminal ("Arrow Terminal") filed its Variance Request on June 11, 2014 regarding a limited number of provisions to the above-referenced Rules and Regulations. On January 29, 2015, Arrow Terminal received a Request for Information from CDPH related to the Variance Request. By letter dated February 23, 2015, CDPH granted Arrow Terminal a 30-day extension of time to respond to Request No. 3, and a 60-day extension of time to respond to Request No. 2. Arrow Terminal filed its timely response to each of the other requests on March 2, 2015, and to Request No. 3 on April 1, 2015. At this time, Arrow Terminal responds to Request No. 2, as follows:

- 2) With respect to Section 3.0(4), and the requirement to install, operate, and maintain fugitive dust monitoring, Kinder Morgan requests an extension of time until June 11, 2016 to continue "evaluating fugitive dust at the Terminal and implement additional measures that are designed to further eliminate off-site fugitive dust emissions." (Kinder Morgan Request p.11). However, it is not clear what Kinder Morgan intends to do on June 11, 2016, nor is it clear how Kinder Morgan will evaluate fugitive dust during the interim. Similarly, it is not clear how Kinder Morgan will demonstrate the effectiveness of additional measures.

Therefore, please provide additional details to support Kinder Morgan's request to not install a dust monitoring network, including evidence of the effectiveness of Kinder

Morgan's planned and future fugitive dust control program. If available please include any scientific studies and any site-specific technical evaluations. Please also be sure to include citations and supporting calculations for all of the sources of emissions data and other information upon which you rely.

RESPONSE: Arrow Terminal is not required to install PM-10 monitors under federal or state law. Furthermore, the area where the facility is located is not a PM-10 non-attainment area. Under section 3.0(4) of the CDPH's regulations, Arrow Terminal is entitled to seek a variance from installing PM-10 monitors if it can establish that the facility's operations do not result in off-site fugitive dust emissions. In 2014, when Arrow Terminal applied for a variance, it had already begun implementing a number of measures to ensure that there will be no off-site fugitive dust emissions. Given the magnitude of the changes at the facility, as set forth in the variance application and this response, Arrow Terminal seeks an extension to June 11, 2016, to install the remaining fugitive dust control measures at the facility and to evaluate the effectiveness of all of the measures. By June 2016, Arrow Terminal believes in good faith that it will be able to establish that its operations do not result in off-site fugitive dust emission.

First, as stated, Arrow Terminal does not handle petcoke or coal. The products that Arrow Terminal does handle, generally speaking, do not create much dust. Any products that do create dust are all stored indoors. The only products stored outdoors are pig iron and certain aggregates, which create almost no dust. Given the nature of its operations and the types of products at issue, PM-10 monitors are not necessary.

As set forth in Arrow Terminal's Fugitive Dust Control Plan and variance application, numerous measures have already been implemented to control dust on the site in response to CDPH's Bulk Material Storage regulations. These measures include, but are not limited to, the following:

- Moving **all** truck loading (excluding pig iron and certain aggregates) indoors;
- Moving **all** storage (excluding pig iron and certain aggregates) indoors;
- Moving **all** outdoor storage piles of pig iron and certain aggregates more than 50 feet from the property line (there are no longer any storage piles near any property line);
- Watering **all** outdoor materials (weather permitting);
- Implementing new and conscientious dust control procedures for handling equipment (e.g., drop heights, bucket management);
- Implementing new procedures for limiting the number of barge lids that remain open during unloading operations (only three barge lids may be open and all others remain closed);
- Implementing new procedures to minimize porthole openings while loading railcars (only one porthole may be open and all other remain closed);
- Implementing new procedures to respond to high wind events; and
- Sweeping and watering roadways daily (as necessary).

Arrow Terminal has evaluated the effectiveness of these measures with a series of USEPA Method 9 and Method 22 observations by trained and certified readers. Since Arrow Terminal filed the variance application, it performed five USEPA Method 22 observations. These observations were performed at the dock as well as the south fence line while handling three different types of materials. All readings demonstrated compliance, as fugitive dust emissions did not leave the property. Since Arrow Terminal filed the variance application, it has also performed 23 USEPA Method 9 observations. These observations were performed while handling eight different types of materials and during three different handling operations. While all of these observations are being made in order to assess the effectiveness of our dust control measures and not to demonstrate compliance (because Arrow Terminal is still waiting for CDPH to approve its Fugitive Dust Control Plan), only one Method 9 observation was non-compliant. On August 27, 2014, during a truck loading operation at Building F, a Method 9 reading showed opacity that would have triggered notification to the CDPH if the Fugitive Dust Control Plan had been approved at that time. Arrow Terminal immediately implemented measures to reduce the opacity from this operation. Specifically, Arrow Terminal opened certain doorways to allow the cross draft to dissipate the plume before it can exit the building. After this measure was taken, there have been no exceedances and all Method 9 readings were within normal and allowable limits. As set forth in more detail below, Arrow Terminal is in the process of installing a baghouse at Building F, which should alleviate all fugitive dust emissions during truck loading operations.

Before June 11, 2016, Arrow Terminal plans to implement two additional and significant measures to further reduce the potential for fugitive dust emissions. Arrow Terminal reasonably believes that after these measures are fully implemented, the facility's operations will not result in off-site fugitive dust emissions. Arrow Terminal needed an extension of time to implement these remaining measures in order to complete the necessary engineering and to obtain approval on the significant capital expenditures. At this time, all capital expenditures for the following additional projects have been approved and the engineering has been completed:

- Paving **all** unpaved roads; and
- Installing a baghouse to Building F (truck loading building).

Arrow Terminal expects that the baghouse will be installed in the third quarter of 2015, and all roads will be paved by the second quarter of 2016. Arrow Terminal already completed paving more than 90% of its internal roads, so only a small portion remains. Arrow Terminal also paved all parking lots. In the meantime, Arrow Terminal waters its unpaved roads and sweeps and water flushes its paved roads.

Arrow Terminal will continue to use USEPA Method 9 and Method 22 observations to evaluate the effectiveness of these additional measures. Observations will be

conducted at least quarterly as required by CDPH's regulations and on a basis frequent enough to evaluate each new measure implemented.

Arrow Terminal respectfully believes that the fugitive dust control measures that it has taken meet and exceed the fugitive dust control measures recommended by USEPA, as evidenced by several USEPA sources. Pursuant to USEPA AP-42 13.2.4.4, watering storage piles reduces fugitive emissions by up to 90%. Similarly, in 13.2.2, watering unpaved roadways reduces emissions by up to 80%. According to the USEPA Air Pollution Control Fact Sheet, typical particulate control efficiencies for newer baghouses range from 99% to 99.9%.

In order to implement the Prevention of Significant Deterioration ("PSD") Program, USEPA defined Best Available Control Technologies ("BACT") to minimize the amount of pollution from new sources. USEPA defines BACT as an emissions limitation which is based on the maximum degree of control that can be achieved and requires implementation of the best available control measures to meet that emission limitation. Therefore, BACT requirements are some of the most restrictive limitations enforced by USEPA. While Arrow Terminal is not required to participate in the PSD program nor achieve BACT, Arrow Terminal believes that the control measures discussed above are consistent with the BACT control measures for fugitive dust recommended by USEPA. Arrow Terminal's belief is based a Fugitive Dust Background Document for Best Available Control Measures (EPA 450/2-92-004). Copies of the EPA source documents are enclosed. As reflected in these materials, the controls for each type of operation should be as follows:

Emission Source	Control
Paved Roads	Water flushing followed by sweeping
Unpaved Roads	Watering
Material Handling	Drop height reduction
Wind Erosion – Piles	Disturbed area reduction
Wind Erosion – Piles	Wet suppression

Arrow Terminal has implemented all of these measures and much more. Arrow Terminal currently has four dust collectors and will install the dust collector at Building F in the next quarter. Arrow Terminal has paved most of its internal roads and will pave the remaining roads by early 2016. Arrow Terminal has moved its storage of almost all products indoors. The little product that is stored outdoors has been moved at least 50 feet from the property line. Arrow Terminal installed covers over conveyors. Arrow Terminal has changed loading and unloading operations to reflect much more conscientious action, including filling buckets only partway and lowering the drop height. Arrow Terminal has implemented more conscientious control measures, including frequent watering, sweeping, keeping barge lids on, and keeping portholes covered.

The capital that Arrow Terminal has invested in controlling fugitive dust exceeds \$1,000,000. These funds were devoted to the new baghouse for Building F, paving, sweepers, the water truck, among other things. Of note, Arrow Terminal previously installed several baghouses, the cost of which is not included.

The cost to install four PM-10 monitors at the site will range from \$300,000 to \$500,000, including operations and maintenance. Furthermore, the monitors will not accurately reflect PM-10 on the property because there are multiple major fugitive dust emission sources within one mile of the facility. Because Arrow Terminal already uses the best available control measures, and because Arrow Terminal has invested so much capital and time in controlling fugitive dust at the site, the PM-10 monitors are a poor use of its remaining capital resources and are unnecessary. Arrow Terminal reasonably believes that once the remaining fugitive dust control measures are implemented, its operations will not result in off-site emissions. Therefore, Arrow Terminal seeks until June 11, 2016 to complete these steps and evaluate fugitive dust. Arrow Terminal would like to re-visit this issue with CDPH in June 2016, at which time it intends to demonstrate the effectiveness of its measures. Assuming that the measures are effective at controlling fugitive dust, Arrow Terminal will seek a permanent variance from installing PM-10 monitors at the site.

The Southeast Environmental Task Force and National Resources Defense Council (jointly referred to as "SETF/NRDC") submitted joint comments objecting to the variance. There were no other negative comments filed related to Arrow Terminal's variance request. Arrow Terminal notes that the Chemical Industry Council of Illinois filed comments supporting Arrow Terminal's variance request.

SETF/NRDC also filed comments opposing all other variance requests. The comments filed by SETC/NRDC were largely generic, contained similar arguments as to all of the variance applicants, and did not address the specific issues and operations related to the necessity of PM-10 monitors at Arrow Terminal's facility. SETC/NRDC did not acknowledge the nature of the products handled at Arrow Terminal, including that there is no petcoke or coal handled at this facility. SETC/NRDC did not acknowledge the enormous capital investment made by the facility to control fugitive emissions, including the baghouses, paving, moving products indoors, and many other controls. SETC/NRDC also infers that a variance cannot be granted because it is impossible to ensure that there will be no off-site emissions. Contrary to SETC/NRDC's inference, Arrow Terminal reasonably believes there will be no off-site fugitive emissions as a result of its operations given that all products, except for pig iron and certain aggregates, are stored indoors, the outdoor storage piles have been moved at least 50 feet away from the property line, the installation of the baghouses, the paving of all roads and parking areas, the conscientious dust control measures implemented, among many other things. Indeed, CDPH incorporated variance language in its regulations, so CDPH clearly understands that a facility can invest in its operations in such a manner as to eliminate off-site

fugitive emissions. Therefore, SETC/NRDC's inference that it is impossible to eliminate off-site fugitive emissions is incorrect.

Arrow Terminal would be happy to meet with CDPH to go over its fugitive dust control measures and initiatives, including the effectiveness of the control measures. Should you require any additional information, or if you have any questions, please do not hesitate to call me at (773) 646-8005 or email me at steven_caudle@kindermorgan.com.

Sincerely,



Steven Caudle
Facility Manager

Cc: Dave Graham, CDPH
Jennifer Hesse, Esq., CDPH
Nancy Van Burgel, Esq., Kinder Morgan
Darren Hunter, Esq., Rooney Rippie & Ratnaswamy LLP

Enclosures