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**By Overnight and Electronic Mail**

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**Re: NT-NW Meteorological Tower Ambient Temperature Data June 26 – August 6, 2014**

Dear Mr. Czerniak and Ms. Cantello:

I write on behalf of KCBX Terminals Company to share with you the results of KCBX's recent review of its monitors and data pursuant to the requirements of the United States Environmental Protection Agency (EPA)-approved March 10, 2014 "Quality Assurance Project Plan for the KCBX Terminals Company" (QAPP). KCBX conducts quarterly quality control (QC) assessments of each of the terminals' meteorological towers, alternating between calibrations performed by on-site personnel and performance evaluation audits conducted by independent auditors, as described in Sections B5.3 and C1.2 of the QAPP. The second calendar quarter calibration assessment of the meteorological towers, which was performed on June 10, 2014, identified no issues.

KCBX also conducts regular monthly operational checks of the monitors pursuant to Section B4.1 of the QAPP. The August operational check found no issues with the PM<sub>10</sub> monitors, and identified only one issue with respect to one of the two meteorological towers. The PM<sub>10</sub> and meteorological monitors at the North Terminal are co-located at the Northwest monitoring location (NT-NW), and the PM<sub>10</sub> monitor at that location collects ambient temperature data. The operational check performed on the NT-NW meteorological monitoring tower on August 6, 2014, revealed that the ambient temperature measurement was outside of the required accuracy specification of  $\pm 1$  °C, found in QAPP Table B-7, reading approximately 3 °C lower than the secondary QC instrument (a National Institute of Standards and Testing traceable temperature device) as of August 6, 2014. The ambient temperature probe was immediately replaced, and the new probe calibrated and determined to be within the required accuracy specification of  $\pm 1$  °C.

A comparison of the NT-NW meteorological monitor ambient temperature data to the other

temperature measurements in the area indicates that the drift outside of specification likely started on June 26, 2014. KCBX therefore determined the originally reported ambient temperature data from June 26 through August 6, 2014, at the NT-NW meteorological monitoring tower should be invalidated. Because the PM<sub>10</sub> monitor at that site also collects ambient temperature data, an additional data source is available at the NT-NW site. This measurement is part of the internal data collection for the BAM-1020 monitor, and is not routinely reported since it is not a primary measurement source, but is regularly checked for accuracy as part of field operations quality control under Section B4.1 of the QAPP.

The BAM-1020 ambient temperature measurement data at the NT-NW site were within the  $\pm 1$  °C accuracy specification during the period in question, based on a review of associated QC check temperature data from June 19 (average accuracy within 0.3 °C), July 11 (average accuracy within 0.3 °C), and August 8 (average accuracy within 0.2 °C). Based on this verification of the substitute data source quality, KCBX substituted the hourly ambient temperature data from the BAM-1020 monitor file for the invalidated meteorological monitor ambient temperature data. This direct substitution of quality-verified redundant site-specific data is consistent with EPA guidance, specifically Section 6.8.1 of "Meteorological Monitoring Guidance for Regulatory Modeling Applications," EPA-454/R-99-005 (Feb. 2000), and even surpasses the use of interpolation and introduction of data of potentially unknown quality allowed under EPA guidance.

Enclosed are updated hourly data files for June 26 – August 2, 2014, containing the substitute ambient temperature data for the NT-NW meteorological tower. The NT-NW ambient temperature data for August 3-10, 2014, were substituted prior to the August 19, 2014 submission. The slight variance in temperature has no impact on the monitor results for any other parameter. Consequently, no changes have been made to data other than the temperature data for the NT-NW meteorological tower. Please contact us should you have any questions or comments regarding this substitution of ambient temperature data or the results of KCBX's review.

Sincerely,

/s/ Adam M. Kushner  
Adam M. Kushner

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Enclosure

Cc: Ray Pilapil, Illinois Environmental Protection Agency