AK Steel Corporation
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James E. Earl
Environmental Affairs Manager
Dearborn Works

December 9, 2019

Ms. Katherine Koster
EGLE, AQD
Detroit District
3058 West Grand Boulevard
Suite 2-300
Detroit, Michigan 48202

RE: Response to Violation Notices Dated November 18 and November 26, 2019
AK Steel – Dearborn Works
SRN: A8640, Wayne County

Dear Ms. Koster:

I am writing on behalf of AK Steel Corporation in response to the Violation Notices dated November 18 and November 26, 2019. In the Violation Notices, EGLE alleges that AK Steel has violated conditions FGBOFSHOP S.C.I.10 and FGBOFSHOP S.C.I.12 of its Renewable Operating Permit based on the stack tests results from August 13 and 14, 2019 and September 17, 2019. The stack test results identified excess emissions for lead and manganese. Compliance was demonstrated for PM, PM_{10}, $PM_{2.5}$, mercury, carbon monoxide and NO_x.

Upon receiving the results of the August 13 and 14 test results, AK Steel performed an investigation to determine a root cause of the excess lead and manganese emissions. AK Steel did not identify a root cause and a follow-up test was conducted on September 17. The results of that test were also above the permit limits for lead and manganese. AK Steel has not yet identified a definitive root cause for the higher lead and manganese emissions.

Starting October 1, 2019, the primary side of the operation was down for 19 days for a major maintenance outage including extensive repairs at the BOF. During this time, the "A" vessel wye section, ESP down comer, and the majority of the inlet and outlet ESP manifolds were replaced. AK Steel believes these repairs will reduce the amount of tramp air infiltrating the control system which should improve the overall ESP efficiency, including the removal of lead and manganese particulate. In addition, several internal trials have been performed to assist with determining what parameters could be affecting the lead and manganese emissions. AK Steel is currently evaluating the results of the trials.

AK Steel has scheduled another compliance test for the week of December 16, 2019. After an evaluation of the results of that test, AK Steel will communicate with EGLE regarding next steps.

Depending on the results of the upcoming stack test, AK Steel may submit a permit modification to increase the manganese and/or lead emissions limits for the BOF ESP. AK Steel believes that there are several strong technical factors that support an increase in both emissions limits.

First, there is no current regulatory basis restricting the manganese and lead permit limits to their current permitted values. Based on preliminary air dispersion modeling, manganese emissions at recently tested levels are well below the air toxics Initial Threshold Screening Level and lead emissions at recently tested levels are well below the National Ambient Air Quality Standards.

Second, the ESP is operating as designed based on the August 2019 testing. Particulate matter stack test results for this test were 0.0077 gr/dscf. This result is well below the permit limit of 0.0152 gr/dscf. Based on in-house inlet testing conducted in January 2019, this equates to a collection efficiency of 99.67%, which exceeds the design specification efficiency for the ESP of 99.2%. It is therefore reasonable to conclude that achieving compliance with both the lead and manganese limits requires AK Steel to greatly exceed the design specification of the ESP.

If you have any questions on this response, please contact me at 313-845-3217.

Sincerely,

James E. Earl
Environmental Affairs Manager
AK Steel Dearborn Works

Cc: Ms. Jenine Camilleri
EGLE, AQD
Enforcement Unit Supervisor
PO Box 30260