U. S. Steel Supplemental Production and Heat Input Information

May 25, 2023

U. S. Steel is providing the following additional information to supplement previously provided 2022 stack test reports.

Blast Furnace Stoves

General Comment

(1) For the Blast Furnace stoves, HCl, THC, and dioxins/furans emission limits in the form of lbs/MMBtu is more appropriate than a lb/ton of iron limit because the stoves are a combustion source (Blast Furnace iron production rate does not have a direct correlation to emissions from the stove stacks). U. S. Steel requests that EPA solicit comments on the form of the HCl, THC, and dioxins/furans emission limits for the Blast Furnace stoves.

Edgar Thomson Plant Corrections

(2) If EPA elects to keep the the form of the emission limits for HCl and THC as a lb/ton of iron, EPA must use the actual tons of iron produced during the 2022 Edgar Thomson stove stack testing.
    a. The appropriate iron production values, based on data collected during the days of the Edgar Thomson stove stack testing on Febuary 22 and 23, 2022, are **162.21 tons of iron/hour for BF Stove 3** (run 1 = 143.08, run 2 = 108.71, run 3 = 234.85), and **163.73 tons of iron/hour for BF Stove 1** (run 1 = 149.80, run 2 = 190.02, run 3 = 151.35).

(3) The previously submitted 2022 Edgar Thomson stack test report included lb/MMBtu information, so EPA has the heat input for the Blast Furnace stoves.

(4) In addition, it is our understanding that steel production data from the 2012 ICR stack test report (588.67 tons of *steel*/*test run*) was applied to the 2022 blast furnace stove stack test emission results. Using a steel production rate from the Basic Oxygen Furnaces is not appropriate to use as a basis for a limit at a Blast Furnace, which only produces iron. The iron production during the 2012 stove stack test averaged to 152.26 tons of iron/hour (run 1 = 134.91, run 2 = 143.55, run 3 = 178.33 tons of iron/hour). Again we want to note that iron production is not direclty correlated to stove emissions and U. S. Steel suggests using a lb/mmbtu as a more appropriate form of any limit at the Blast Furnace Stoves.

Granite City Supplemental Information

(5) At Granite City, Boiler 12 was tested for dioxins and furans in lieu of a stove stack, as agreed to by EPA, on December 20, 2022. The corresponding heat input for this test would be an average of **95.25 MMBtu/hr** (run 1 = 102.80, run 2 = 94.14, run 3 = 88.81 MMBtu/hr). The corresponding average iron production rate of the blast furnace during the Boiler 12 stack test is **207.98 tons of iron/hour** (run 1 = 244.93, run 2 = 196.67, run 3 = 182.35 tons of iron/hour). Again we want to note that iron production is not direclty correlated to stove emissions and U. S. Steel suggests using a lb/mmbtu as a more appropriate form of any limit at the Blast Furnace Stoves.

BOP Primary

Edgar Thomson Plant Correction

(1) For the BOP scrubber, the calculated lb/ton of steel value for the THC emission limit, based on the 2022 Edgar Thomson stack test, must be corrected. It is our understanding that production data from the 2012 ICR stack test report (376.77 tons of steel/hour) was applied to the 2022 stack test emission results. 2012 production data should not be used in place of production data during the actual stack testing event. U. S. Steel has steel prodution data during the time of the 2022 test.

   a. The appropriate steel production value, based on data collected during the BOP scrubber stack testing on Febuary 24, 2022, averages **290.82 tons of steel/hour** (run 1 = 229.05, run 2 = 327.63, run 3 = 315.77).

Granite City

(2) Steel production data for the 2022 Granite City BOP ESP test was included in the previously submitted stack test report and no corrections are needed.