

From: [Fischman, Gary](#)
To: [Deluca, Dean](#); [Maranche, Jason](#)
Cc: [Etzel, Sandra](#)
Subject: RE: USS Clairton emission reductions
Date: Thursday, July 11, 2019 11:19:00 AM
Attachments: [Consent judgment 2019.xlsx](#)
[image001.gif](#)

The only emission reductions I can quantify are due to the air curtain at B Battery. I estimate about 5.1 TPY reduction in PM2.5 emissions. This results from 81.5% capture by the air curtain, reducing current PEC fugitives by 81.5%. The source for the capture efficiency is stated in the attached spreadsheet. B Battery already emits substantially less pushing fugitive emissions than the other batteries due to having a shed.

Through wall repair should reduce VOC, SO₂, and particulate emissions due to reducing oven-to-flue leakage. However, the same repair could increase NO_x by removing a source of flameout, namely, excess fuel introduced into the flame zone. This effect is borne out by the high percentages of methane in the 2008 Battery 19 and 20 test results – this indicates that substantial amounts of coke oven gas were emitted unburned. The increases in NO_x could exceed the decreases in all other pollutants combined. The attached spreadsheet shows an analysis of 2008, 2012 and 2016 stack test results for Batteries 19 and 20, which experienced through wall repair between the 2008 and 2012 tests, and Batteries 13 and 14, which did not experience such repair. The 2016 test is included to look at whether there was a continuing effect of the repairs, the effect was reversed due to degradation following the repairs, or the data is meaningless. Unfortunately, not all pollutants were tested all three years for all batteries. If we treat the changes in emissions for Batteries 19-20 from the 2008 test to the 2012 test as representing the effects of through wall repairs, and apply the percentage changes to 2018 emissions from Batteries 1-3, I project an overall *increase* of 113 TPY, with an increase in NO_x of 192 TPY and a decrease in SO₂ of 65 TPY.

The effects of the remaining required actions are unquantifiable.



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From: Deluca, Dean

Sent: Friday, July 5, 2019 1:38 PM

To: Fischman, Gary <Gary.Fischman@AlleghenyCounty.US>; Maranche, Jason
<Jason.Maranche@AlleghenyCounty.US>

Cc: Etzel, Sandra <Sandra.Etzel@AlleghenyCounty.US>

Subject: USS Clairton emission reductions

Gary and Jason,

Would you be able to work together on calculating an estimated emissions reduction from the actions in the attached USS Clairton settlement agreement?

Thanks