



Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

August 13, 2015

Ms. Lizzette Danner
 Johnson Controls Battery Group, Inc.
 1800 Paper Mill Road
 Florence, SC 29501

Re: Furnaces 1, 2, and 3 (ID 07, 08, & 09), Refining Process Stack (ID 11), Refining Combustion Stack (ID 11), and Refining Ventilation (ID 12) Emissions Testing – Conducted January 13-22, 2015 - Redacted Summary

Dear Ms. Danner:

The Department has reviewed the referenced tests and the results are summarized below:

Furnace No. 1 (ID 07) Average Emissions			
Pollutant	Emission Concentration	Emission Rate (lb/hr)	Emission Limit
Particulate Matter	4.16E-03 gr/dscf	1.61	0.022 gr/dscf 12.3 ¹ lb/hr
Lead	3.84E-07 gr/dscf	1.48E-04	8.70E-05 gr/dscf
Mercury	<1.65E-03 mg/dscm	<2.76E-04 ²	----

¹Based on a production rate of 5.14 tph.

²Emission rates may be used to demonstrate compliance with facility-wide emission limits in semiannual compliance reports.

Furnace No. 1 (ID 07) Average Gaseous Pollutant Emissions			
Pollutant	Emission Concentration (ppm)	Emission Rate¹ (lb/hr)	Emission Limits²
Sulfur Dioxide	34.1	15.4	<100 TPY
Nitrogen Oxides	38.1	12.3	
Carbon Monoxide	19.1	3.75	

¹Emission rates may be used to demonstrate compliance with TPY emission limits submitted in semiannual compliance reports.

²Facility-wide emission limit.

Furnace No. 2 (ID 08) Average Emissions			
Pollutant	Emission Concentration	Emission Rate (lb/hr)	Emission Limit
Particulate Matter	5.66E-04 gr/dscf	0.254	0.022 gr/dscf 12.2 ¹ lb/hr
Lead	1.39E-07 gr/dscf	6.21E-05	8.70E-05 gr/dscf
Mercury	<2.31E-03 mg/dscm	<4.53E-04 ²	----

¹Based on a production rate of 5.11 tph.

²Emission rates may be used to demonstrate compliance with facility-wide emission limits in semiannual compliance reports.

Furnace No. 2 (ID 08) Average Gaseous Pollutant Emissions			
Pollutant	Emission Concentration (ppm)	Emission Rate¹ (lb/hr)	Emission Limit²
Sulfur Dioxide	6.40	3.31	<100 TPY
Nitrogen Oxides	27.9	10.4	
Carbon Monoxide	25.0	5.71	

¹Emission rates may be used to demonstrate compliance with TPY emission limits submitted in semiannual compliance reports.

²Facility-wide emission limit.

Furnace No. 3 (ID 09) Average Emissions			
Pollutant	Emission Concentration	Emission Rate (lb/hr)	Emission Limit
Particulate Matter	4.93E-04 gr/dscf	0.223	0.022 gr/dscf 12.8 ¹ lb/hr
Lead	3.14E-07 gr/dscf	1.41E-04	8.70E-05 gr/dscf
Mercury	<2.95E-03 mg/dscm	<5.77E-04 ²	----

¹Based on a production rate of 5.49 tph.

²Emission rates may be used to demonstrate compliance with facility-wide emission limits in semiannual compliance reports.

Furnace No. 3 (ID 09) Average Gaseous Pollutant Emissions			
Pollutant	Emission Concentration (ppm)	Emission Rate¹ (lb/hr)	Emission Limit²
Sulfur Dioxide	1.15	0.603	<100 TPY
Nitrogen Oxides	26.4	9.91	
Carbon Monoxide	44.1	10.1	

¹Emission rates may be used to demonstrate compliance with TPY emission limits submitted in semiannual compliance reports.

²Facility-wide emission limit.

Refining Kettles and Casting - Process Stack (ID 11) Average Emissions Summary			
Pollutant	Emission Concentration	Emission Rate (lb/hr)	Emission Limit
Particulate Matter	2.28E-04 gr/dscf	0.170	27.7 ¹ lb/hr
Lead	5.69E-07 gr/dscf	4.24E-04	8.70E-05 gr/dscf
Mercury	<6.72E-04 mg/dscm	<2.20E-04 ²	----

¹Based on a production rate of 17.34 tph of lead ingots.

²Emission rates may be used to demonstrate compliance with facility-wide emission limits in semiannual compliance reports.

Refining Kettles and Casting - Process Stack (ID 11) Average Gaseous Pollutant Emissions			
Pollutant	Emission Concentration (ppm)	Emission Rate¹ (lb/hr)	Emission Limit²
Sulfur Dioxide	0.14	0.127	<100 TPY
Carbon Monoxide	3.85	1.46	

¹Emission rates may be used to demonstrate compliance with TPY emission limits submitted in semiannual compliance reports.

²Facility-wide emission limit.

Refining Kettles and Casting - Combustion Stack (ID 11) Average Gaseous Pollutant Emissions			
Pollutant	Emission Concentration (ppm)	Emission Rate¹ (lb/hr)	Emission Limit²
Sulfur Dioxide	0.05	2.79E-03	<100 TPY
Carbon Monoxide	3.06	0.193	

¹Emission rates may be used to demonstrate compliance with TPY emission limits submitted in semiannual compliance reports.

²Facility-wide emission limit.

Refining Ventilation (ID 12) Average Emissions Summary*			
Pollutant	Emission Concentration	Emission Rate (lb/hr)	Emission Limit
Particulate Matter	1.78E-04 gr/dscf	7.48E-03	0.01 lb/hr ¹
Lead	2.50E-06 gr/dscf	1.05E-04	8.70E-05 gr/dscf

*One vent was sampled. Results may be used for calculating emissions from all refining vents.
¹PM modeled emission rate based solely on PM₁₀.

Compliance Status:

Furnaces 1, 2, and 3, Refining Process, Refining Combustion, & Refining Ventilation (Unit ID 07, 08, 09, 11, 12)
 (Permit No. 1040-0129-CA).....**Compliance**
 (40 CFR 63, Subpart X).....**Compliance**

The next source test for particulate matter for Furnaces 1, 2, and 3, the Refining Process stack, and the Refining Ventilation shall be conducted no later than **January 31, 2017**. Please note, a different vent for the Refining Ventilation (ID 12) must be tested during the next source test. The next source test for mercury and sulfur dioxide for Furnaces 1, 2, and 3, and Refining Process and Combustion shall occur no later than **January 31, 2017**. The next source test for carbon monoxide for the Refining Process and Combustion stacks shall occur no later than **January 31, 2017**. The next source test for lead for Furnaces 1, 2, and 3, the Refining Process stack, and the Refining Ventilation shall be conducted no later than **January 31, 2016**.

If I can be of further assistance, please do not hesitate to call me at (803) 898-0834 or e-mail me at williadtd@dhc.sc.gov.

Sincerely,



Derek T. Williams
 Environmental Health Manager
 Source Evaluation Section
 SC DHEC Bureau of Air Quality

Cc: Compliance file 1040-0129

Ec: Michael Shroup, BAQ David Meekins, BAQ Dawn Jordan, BAQ
 Eve Leitzsey, BAQ James Myers, BAQ Heinz Kaiser, BAQ
 Mary Peyton Wall, BAQ Christopher Hardee, BAQ
 Bryan Baxley, Pee Dee Region – Florence BEHS