



The Steel Company of Canada

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# **Hamilton Works Community Liaison Committee Meeting Q1 2021**

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April 2021

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# Agenda

1. Introductions
2. Coke Battery Performance – Method 303 Results
3. Air Dispersion Modeling – ESDM and SO<sub>2</sub>
4. Community Feedback
5. Next Meeting
6. Adjournment

# Coke Battery Performance – Method 303: Performance Review – Daily

Date	Doors (% Leaks)	Lids (% Leaks)	Off-takes (% Leaks)
2015 Thresholds (July 2 start)	54%	2%	NA
2016 Thresholds	32%	2%	NA
2017-2019 Thresholds	10%	2%	5%
<b>2020-2021 Thresholds</b>	<b>5%</b>	<b>1%</b>	<b>4%</b>
<b>Jan – Mar 2021 Results (Average)</b>	<b>0 – 3.67% (0.92%)</b>	<b>0 – 0.77% (0.16%)</b>	<b>0 – 2.44% (0.26%)</b>

## Daily Measurements Performed YTD

- All weekdays, except for holidays
- 1 Saturdays
- 4 Sundays

## Jan – Mar Operational Adjustments

- None required

# Coke Battery Performance – Method 303: Performance Review – 30 Day Rolling Averages

Date	Doors (% Leaks)	Lids (% Leaks)	Off-takes (% Leaks)	Charging (sec) (log avg)
2015 Limits (July 2 start)	38%	0.8%	25%	12 sec
2016 Limits	22.5%	0.8%	15%	12 s
2017-2019 Limits	7%	0.8%	4.2%	12 s
<b>2020-2021 Limits</b>	<b>4%</b>	<b>0.4%</b>	<b>2.5%</b>	<b>12 s</b>
<b>Jan – Mar 2021 Results (Average)</b>	<b>0.42 – 1.32% (0.84%)</b>	<b>0.14 – 0.38% (0.23%)</b>	<b>0.12 – 0.37% (0.27%)</b>	<b>2.06 – 4.03s (2.91s)</b>

## Jan – Mar Performance

- In compliance with limits

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# Coke Battery Performance – Method 303: Performance Review – Daily Observations – Pushing Emissions

Date	Pushing Emission (opacity %)
2015 Limit (July 2 start)	≥ 50%
2016 – 2018	≥ 50%
2019	≥ 40%
<b>2020 - 2021</b>	<b>≥ 30%</b>
<b>Jan – Mar 2021 Results (Average)</b>	<b>0 – 48.33% (6.31%)</b>

Jan – Mar Operational Adjustments (7 exceedances)

- Waterwashing of orifice headers and riser pipes
- Air lancing pusher side buss flues
- Cokeside jamb repair

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# Coke Battery Performance – Method 303: Performance Review – Additional Items

- There were no community complaints for the period of Q1 2021 related to the coke battery performance (Method 303)
- MECP to provide verbal comments

# 2020 Emission Summary Dispersion Model

Parameter	Standard (ug/m <sup>3</sup> )	Averaging Period	Max. POI Concentration (ug/m <sup>3</sup> )	Percentage of Limit
Benzene	*3.90E+00	Annual	2.90E+00	74%
Benzo[a]Pyrene	*4.70E-03	Annual	3.50E-03	73%
Cadmium	3.00E-02	24-hour	8.90E-04	4%
Carbon Monoxide	6.00E+03	1/2-hour	1.80E+03	29%
Chromium	5.00E-01	24-hour	4.70E-02	9%
Naphthalene	2.30E+01	24-hour	1.00E+00	4%
Naphthalene	5.00E+01	10-minute	1.50E+01	30%
Nitrogen Oxides	4.00E+02	1-hour	2.00E+02	50%
Nitrogen Oxides	2.00E+02	24-hour	1.10E+02	56%
Sulphur Dioxide	6.90E+02	1-hour	1.80E+03	258%
Sulphur Dioxide	2.75E+02	24-hour	9.90E+02	360%
Suspended Particulate Matter	*1.90E+02	24-hour	5.30E+01	28%

\*Site Specific Standard

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# Sulphur Dioxide (SO<sub>2</sub>)

- Industrial boilers utilize fuels to generate useful steam for operations with the plant
  - Main fuel options are coke oven gas (COG) that is already generated as a by-product of cokemaking, and natural gas
- Central Boiler Station stacks located ~ 30 m away from fenceline
- Utilize COG at boilers to reduce by-product gas flaring, and to reduce additional natural gas requirements – lowers carbon footprint
- Utilizing COG at Central Boiler Station can result in higher modeled SO<sub>2</sub> emissions at property boundary than if COG was flared
  - Highest concentration modeled remains on industrial land



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# SO<sub>2</sub> Mitigation Options

- Coke Oven Gas Desulphurization
  - Work is underway to meet federal requirements by Jan. 2026
- Coke Oven Gas Balancing for the CBS Boilers
  - Conducted a trial to attempt different distribution of COG between the 2 main boilers
  - Piping configuration limits capacity of COG that each boiler can utilize
- Boiler Pre-heaters
  - Order and install preheaters at the boilers
    - Increases temperature of gas leaving the stack – improved air dispersion

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# Community Feedback

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# Next Meetings

- Wed. July 28, 2021
- Wed. Oct. 27, 2021



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**Thank You.**

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