

The Steel Company of Canada

Hamilton Works Community Liaison Committee Meeting

06 February 2019

K. Chan

- 1. Welcome and Safety Contact
- 2. Review and Approval of Agenda
- 3. Review and Approval of Minutes of 17 October 2018
- 4. Performance under O.Reg 419/05 Site Specific Standard Order Particulates
- 5. Cokemaking Update
- 6. Benzene Monitoring Program
- 7. Community Concerns
- 8. Adjournment



Know Your Emergency Exits

Review Evacuation Routes of the room you are located in





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Site-Specific Standard Order (Particulates): Performance Review – Daily

Date	Doors (% Leaks)	Lids (% Leaks)	Off-takes (% Leaks)
2015 Limits (July 2 start)	54%	2%	NA
2016 Limits	32%	2%	NA
2017-2019 Limits	10%	2%	5%
2020 Limits	5%	1%	4%
Oct 1 – Dec 31, 2018 Range (Average)	0 – 2.47% (0.2%)	0 – 0.78% (0.04%)	0 – 6.58% (0.46%)

Daily Measurements Performed YTD

- All weekdays, except for holidays
- 10 Saturdays
- 10 Sundays

Oct 1 – Dec 31, 2018 Operational Adjustments • Offtakes - The Battery was still stabilizing its operations after resuming from scheduled 16 hour maintenance downturn on October 10th. Leak was repaired.



Site-Specific Standard Order (Particulates): 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
2020 Limits	4%	0.4%	2.5%	12 s
Oct 1 – Dec 31, 2018 Range (Average)	0.1 – 0.39% (0.24%)	0.02 – 0.12% (0.053%)	0.17 – 1.16% (0.55%)	5.94 – 7.88 s (6.82 s)

Oct 1 – Dec 31, 2018 Performance

• In compliance with 2018 limits



Site-Specific Standard Order (Particulates): Performance Review – Daily Observations – Pushing Emissions

Date	Pushing Emission (opacity %)
2015 Limit (July 2 start)	≥ 50%
2016 – 2018	≥ 50%
2019	\geq 40%
2020	≥30%
Oct 1 – Dec 31, 2018 Range (Average)	0 – 58.3% (13.4%)

Oct 1 – Dec 31, 2018 Operational Adjustments

•Cleaned plugged risers and orifices (2)

•Reduced coking schedule



Site-Specific Standard Order (Particulates): Performance Review – Additional Items

- There were no community complaints for the period of October – December 2018
- MECP will provide verbal comments



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Hamilton Works Cokemaking Update

February 2019

Pete Schiestel

Stelco Cokemaking Overview

Video presentation



Coke Battery Overview





HW Battery

Future Standards:

Minimizing or eliminating battery operating delays will lower coke ovens emissions.

The Stelco Hamilton Works coke ovens department has a broadened preventive maintenance and upgrade plan to meet all future standards.





Upgrades

- Rebuilding #3 primary cooler aiding in improving gas quality.
- Extending the battery decking to increase coal bunker usage.
- Rebuilding #3 tar decanter to remove more tar.
- Adding another oxygen sensor into the rich gas stream to control under firing usage.
- Designing a one spot quench car to assist the coke shed pushing emission control.
- Engineering study to resurrect the #5 & #6 boosters to eliminate the need for #1 coke oven gas flare.







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Thank You.

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Benzene Monitoring Program

- Monitor Hand-held with Photoionization Detector for VOCs (specific for benzene)
- Most of the sources at the Coke Ovens and By-Products are well controlled
- Sources with opportunities for improvement include:
- **Group 1** Manage with procedures and operating practice
 - Fugitive Battery emissions charging, doors (minimize visible leaks)
 - Light Oil Loading hose (upon completion of loading, cap off hose)
- **Group 2** Emission control equipment
 - Process Water Decanter Tank
 – (emission control to be incorporated at top vent on the tank)
- Next steps: Implementation of identified opportunities for improvement



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Supplementary (March 21, 2019)



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2015 Limits (July 2 start)	54%	2%	NA
2016 Limits	32%	2%	NA
2017-2019 Limits	10%	2%	5%
2020 Limits	5%	1%	4%
Jan 1 – Feb 28, 2019 Range (Average)	0 – 0.26% (0.11%)	0 – 0.26% (0.01%)	0 – 2.6% (0.47%)

Daily Measurements Performed YTD

- All weekdays, except for holidays
- 3 Saturdays
- 2 Sundays

Jan 1- Feb 28, 2019 Operational Adjustments

• In compliance with 2019 limits



Site-Specific Standard Order (Particulates): 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
2020 Limits	4%	0.4%	2.5%	12 s
Jan 1 – Feb 28, 2019 Range (Average)	0.04 – 0.17% (0.13%)	0 – 0.03% (0.011%)	0.34 – 0.64% (0.48%)	5.01 – 9.31s (7.43 s)

Jan 1 – Feb 28, 2019 Performance

• In compliance with 2019 limits



Site-Specific Standard Order (Particulates): Performance Review – Daily Observations – Pushing Emissions

Date	Pushing Emission (opacity %)
2015 Limit (July 2 start)	≥ 50%
2016 - 2018	\geq 50%
2019	\geqslant 40%
2020	≥30%
Jan 1 – Feb 28, 2019 Range (Average)	0 – 40% (6.55%)

Jan 1 – Feb 28, 2019 Operational Adjustments

• Increased coking time; increased coke oven gas supply to underfiring; decrease coal moisture



Emission Observation (March 12, 2019)

Conclusion:

• Pushing emission

Probable Cause:

- Low oven temperature due to water washing of the underfiring system to remove deposits in the piping
- The gas to the oven being water washed is shut off as the washing is being done

Resolution:

• The Battery heating was supplemented by natural gas



Batch Anneal

- Upgrade existing #3 Batch Anneal facility
 - 12 bell anneal workbases (6 for heating; 6 for cooling)
- Anneal steel coils in nitrogen atmosphere
- Expected annual production of approximately 540,000 tonnes of annealed steel coils
- Stelco has applied for a new Environmental Compliance Approval for non-contact cooling water system
 - Existing baywater supply network to control temperature of cooling bell inner cores
 - Non-contact cooling water to be discharged through an existing industrial sewer to Hamilton Harbour via MISA control point
 - Water from existing baywater supply network to a closed loop cooling water skid
 - Effluent water quality should be equivalent to influent
 - Effluent temperature to be monitored by thermocouple; if required, would be regulated prior to industrial sewer outfall



Proposed 2019 CLC Meeting Dates

Thurs. March 21

Wed. June 12

Wed. Sept. 18

Wed. Dec. 11





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Thank You.

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