



# HAMILTON WORKS COMMUNITY LIAISON COMMITTEE MEETING

6 October 2016



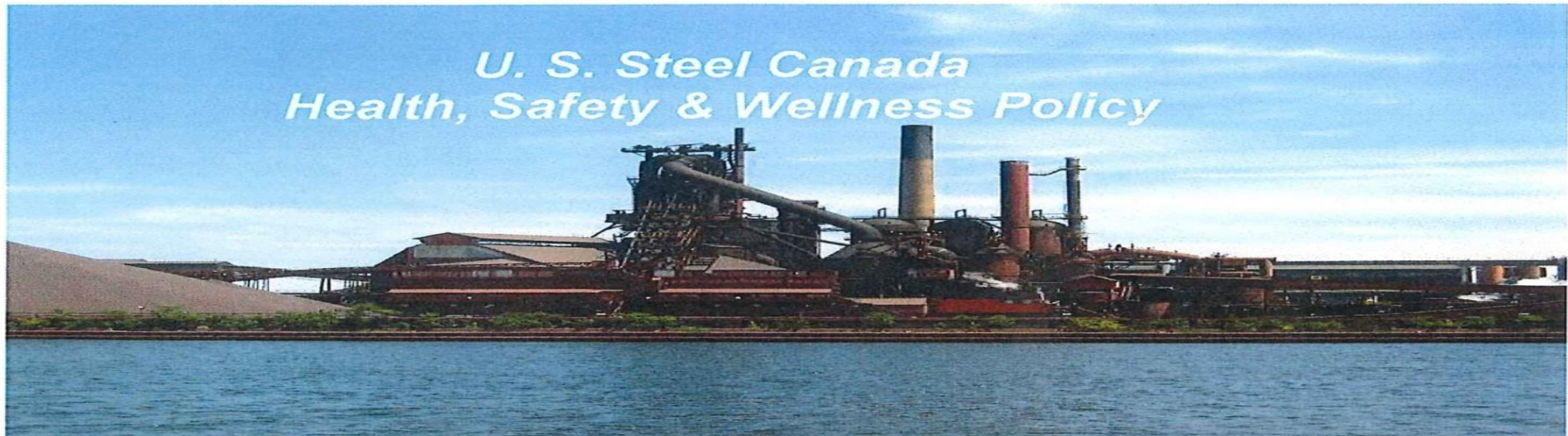
**U. S. Steel Canada**

# AGENDA

1. **Welcome and Safety Contact**
2. **Review and Approval of Agenda**
3. **Review and Approval of Minutes of 26 May 2016**
4. **Performance under O.Reg. 419/05 Site Specific Standard Order - Particulates**
5. **Hamilton Works Coke Battery Improvements**
6. **Environmental Update – Climate Change**
7. **Community Concerns**
8. **CLC Meeting Schedule for 2017**
9. **In-camera Discussion**
10. **Adjournment**



# WELCOME AND SAFETY CONTACT



All U. S. Steel Canada employees, partners, and agencies hold shared responsibility to create and maintain a healthy workplace culture by acting in compliance with this policy.

"Safety First" is a core value at U. S. Steel Canada. We will operate our company in a manner that leaves our employees and our community healthy, well and safe.

We will achieve our commitment by:

- Ensuring that senior management is responsible to initiate, maintain and support our Safety and Industrial Hygiene program.
- Requiring those in leadership roles to be responsible to provide a safe work environment and to ensure that workers comply with our requirements.
- Requiring all of our employees, contractors and visitors to be responsible for working in accordance with established procedures, practices, rules and duties made under the Occupational Health and Safety Act and where work is deemed unsafe, ensuring it is stopped.
- Providing our employees with appropriate Health and Safety training in the safe performance of their jobs.
- Continuously improving our equipment, practices and the training of our employees.

Michael A. McQuade  
President & General Manager  
U. S. Steel Canada Inc.  
July, 2016



U. S. Steel Canada

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# SITE-SPECIFIC STANDARD ORDER (PARTICULATES): PERFORMANCE REVIEW – DAILY OBSERVATIONS

Date	Doors (% Leaks)	Lids (% Leaks)	Off-takes (% Leaks)
2015 Limits (July 2 start)	54%	2%	NA
<b>2016 Limits</b>	<b>32%</b>	<b>2%</b>	<b>NA</b>
2017-2019 Limits	10%	2%	5%
2020 Limits	5%	1%	4%
<b>May - Sept, 2016 Range (Average)</b>	<b>0.00 – 0.68% (0.06%)</b>	<b>0.00 – 0.51% (0.05%)</b>	<b>0.00 – 2.50% (0.30%)</b>

## Daily Measurements Performed YTD

- All weekdays, except for holidays
- 10 Saturdays (Completed = 7) and  
10 Sundays (Completed = 6)

## May – Sept 2016 Operational Adjustments

- None required – in compliance with 2016 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
<b>2016 Limits</b>	<b>22.5%</b>	<b>0.8%</b>	<b>15%</b>	<b>12 s</b>
2017-2019 Limits	7%	0.8%	4.2%	12 s
2020 Limits	4%	0.4%	2.5%	12 s
<b>May - Sept, 2016 Range (Average)</b>	<b>0.00 – 0.41% (0.11%)</b>	<b>0.03 – 0.07% (0.05%)</b>	<b>0.08 – 0.49% (0.28%)</b>	<b>0.49 – 1.01 s (0.75 s)</b>

## May – Sept 2016 Performance

- In compliance with 2016 limits





# SITE-SPECIFIC STANDARD ORDER (PARTICULATES): PERFORMANCE REVIEW – DAILY OBSERVATIONS – PUSHING EMISSIONS

Date	Pushing Emission (opacity %)
2015 Limit (July 2 start)	≥ 50%
<b>2016 – 2018</b>	<b>≥ 50%</b>
2019	≥ 40%
2020	≥ 30%
<b>May – Sept 2016 Range (Average)</b>	<b>0 – 20% (0.85%)</b>

## May – Sept 2016 Operational Adjustments

- None required – in compliance with 2016-2018 limit



# SITE-SPECIFIC STANDARD ORDER (PARTICULATES): COMMUNITY COMPLAINTS

July 31, August 6 & 14, 2016

- White emissions

## Cause

- “Dampered” ovens
  - Isolate oven from collector main for pressure equalization
  - Prevents raw gas from being released
- Mostly steam with some particulates
- Very little hydrocarbons and VOCs since oven has been coked out and is ready to be pushed

## Corrective Actions

- Preventative measures implemented:
  - Reduce the number of dampered ovens while maintaining battery infrastructure integrity
  - Improve air flow through ovens
  - Shut off extra collector main cooling sprays to reduce steam



# SITE-SPECIFIC STANDARD ORDER (PARTICULATES): MOECC COMMENTS

- MOECC representative to provide verbal remarks



# ADDITIONAL UPDATE - COMMUNITY COMPLAINTS

August 6, 2016

- Battery stack visible emission

## Cause

- Loss of protective carbon in oven due to prolonged coking duration
- Drier coal input

## Corrective Actions

- Increased production level
- Increased coal moisture

August 14, 2016

- Battery stack visible emission

## Cause

- Loss of protective carbon in oven due to prolonged coking duration
- Unplanned operating delay

## Corrective Actions

- Repaired operating equipment
- Inspected and repaired coke oven



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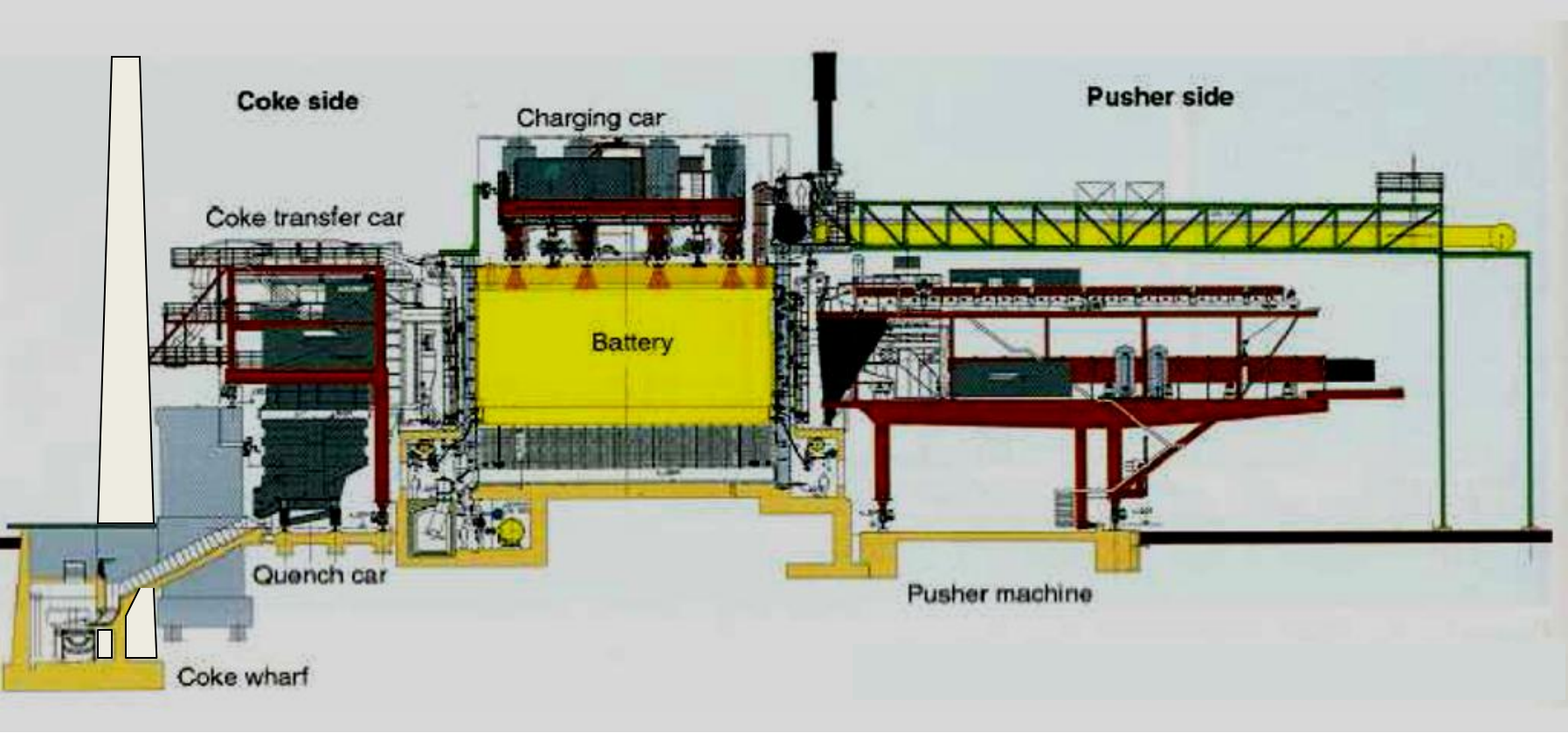
# HAMILTON WORKS COKE PRODUCING IMPROVEMENTS

PETER SCHIESTEL, AREA MANAGER



**U. S. Steel Canada**

# COKE OVENS OVERVIEW



# RECENT CHALLENGES

- Reduced production levels → increased coking time
  - Loss of protective carbon in ovens
- Impact of electricity conservation efforts
- Coal quality
- Unplanned operating delays





# RECENT COKE OVENS EMISSION IMPROVEMENT INITIATIVES

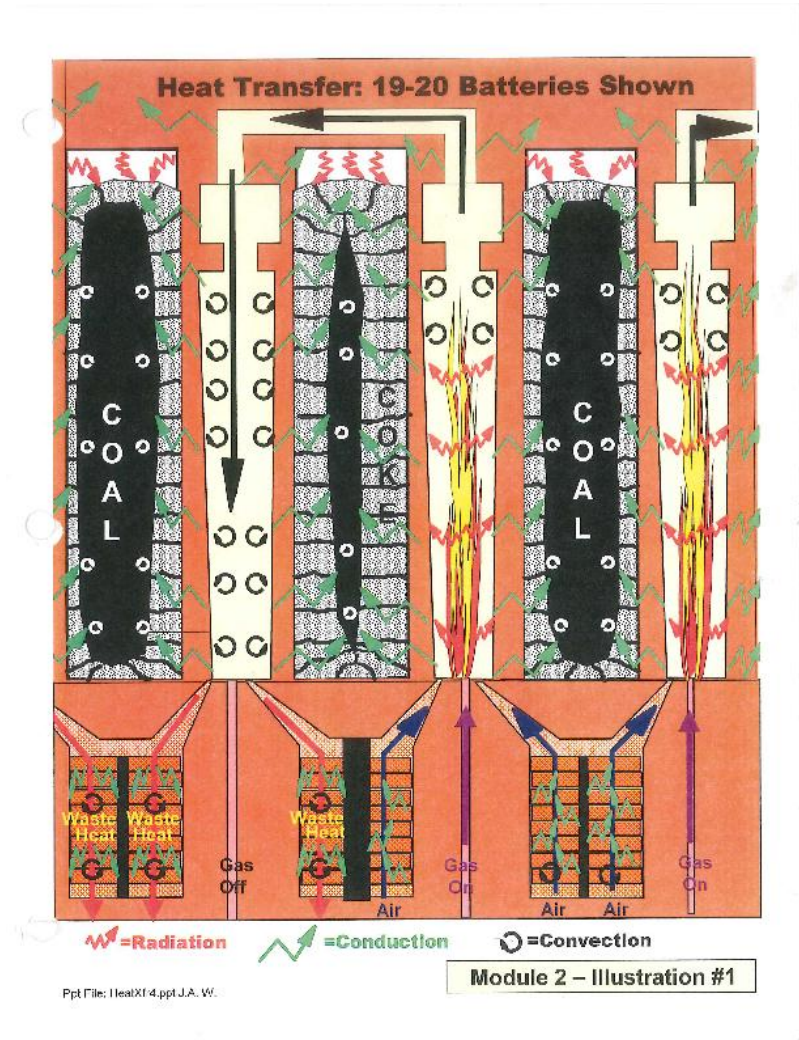
Visible emissions have improved since implementing suite of initiatives including:

1. Exhausters
  - Programmed the equipment to automatically increase air suction prior to a charge
2. Flushing Liquor
  - Systematically increase cooling water temperature
3. Coal Quality
  - Increased coal moisture and grind characteristics
4. Heating
  - Reduced underfiring fuel load during unscheduled operating delays
5. Stand Pipes
  - Inserting air lance to redirect the heat back into the oven



# HEATING FLUES

- Cross wall leakage may occur when the differential flue pressure and oven pressures are not within control ranges.
- Cracks in the oven walls that cannot be sealed by “beneficial carbon” can lead to visible emissions



# COKE OVENS/BY-PRODUCTS EXHAUSTER



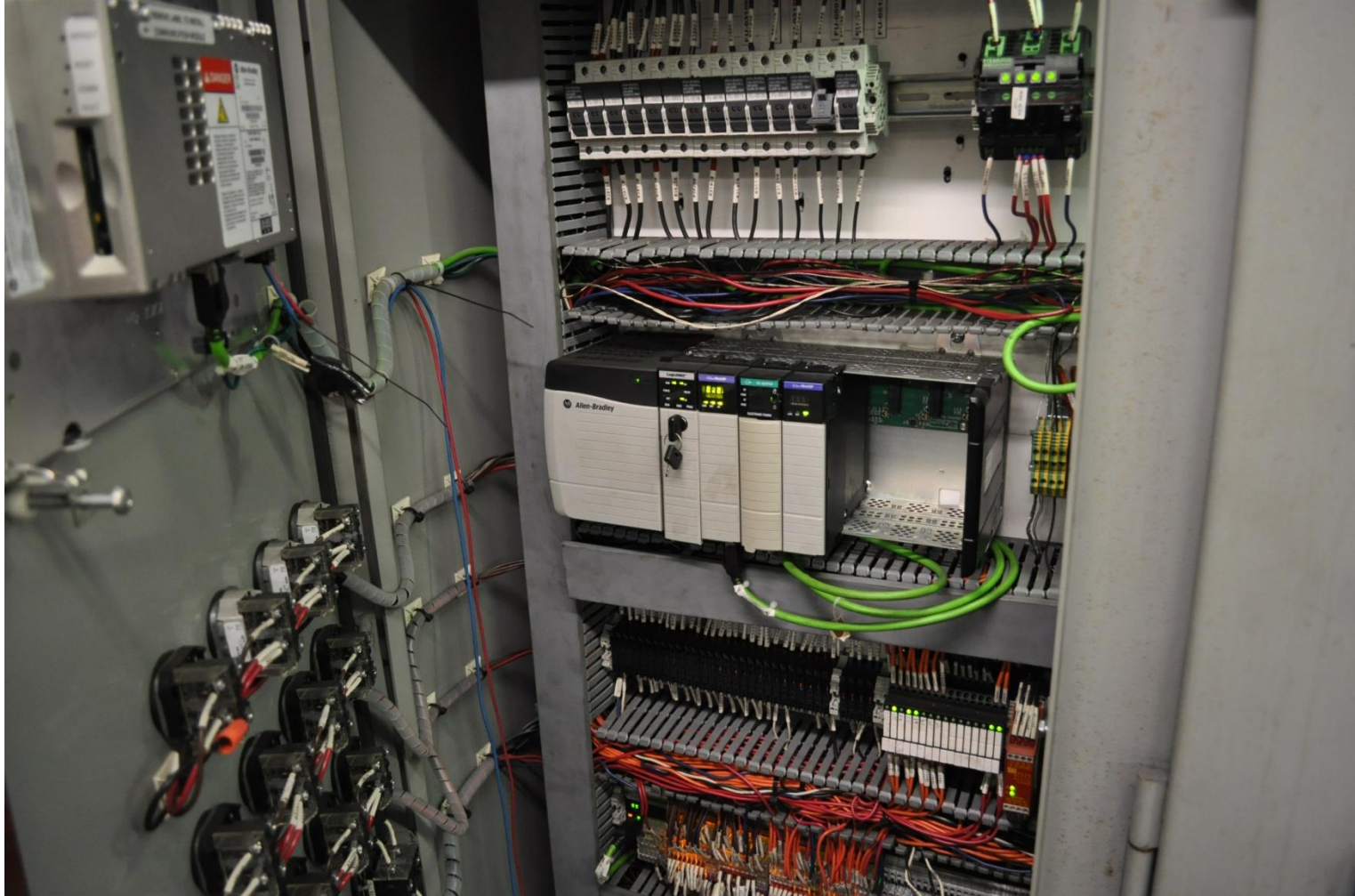
# FLUSHING LIQUOR – COOLING WATER



# BATTERY HEATING CONTROL



# BATTERY HEATING CONTROL PLC



# OBSOLETE 6 MOGUL



# REBUILT 6 MOGUL





# REBUILD 6 QUENCH CAR



# 6 & 7 MOGUL AND QUENCH CARS



# FIRST PUSH



# FIRST QUENCH



# 7 MOGUL AND QUENCH CAR



# 6 & 7 MOGULS AND QUENCH CARS





**QUESTION PERIOD**



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# CLIMATE CHANGE: ONTARIO CAP AND TRADE

- On May 18, 2016 the Climate Change Mitigation and Low-carbon Economy Act, 2016 received Royal Assent
  - Provincial GHG Targets:
    - a. 15% below 1990 levels by the end of 2020;
    - b. 37% below 1990 levels by the end of 2030; and
    - c. 80% below 1990 levels by the end of 2050
- Cap and Trade Regulation (O. Reg. 144/16) in effect since July 1, 2016
  - Defines key elements (e.g. caps, allocations) and program rules (auctions, market requirements)
- Quantification Reporting and Verification of Greenhouse Gas Emissions Regulation (O. Reg. 143/16) comes in effect January 1, 2017
- Ontario program begins on January 1, 2017
- Ontario program targeting to link with Quebec and California (Western Climate Initiative) in 2018
- Post-2020 program design still underway



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# PROPOSED 2017 CLC MEETING SCHEDULE



- Wednesday, January 25
- Wednesday, April 12 (tentative)
- Wednesday, July 12
- Wednesday, October 11 (tentative)



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**THANK YOU FOR YOUR TIME AND COMMITMENT TO  
THE HAMILTON WORKS COMMUNITY LIAISON COMMITTEE**



**U. S. Steel Canada**