

**ALGOMA**

**Community Liaison  
Committee Meeting #23**

December 5, 2017



## Agenda

1. Review of Sept 12, 2017 meeting notes
2. Membership items
3. Site Specific Standards for Particulate, BaP, Benzene
4. Algoma Boat Slip
5. Noise Abatement
6. Current planned activities that require an application for an Environmental Compliance Approval (ECA)
7. GHG Cap and Trade
8. Public Open House
9. Next Meetings

# Membership Items

## Current Members and Alternates

### Representation

Algoma  
Algoma  
Algoma  
Ontario Ministry of Environment  
Public  
Public  
SSM Tribe of Chippewa Indians  
Algoma Public Health  
Chippewa County Health Dept.  
Batchewana First Nations  
City of Sault Ste. Marie  
United Steel Workers Local 2251  
St. Mary's River RAP Coordinator

### Primary Member

Fred Post  
Dave Clingen  
Chris Galizia  
Lori Greco  
David Trowbridge  
Patt Marquis  
Kathie Brosemer  
Kara Flannigan  
Trevor Quinlan  
Dan Sayers Jr.  
Catherine Taddo  
Reginald Dunn  
Lisa Derickx

### Alternate

Dave Clingen  
Fred Post  
  
Ron Dorscht  
Ildiko Horvath  
  
Jonathon Bouma  
Suzanne Lieurance  
  
Dan Perri

# Site Specific Standard for Particulate and BaP

- On March 27<sup>th</sup>, 2015 Essar received a Site Specific Standard for Particulate accompanied by a Directors Order which sets specific emission limits in cokemaking:
  - Certified observers (per EPA Method 9 and Method 303)
  - 5 days per week, 10 Saturdays and 10 Sundays each year
  - Must observe daily per battery: 4 pushes, 5 charges, all lids, all doors, all standpipes
  - Must make operational adjustments if over the daily limits and notify MOE

## Site Specific Air Quality Standard for Particulate & B(a)P

Identifies Key Performance Indicators related to Cokemaking Emissions:

- average intensity of pushing emissions
- average duration of charging emissions
- % lid leaks
- % off-takes leaks
- % door leaks

*Conformance calculated daily for each battery*

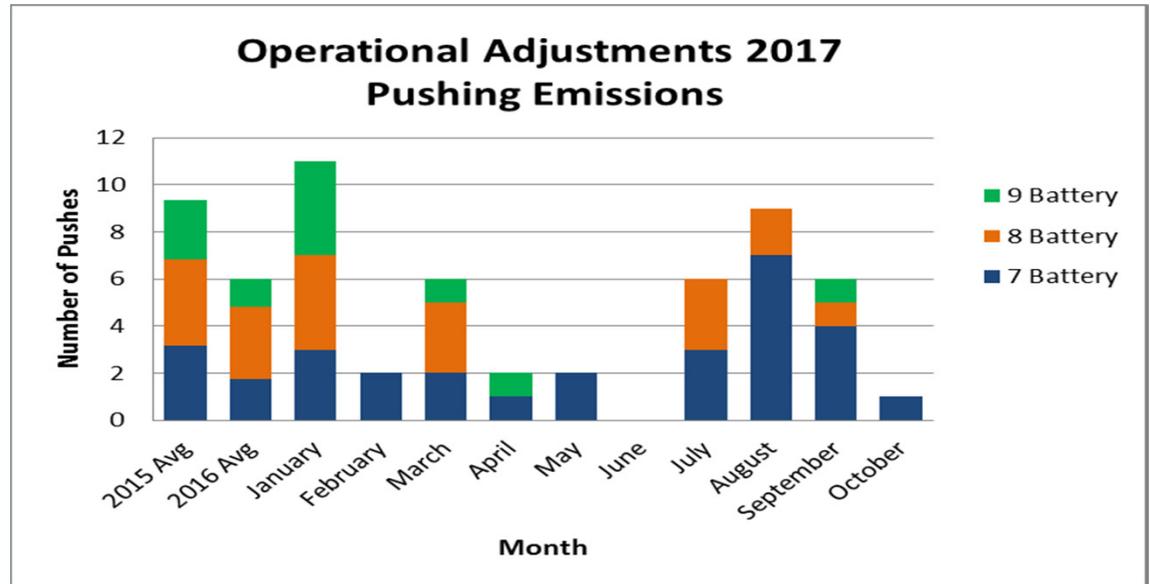
**New limits set July 2015. Progressive, annual reduction.**

Implementation Date	30 day rolling average %			Charging Emission	Pushing Opacity (%)
	Doors	Lids	Off-takes		
July 2, 2015	38	0.8	25	12 sec	50
Jan 1, 2016	22.5	0.8	15	12 sec	50
Jan 1, 2017	7	0.8	4.2	12 sec	50
Jan 1, 2019	4	0.4	2.5	12 sec	40



## Continued Success through Operating Adjustments

To date all corrective actions have been successful at reducing opacity below the limit.

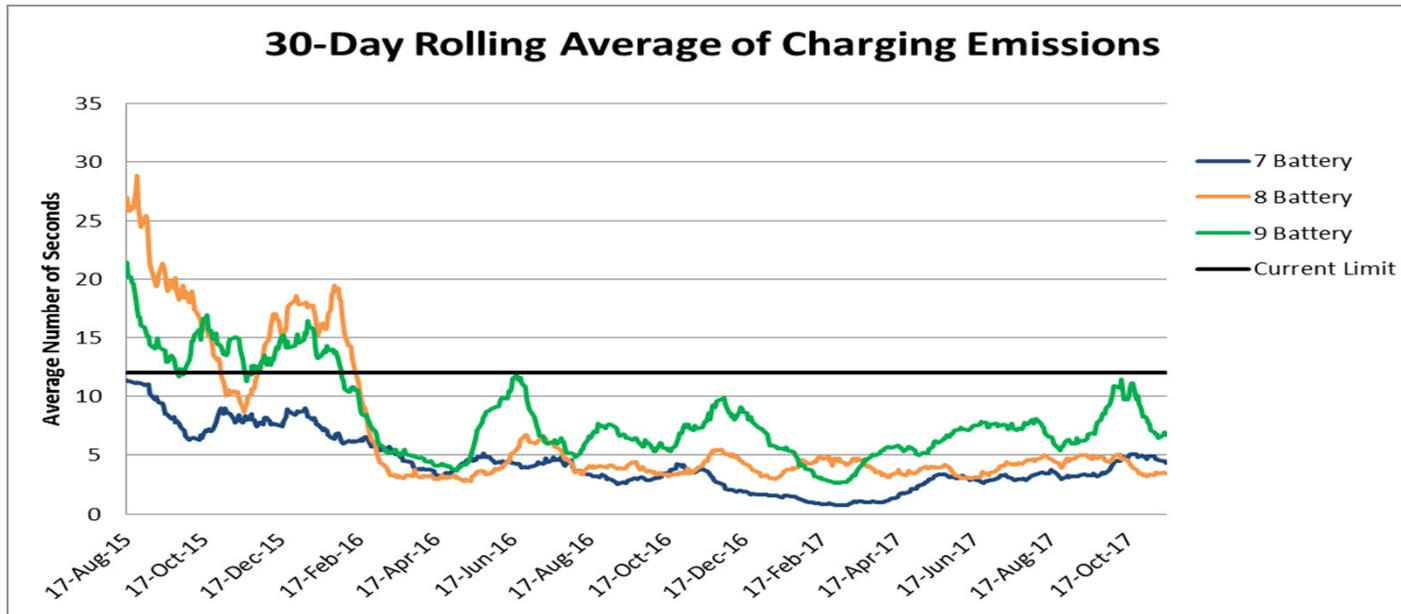


### Corrective actions include:

- Taking cross-wall temperature readings to identify problem flues
- Cleaning the flues, pins, orifices, risers, flex hoses, venturies and bus flues
- Increasing oven temperature
- Repairing adjacent ovens and ensure proper heating of the shared walls
- Adjusting fuel or air to improve combustion
- Extending coking time



## Charging Emissions Below Limit



### Preventative Measures include:

Adjusting carbon scraper bar

Decarbonizing standpipes, goosenecks and charge holes

Cleaning goosenecks, sleeves to the collector main, and steam jets

Replacing drop sleeve donuts, bellow bags, and carbon seals

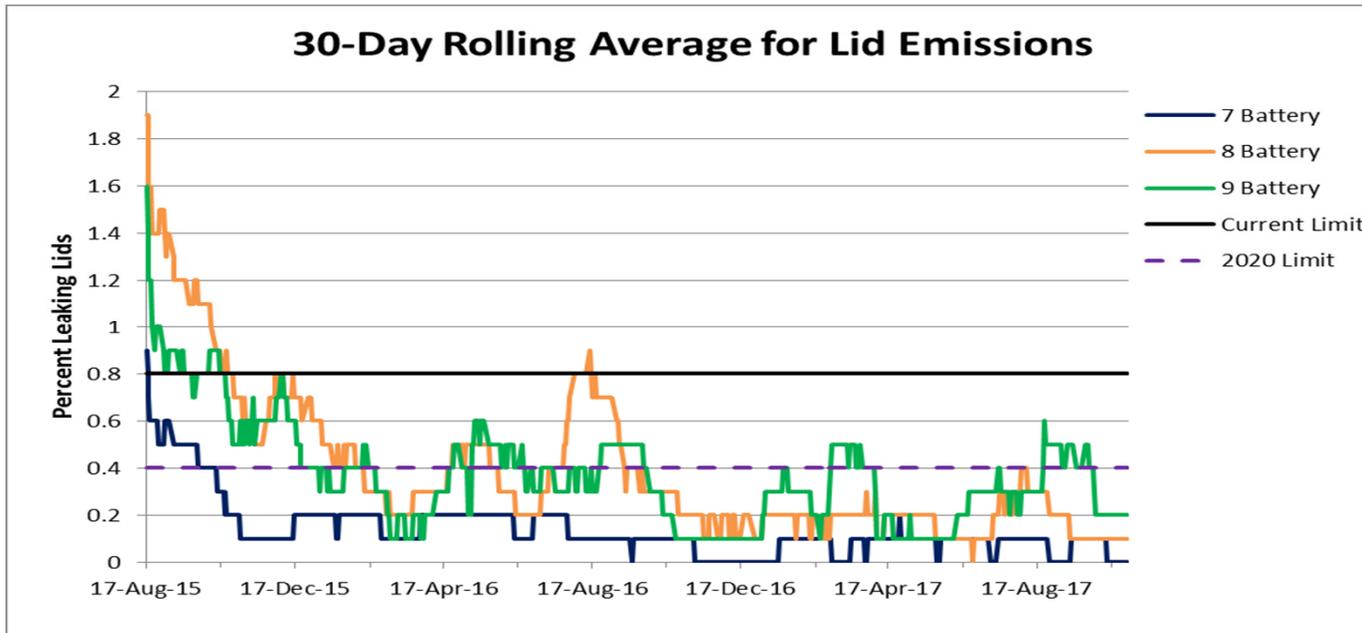
Adjusting coal feed systems to optimize coal charging volume

**All batteries performing below limit since February 2016.**

Leveling charge hole bases to ensure proper elevation and tight seal



## Lid Emissions Below Limit



**Preventative Measures include:**

**Applying lid sealant immediately after charging an oven and whenever emissions are observed**

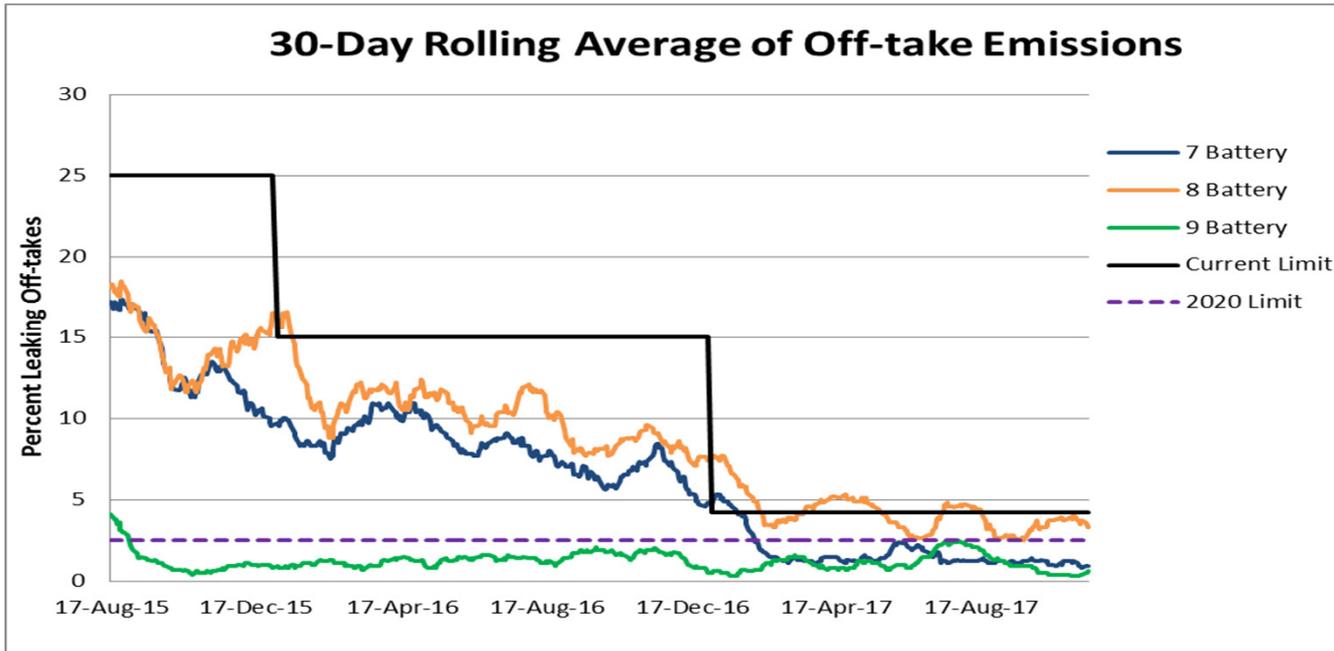
**Replacing damaged or cracked lids**

**Repairing, leveling and grouting charge hole bases to ensure proper seal**

**All batteries performing below limit since August 2016; now performing below 2020 limit!**



## Off-take Emissions Below Limit



### Preventative measures include:

Replacing the soft seal and adjusting the cap

Cleaning the gooseneck, sleeve to collector main, and steam jet

Re-packing collar or base of the pipe with refractory

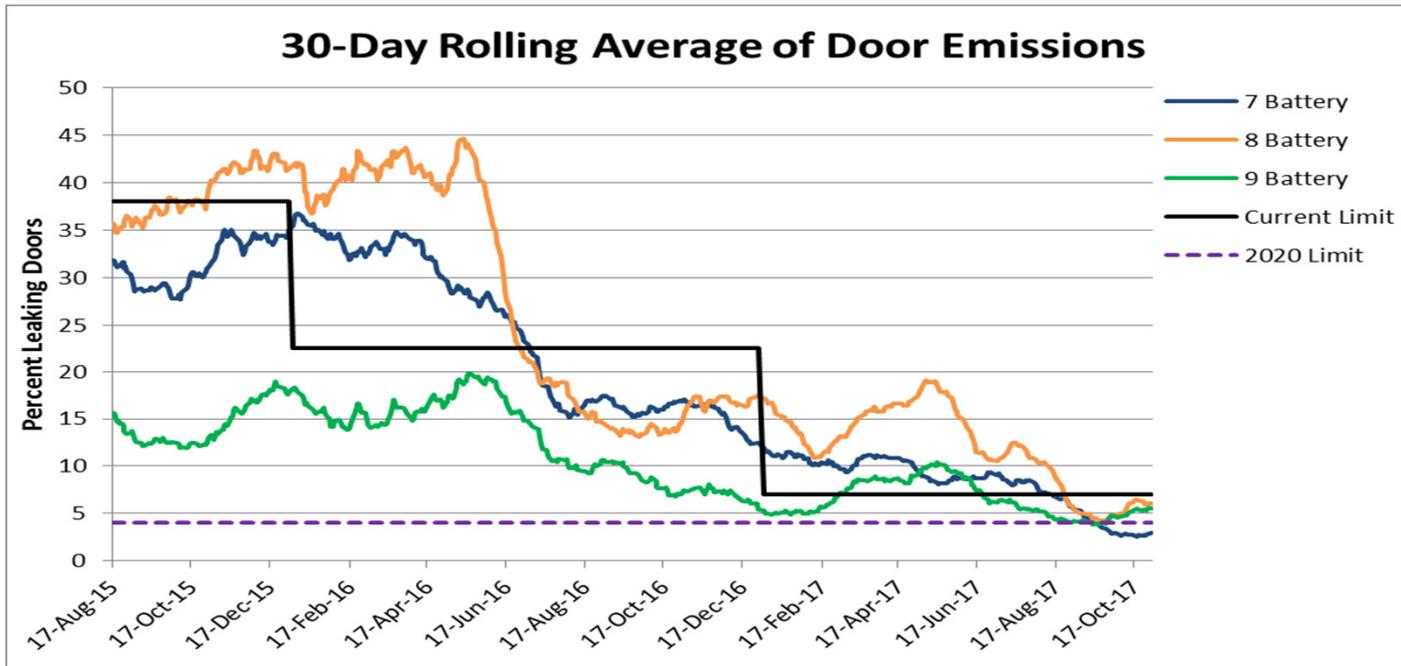
Applying masonry seal to small cracks until welding can be completed

Replacing the standpipe at the end of its lifecycle

On track to achieve 2020 limit ahead of schedule.



## Door Emissions Below Limit



### Preventative measures include:

Adjusting door bolts, frame clips and hour glass clips

Cleaning doors, door jambs, sill plates and spotting targets

Replacing door cleaner bushes and jamb cleaner blades on frequent schedule

Replacing damaged doors and frames.

Applying silicate to seal leaks

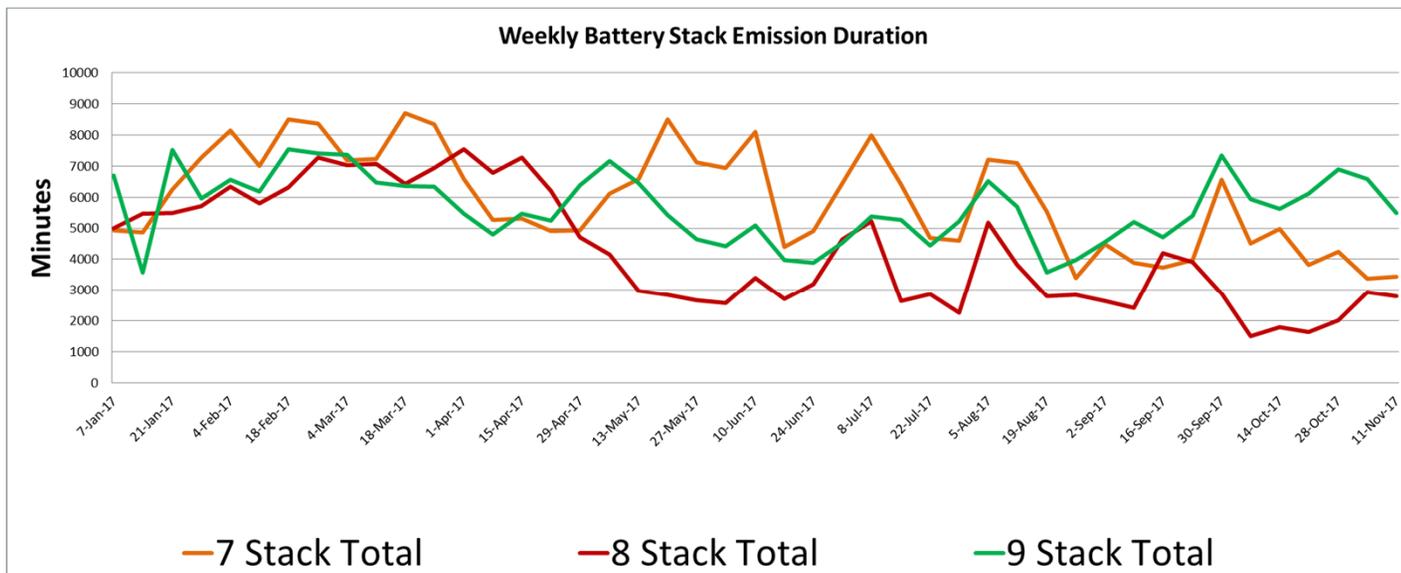
**On track to achieve 2020 limit ahead of schedule.**



# Stack Opacity

## Continuous corrective actions on all batteries

- Part of the investment plan to achieve compliance with new limits also focuses on reducing stack emissions from cokemaking
- Initial focus is on reducing intensity of stack emissions
- Significant recent improvements being realized



## Public Complaints

There were no public complaints received since the last meeting of the CLC that related to a matter addressed in the Order.

# MOE Comments

## Site Specific Standard for Benzene

- The Benzene SSS approval and order requires continued addition to Benzene Emission Control (BEC) systems and on site monitoring
  - Two sources were connected to BEC in 2017
    - #8 Tar tank controlled in April
    - 9b Tar decanter controlled in July
  - Third source - North Raw Liquor Tank - requires complete replacement
    - Tank vent measurements did not detect benzene
    - Will connect new tank to BEC anyway for odour control
    - Will be requesting one year extension
  - Planning has started to install remaining controls by 2020 year end.
  - Planning underway to conduct ambient monitoring on site to identify further benzene sources and develop control plans if required

## Boat Slip Dredging Complete

Dredging occurred from Aug 31<sup>st</sup> to Sept 22<sup>nd</sup>, 2017.

The objective was to remove legacy contaminated sediment.

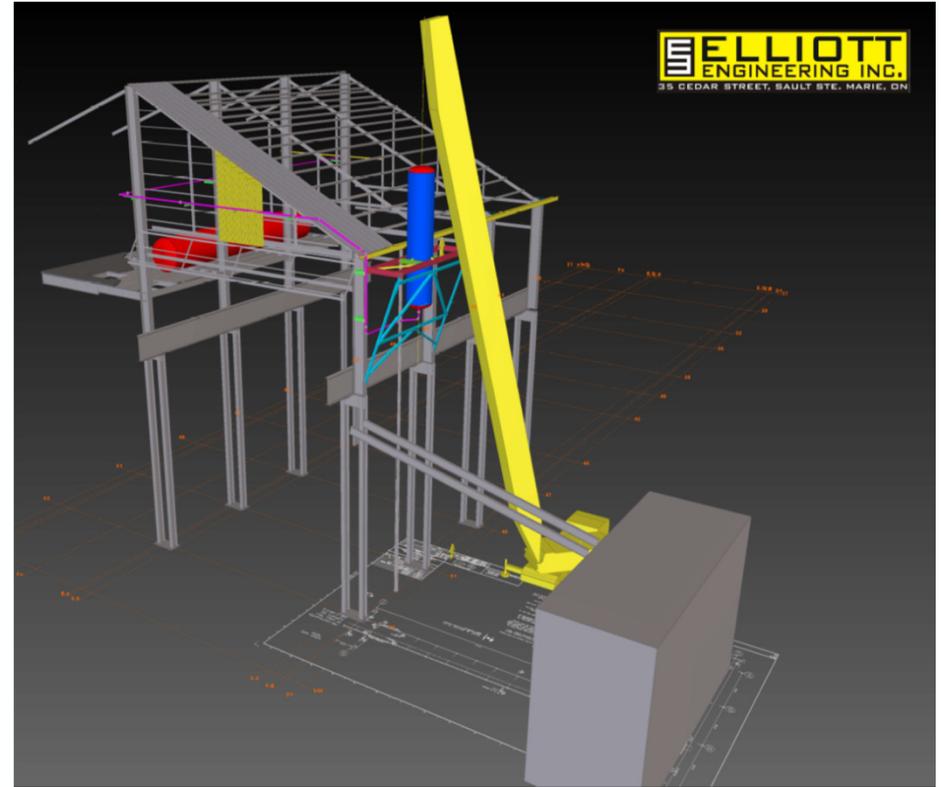
All permits and approvals obtained prior to dredging.

A post-dredge sediment assessment will occur to inform future planning.



# Noise Abatement

- BOSP excess steam acoustic muffler
- Engineering design complete
- Muffler fabricated
- Installation scheduled for winter 2018



# New Environmental Compliance Approval Applications

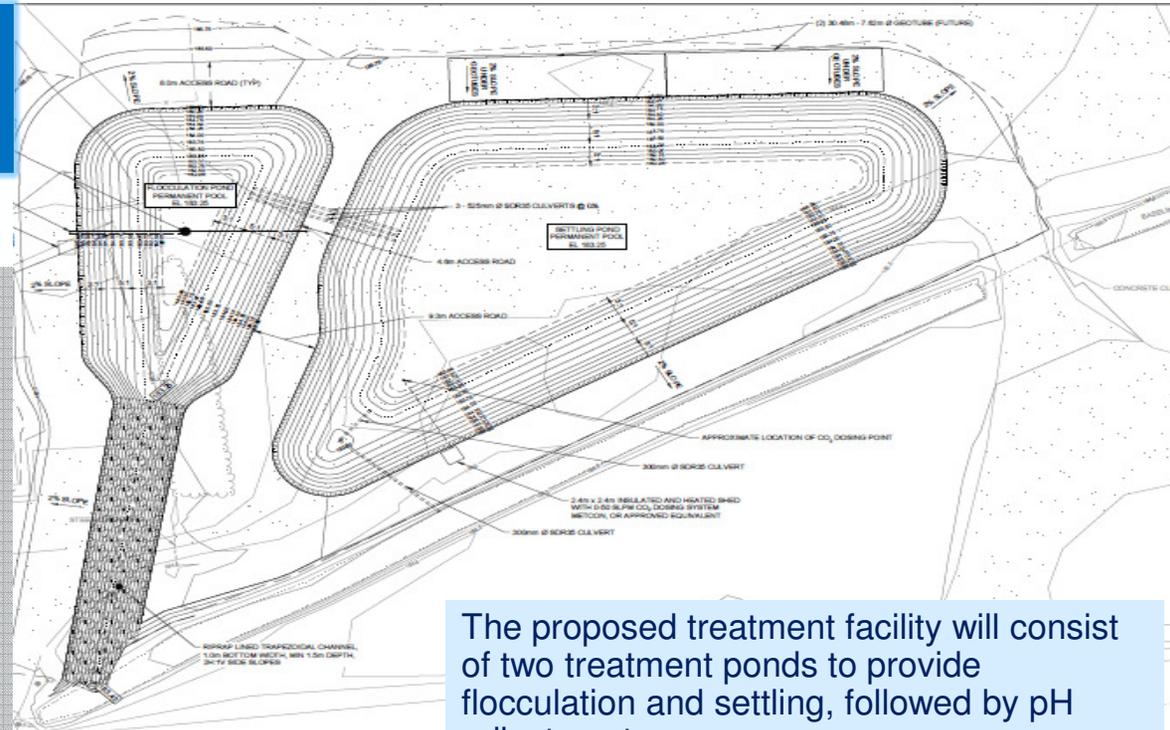
- Currently there are no new ECA applications outstanding.
- Algoma will be submitting a new ECA application in the next quarter for a surface and groundwater treatment facility.

# Surface and Ground Water Treatment Facility Proposed

A surface and ground water drainage ditch located at the northeastern portion of Algoma's Material Storage and Reprocessing Site acts as a localized catchment for groundwater and surface water run off.

Since 2014, Algoma has conducted multiple water quality studies indicating that pH, total dissolved solids, and total iron require treatment.

An Environmental Compliance Approval application is being submitted to the Ministry of Environment and Climate Change (MOECC) for a proposed treatment facility.



The proposed treatment facility will consist of two treatment ponds to provide flocculation and settling, followed by pH adjustment.



## Targeted Greenhouse Gas Reduction

### Cap and Trade Impact



In 2015 a Greenhouse Gas (GHG) Cap and Trade system came into force in Ontario which places a price on GHG emissions of ~\$18/tonne.

Under the Cap and Trade system, the government sets a cap on the amount of GHG's companies can emit and forces them to pay for excess emissions.

### Algoma's Response



Algoma is investing in its facility in order to reduce its GHG footprint

At a cost of approximately \$20 million, Algoma is rebuilding one blast furnace stove in 2017 which will reduce GHG emissions by 40,000 tonnes per year.

Algoma is evaluating numerous opportunities to further reduce its carbon footprint.

# Sustainable Power Opportunities

## Algoma is currently pursuing 71MW of Sustainable Power Alternatives

**Solar Farm (50 MW)** – Ample vacant land and comprehensive power distribution infrastructure make Algoma an ideal site for a solar farm.

- Offers zero carbon emissions; effective for reducing power peaks

**Low Pressure Steam Turbine (8 MW)** – Through the use of a low pressure steam turbine, excess steam currently generated at our Steelmaking Facility can be converted into electricity.

**Top Gas Recovery Turbine (13 MW)** – Energy from the flow of gas at the top of #7 Blast Furnace can be recovered to generate power.



# Public Open Houses

- Last open house held on December 14, 2016 at the new Library at the Northern Community Centre.
- Next open house scheduled for December 7<sup>th</sup>, 2017 at the Polish Canadian Hall located at 232 Goulais Avenue.
  - Focus will be on Cokemaking Site Specific Standard performance and efforts to continue to reduce emissions from Cokemaking.

# Next Meeting

- Proposed 2018 Schedule:
  - December 5<sup>th</sup> , 2017 (today)
  - March 6<sup>th</sup>, 2018
  - June 5<sup>th</sup>, 2018
  - September 11<sup>th</sup>, 2018