

Lake Erie Works Community Liaison Committee Meeting

12 June 2019

- 1. Welcome and Safety Contact
- 2. Review and Approval of Agenda
- 3. Review and Approval of Minutes of 21 March 2019 Meeting
- 4. Performance under O.Reg. 419/05 Site Specific Standard Order Particulates
- 5. Cokemaking Update
- 6. Dust management Coalfields
- 7. Examples of Emissions Control at LEW -- Baghouses
- 8. Community Concerns
- 9. 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%
Mar 1 - May 31, 2019 Range (Average)	1.11-9.52% (6.34%)	0 - 1.83% (0.19%)	1.22 - 5.0% (3.6%)

Daily Measurements Performed YTD

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

Mar 1 - May 31 Operational Adjustments

None required – 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
Mar 1 - May 31, 2019 Range (Average)	5.56 - 6.73% (6.17%)	0.08 - 0.27% (0.18%)	3.09 - 3.8% (3.46%)	6.9 – 8.1 s (7.5 s)

Mar 1 - May 31, 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	≥ 50%	
2019	≥ 40%	
2020	≥ 30%	
Mar 1 - May 31, 2019 Range (Average)	0 - 66% (10.95%)	

Mar 1 - May 31, 2019 Operational Adjustments

Coal blockage was cleared – end flue repair



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

 There were no community complaints for the period of Mar 1 to May 31, 2019

MECP to provide verbal comments



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Cokemaking Update



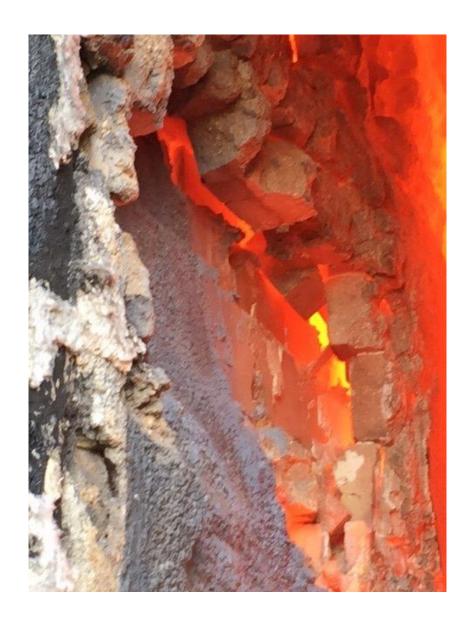




















Thank You.

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Lake Erie Works Coal Field Dust Management

12 June 2019

Barry Stefureak, Area Manager, Blast Furnace and Dock

Dust Management Plan 2019

Research

Reviewed dust control plan from prior years and identified opportunities for improvement.

<u>Plan</u>

- Seal unused north side of coal field with sealant.
- Utilize Water Tankers during the day and night for dust suppression.
- Conducted meetings with all crews to discuss our roles and responsibilities.
- Focus on proactive approach to dust control.
- Utilize internal website to ensure timely communication with crews.



Dust Management Plan 2019

<u>Plan</u>

 Integrate detailed weather forecast information which allows us to be proactive in using our coal dust suppression tools effectively.

Tools

- Envirobind ET Sealant on Coal piles
- Internet Weather Forecast Website. Allows operators to be proactive in using dust controls measures before winds pick up.
- Water Tankers
- Dozers and Graders
- Sprinkler System



Dust Management Plan 2019 Sprinkler System

History

- In 2016 we developed a sprinkler system for our coal field with input from community stakeholders
- Sprinkler system consisted of 3 towers. One per coal pile.

<u>Today</u>

- Our 2019 sprinkler system consists of 7 towers and is controlled via a computer system PLC which will operate automatically once set.
- Sprinkler System is used in conjunction with our Water Tankers for dust suppression.
- Video of coal piles and sprinkler system.





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Dust and Emission Control

Lake Erie Works Baghouses

June 12th, 2019

Garret Urie, Area Manager Primary Utilities

Agenda Slide

Lake Erie Works Baghouses

1) Baghouse Basics

- Forced Air Vs. Induced (Pulled) Air
- General Baghouse Layout

2) Primary

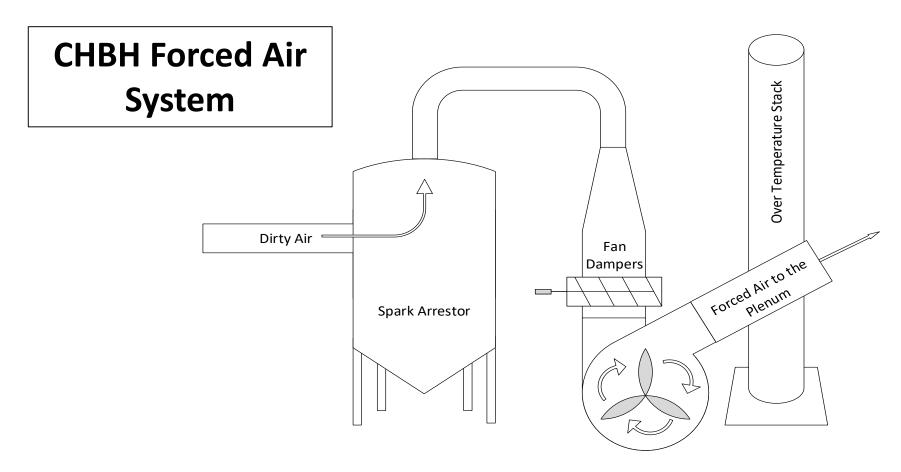
- Cast House Baghouse
- Stock House Baghouse

3) Steelmaking

- Secondary Ventilation System (SVS) Baghouse
- Dedust (Flux and Ladle Additive Control) Baghouse
- Ladle Trim Station (LTS) Baghouse

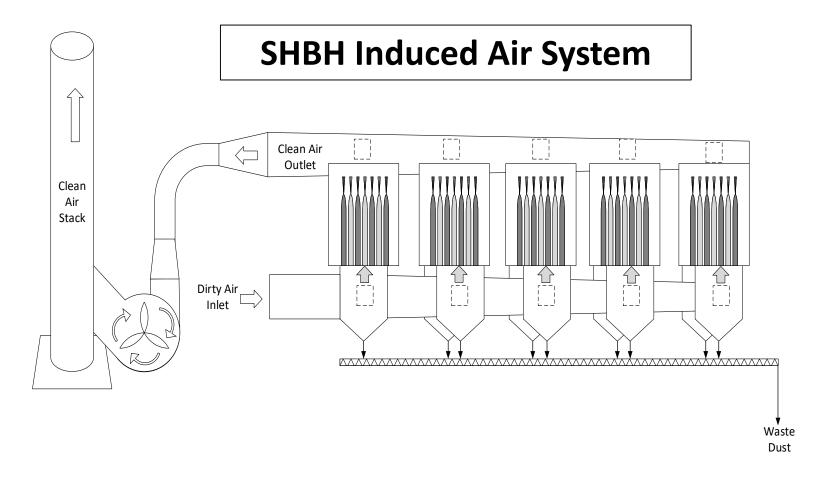


Forced Air Vs. Induced Air



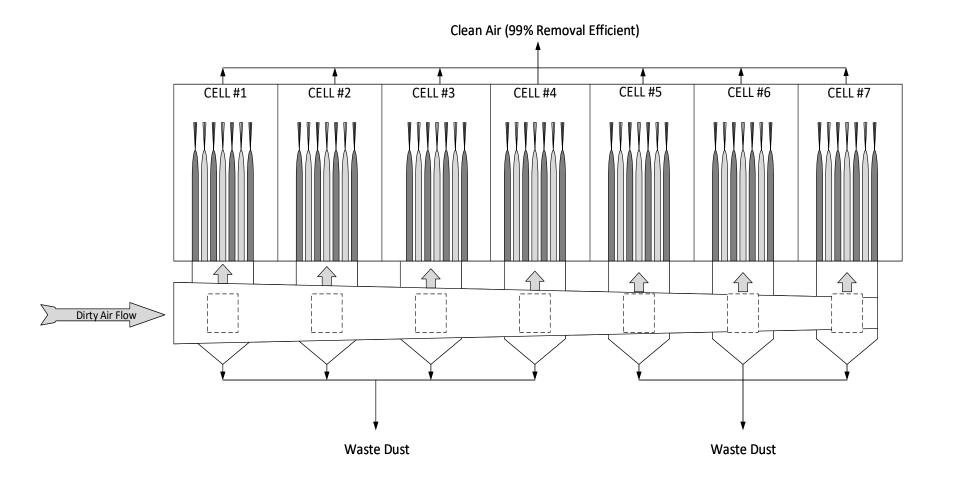


Forced Air Vs. Induced Air





General Baghouse Layout





Ironmaking Operations & Raw Material Handling

SHBH

(StockHouse BagHouse)

9 Cells each with --- 252 Filter Bags





Ironmaking Operations & Raw Material Handling

CHBH

(CastHouse BagHouse)

7 Cells each with 348 Filter Bags





Steelmaking & Continuous Casting

SVS Baghouse (Secondary Ventilation System)



- Removing dust particulates and hot gas fumes in the BOF(Basic Oxygen Furnace) shop which will be generated during the charging of the vessel with hot metal and scrap.
- 6 Collection Hoods: Charging Side of each Vessel, Emergency Hot Metal Reloading Station, 3 Desulph stations (Relading of hot metal, desulphurization and slag skimming)
- The SVS baghouse is a positive pressure system comprised of 12 identical cells, each containing 348 Nylon synthetic bags



Steelmaking & Continuous Casting

Dedust Baghouse (Flux and Ladle Additive Control)



- Removing dust generated by material handling at the Ladle Additive Bins and Trippers and all Feeder and Conveyor transfer points and all Weigh Hoppers.
- There are 41 points in the BOF that collect dust particles.
- 8 cell baghouse containing 128 bags

LTS Baghouse - (Ladle Trim Station)

- Fumes generated by the Ladle Trim Station operation is captured by the hood above the ladle
- 4 module, pulse air type baghouse containing 256 bags



Steelmaking & Continuous Casting

RHOB Baghouse

(Ruhrstahl Heraeus Oxygen Blowing)



- Removing dust generated by material handling at the RHOB storage bins
- There are 17 points in the RHOB that collect dust particles
- 4 module, pulse air type baghouse containing 288 bags

Powder Blowing Baghouses

- Flux Storage Bin Baghouse: remove dust generated by material handling at the RHOB Powder Blowing Silo
- Flux Injection Baghouse: remove dust generated by material handling at the RHOB Day Tanks





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2019 CLC Meeting Dates

Thurs. March 21

Wed. June 12

Wed. Sept. 18

Wed. Dec. 11



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