

REINHOLD ENVIRONMENTAL®



2026 Reinhold/PCUG Round Table Presentation

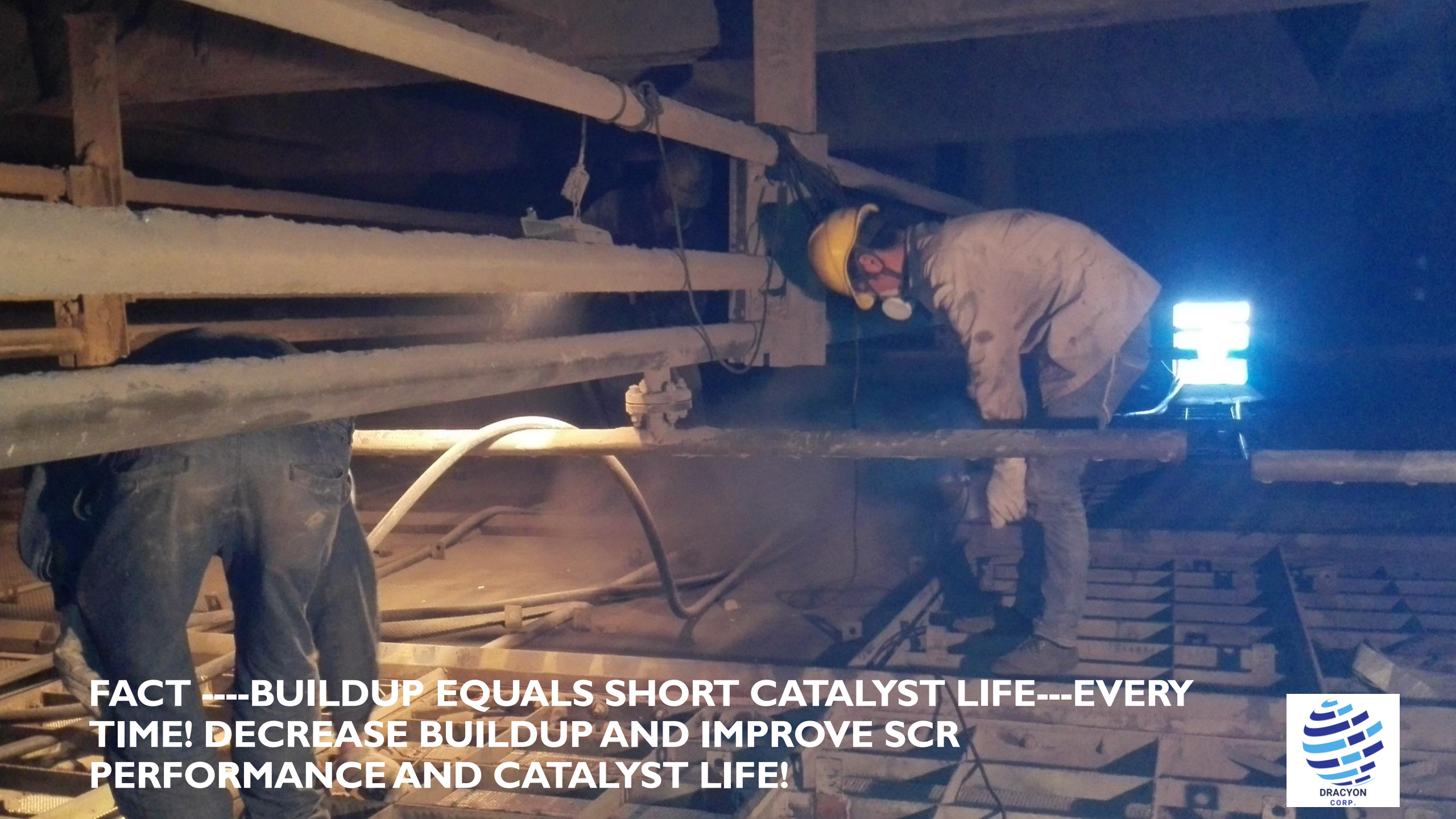
Hosted by TVA, Southern Company and Vistra
in the Sonesta Nashville Airport Hotel, Nashville, TN
on June 22-23, 2026

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INNOVATIONS IN COAL SCR'S

DRACYON CORP



**FACT ---BUILDUP EQUALS SHORT CATALYST LIFE---EVERY
TIME! DECREASE BUILDUP AND IMPROVE SCR
PERFORMANCE AND CATALYST LIFE!**



WHY SCR INNOVATION STILL MATTERS FOR COAL

- Most plant still use SCR as method to control NO_x
- SCR have historically been underperformers
- Use of O&M money verse Capital
- NO_x limits becoming stricter
- Innovation is easy to say but difficult to live!



WE KNOW THE FOLLOWING!

- Some plants replace a layer every year (two years of catalyst life) \$\$!
- Some plants replace a layer infrequently)often every 4 years (10 years of life!!)
- Why allow the legacy catalyst OEM to control this replacement?
- **Demand more from your catalyst suppliers!**

TOPICS

- New US Catalyst supplier--Tuna
- Interlayer Mixing system—improve RMS and reduce ammonia slip
- Online cleaning-sonic horns , air cannons
- Offline cleaning=low pressure high volume

Company Profile



- Founded: in year 2005

- Employee: 900+ employees (include 200+ technicians)
- Average Annual Revenue: USD 160-200 M

- Public listed: 2017 Shanghai Main Board

- Stock Exchange Code: 603177

- Business scope:

- Air Pollution Control: EPC projects, FGD, SCR/SNCR, Dust Removal, Catalyst Regeneration
- New Energy: Battery Energy Storage System (BESS), Sodium-ion Battery Cathode Materials
- Solid Waste Treatment: Medical Waste to Power, Waste Salt Regeneration, Hazardous Waste Landfill

- 8 Manufacture Bases: 5 in Shaoxing, 1 in Xinjiang, 1 in Guangdong, China + 1 in New Delhi, India

- Catalyst Base: 100,000m², Equipment Base: 150,000m², New Energy Base: 20,000m², Solid Waste Base: 80,000m²
- India Base: 50,000m²



Long-term Sustainable Growth



2025

2026

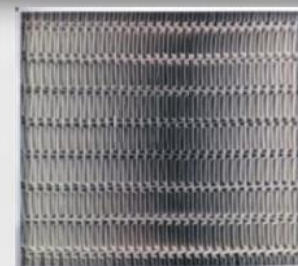
Sustainable & Global Management

ODI coverage till 2025: Three Subsidiary of Indonesian, Vietnam, India + One JV of Marine

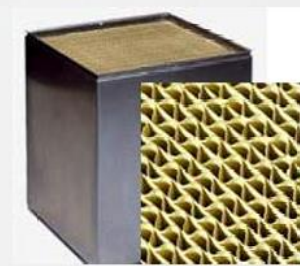
Honeycomb Catalyst:



Plate-type Catalyst:



Corrugated Catalyst:



China's largest and most comprehensive SCR catalyst manufacturer, and the country's leading exporter of marine SCR catalysts. Manufacturing capacity: 26,000m³ Honeycomb, 20,000m³ Plate, 4,000m³ Corrugated

KEYS TO CATALYST LIFE

Activity levels(reactivity rate)

Resistance to buildup, erosion and poisons

Industry has allowed the catalyst OEMs to promote larger pitch catalyst which they say will reduce buildup. In some cases, this is at the expense of adding a new layer

Modern approach is to control the buildup and remove as much NO_x as possible! Key is Offline Cleaning and do not allow catalyst to restart plugged!

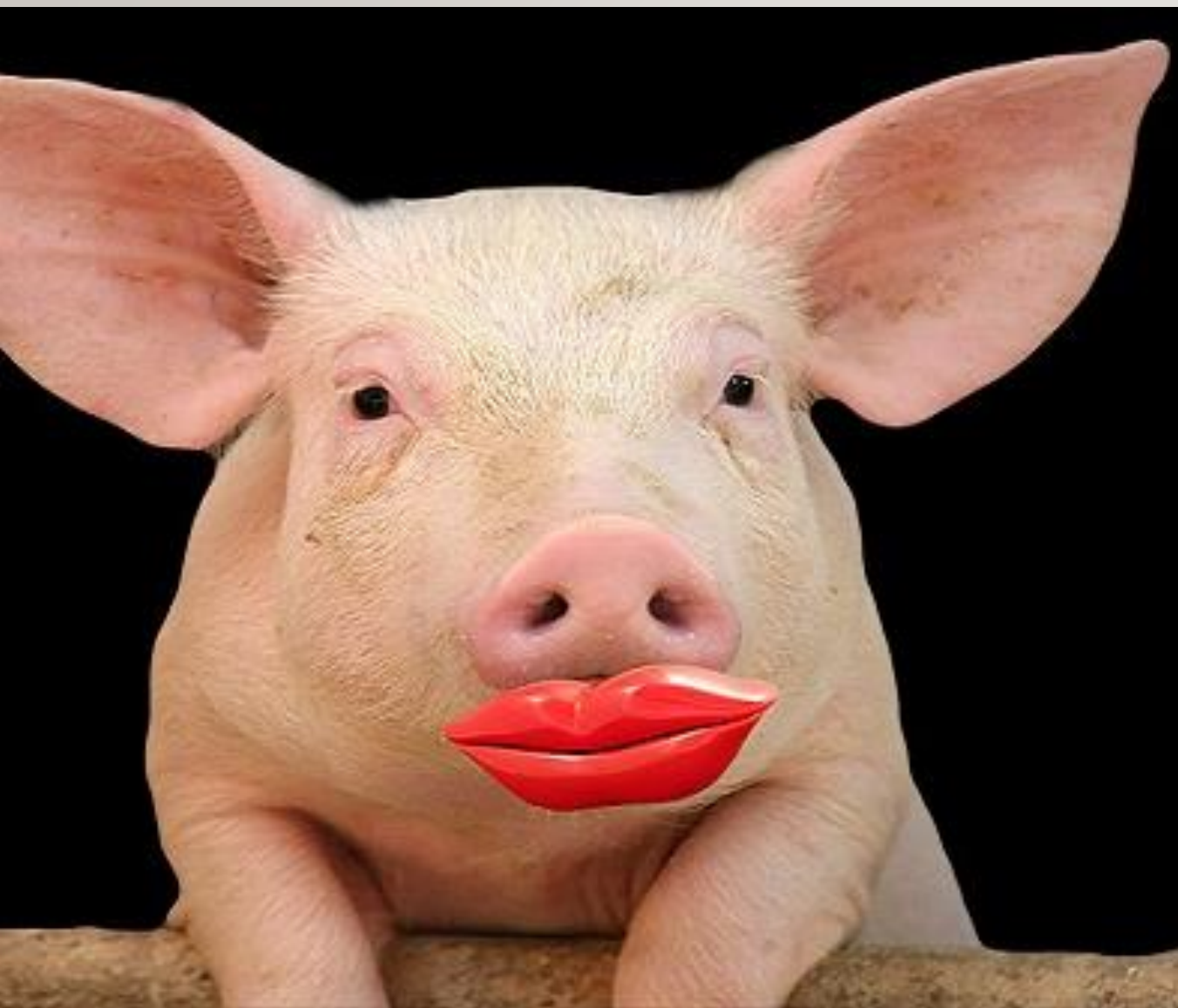


PLANTS FOCUS ON STARTING ACTIVITY. IS THIS THE CORRECT METHOD TO EVALUATE CATALYST?

- We believe the key is life and activity over time. For example, catalyst 1 starts with a activity level of 50 and see reduction the first year of 20 % and then settle down to 10% each year.
- Catalyst 2 starts with an activity of 45 and see reduction of 10% the first year and then settles down to 5%

	Starting activity	20% drop year 1	10 % 2 nd year	10% 3 rd year	10% 4 th year	10% 5 th year
Catalyst 1	50	10 40	4 36	3,6 32.4	3,24 29.16	2.91 26.25

	Starting activity	10% drop year 1	5 % 2 nd year	5% 3 rd year	5% 4 th year	5% 5 th year
Catalyst 2	45	4.5 40,5	2.025 38.475	1,92375 36.55125	1.827 34.724	1.73625 32.98775



EXTENDING CATALYST LIFE

- Increasing catalyst pitch without addressing why your catalyst is building up is like putting lip stick on a hog
- No matter what you think, it is still a hog.
- Understand what really is happening. Don't kiss the hog!
- Follow the Science!

SCR PERFORMANCE IS INCREASINGLY LIMITED BY CLEANING STRATEGY, NOT CATALYST CHEMISTRY!

- I have been told by several SCR guys they are tired of replacing catalyst because of buildup and not chemistry.
- If you take care of your catalyst, then your catalyst will take care of you!!
- **The photo on the right is not taking care of your catalyst**



Change out catalyst--- go to larger pitch which reduces surface area and DeNOx potential. Does not work –all catalyst will plug

TYPICAL SOLUTIONS TO REDUCED ASH PILES

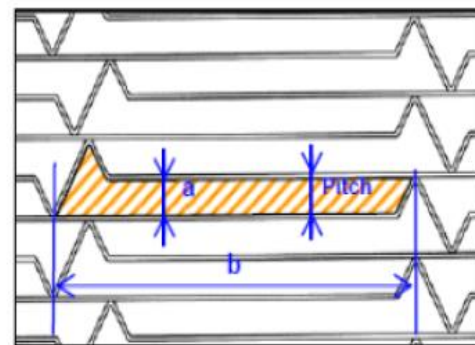
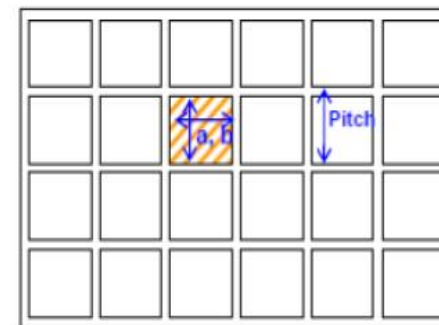


Plate type

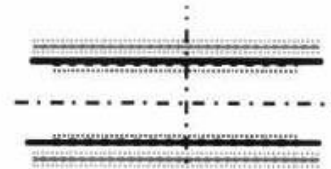
Typical Pitch: 5.7 – 7.0 mm



Honeycomb type

Typical Pitch: 6.9 – 9.2 mm

PARALLEL PLATE



SQUARE HONEYCOMB

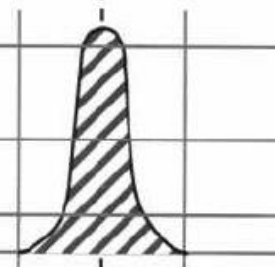
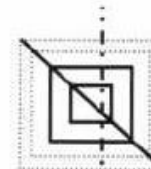
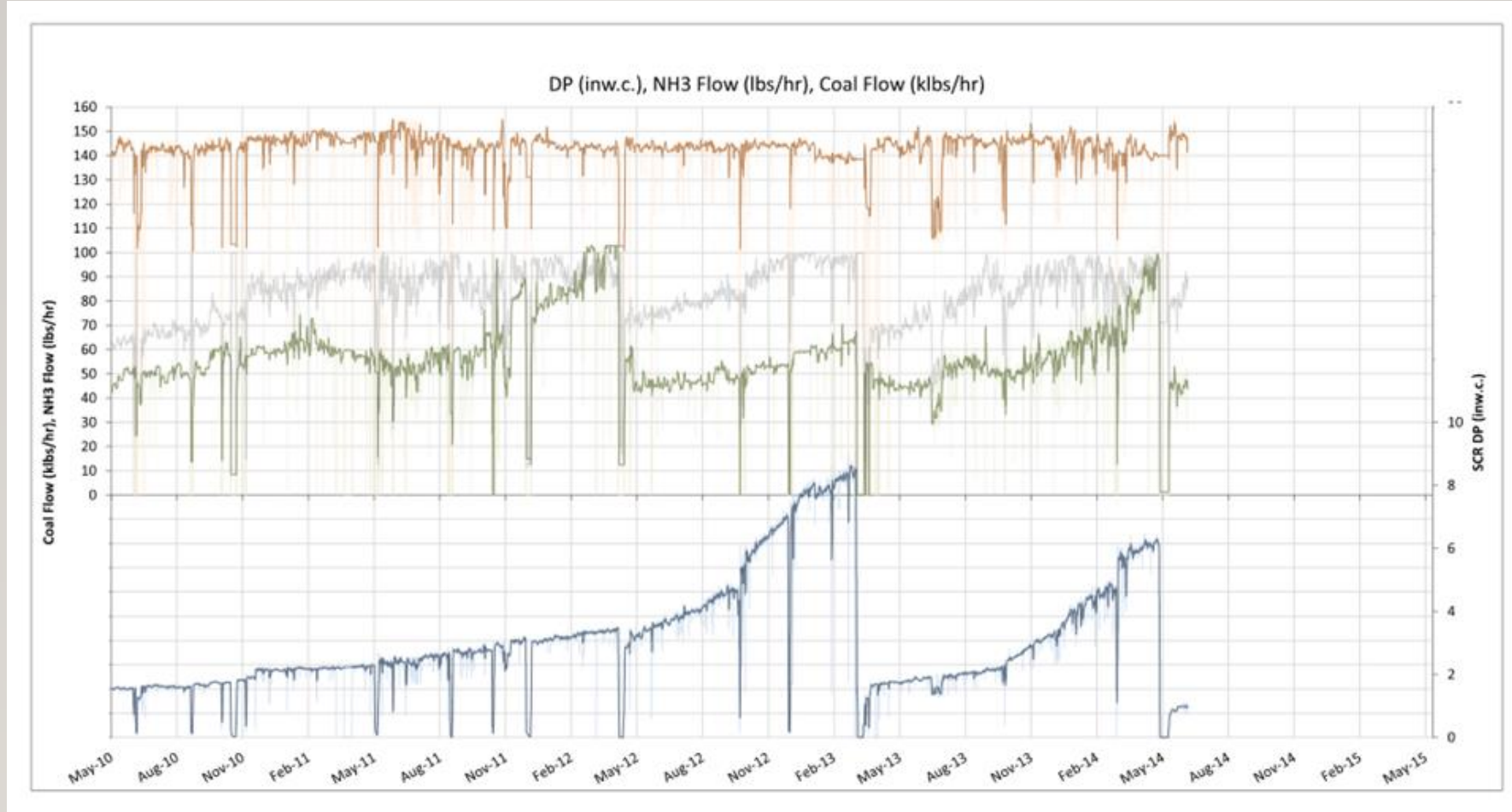
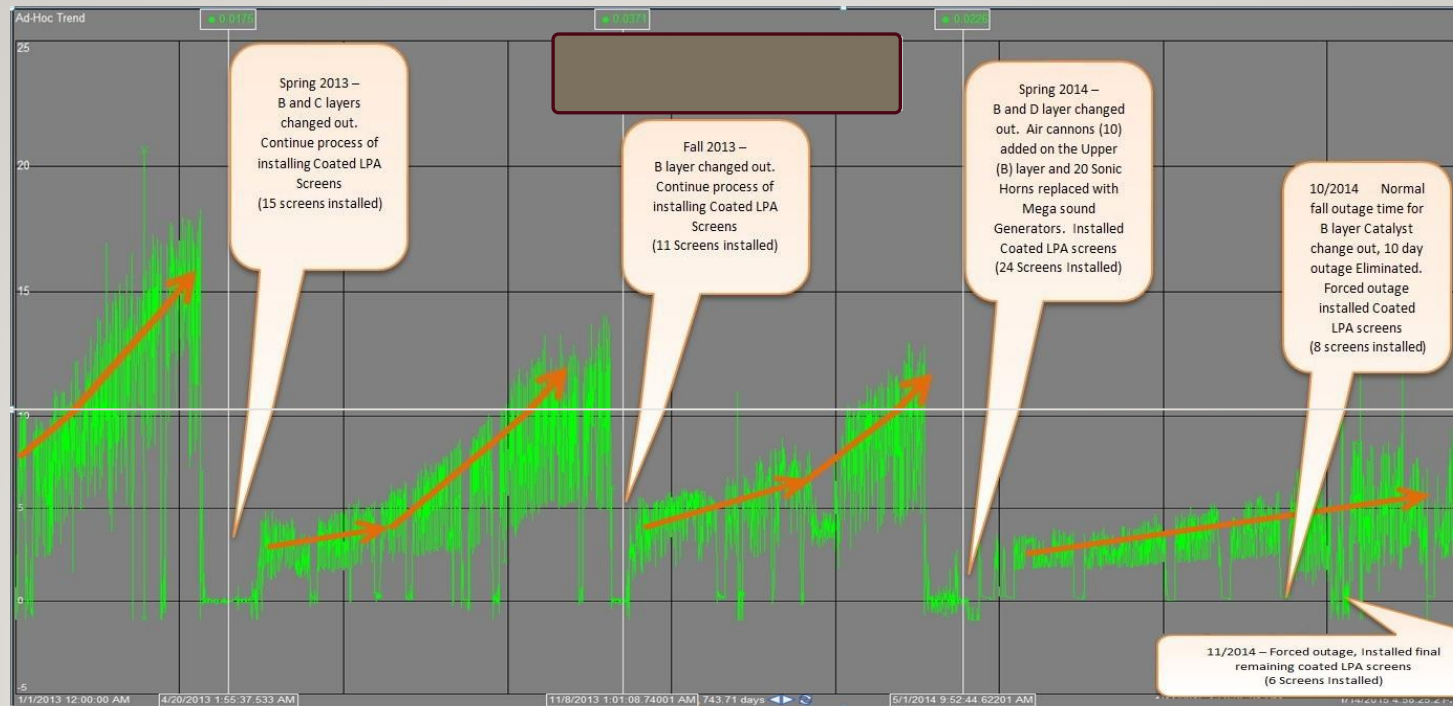


Figure 2: Gas Velocity Distributions



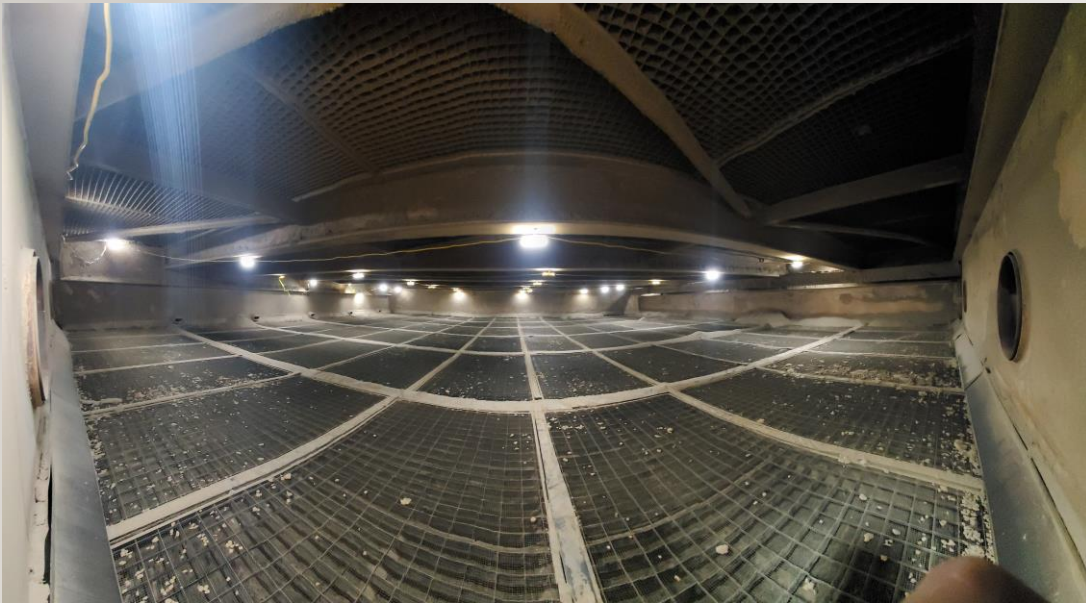
Greater pitch catalyst still built up, and cause pressure drop issues! Solution was air cannons



- **Air Cannon installation was successful.**
- **Air cannons reduced buildup, normalized pressure drop and increased catalyst life.**
- **Plant experienced an immediate return on investment**

NEVADA GOLD INSTALLATION OF 8" AIR CANNONS AND SONIC HORNS!

FIRST LAYER

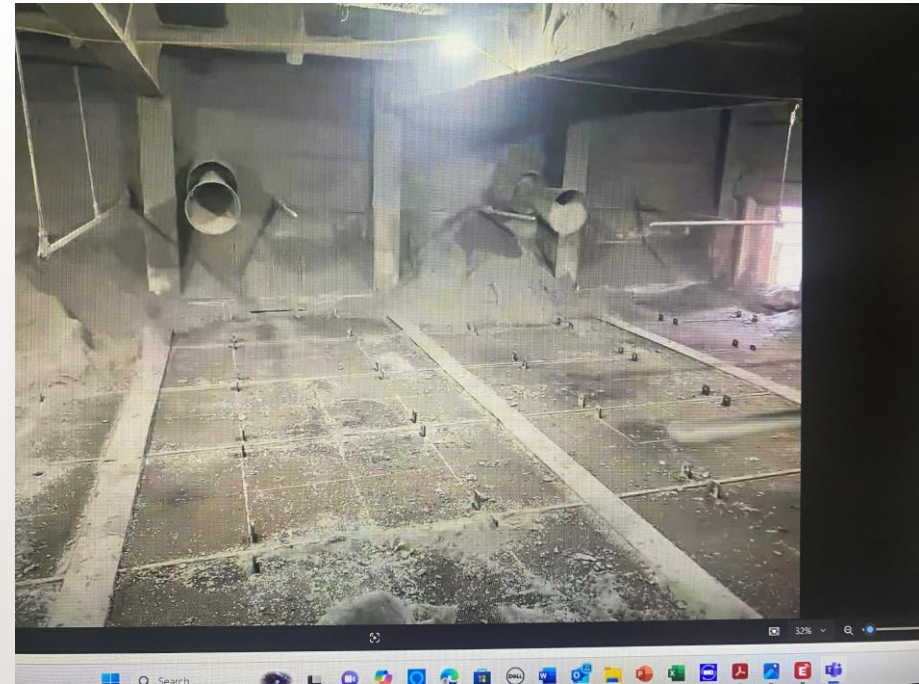


NO VACUUMING WAS REQUIRED!



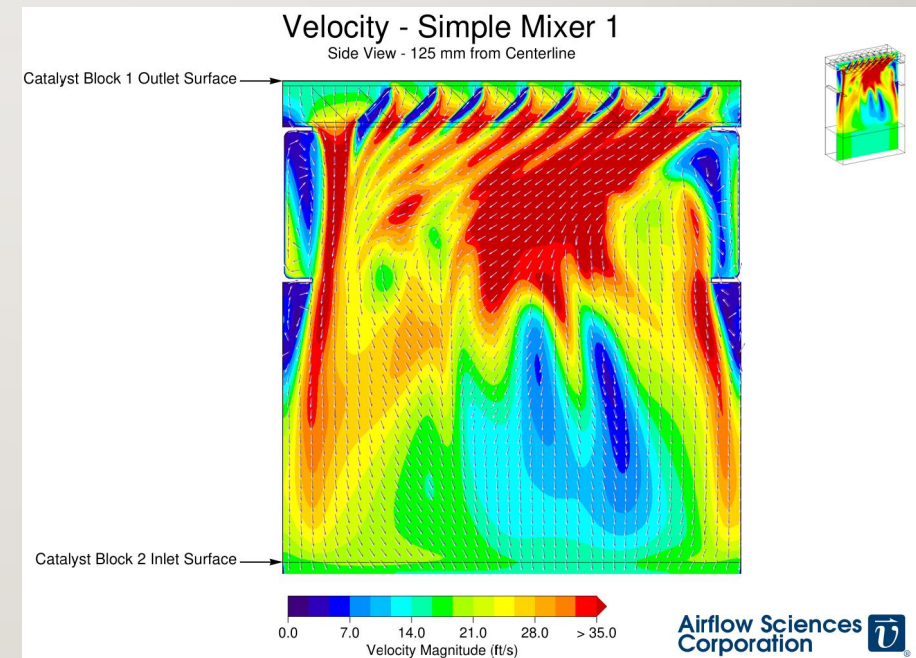


CATALYST CAN BE KEPT CLEAN



INTERLAYER MIXING SYSTEM

- Improve catalyst life
- Improve DeNO_x
- Reduce ammonia slip

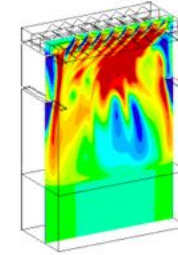
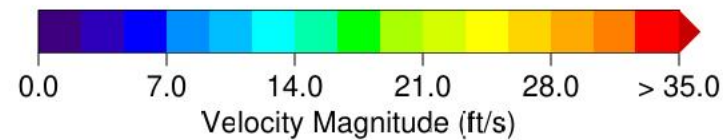
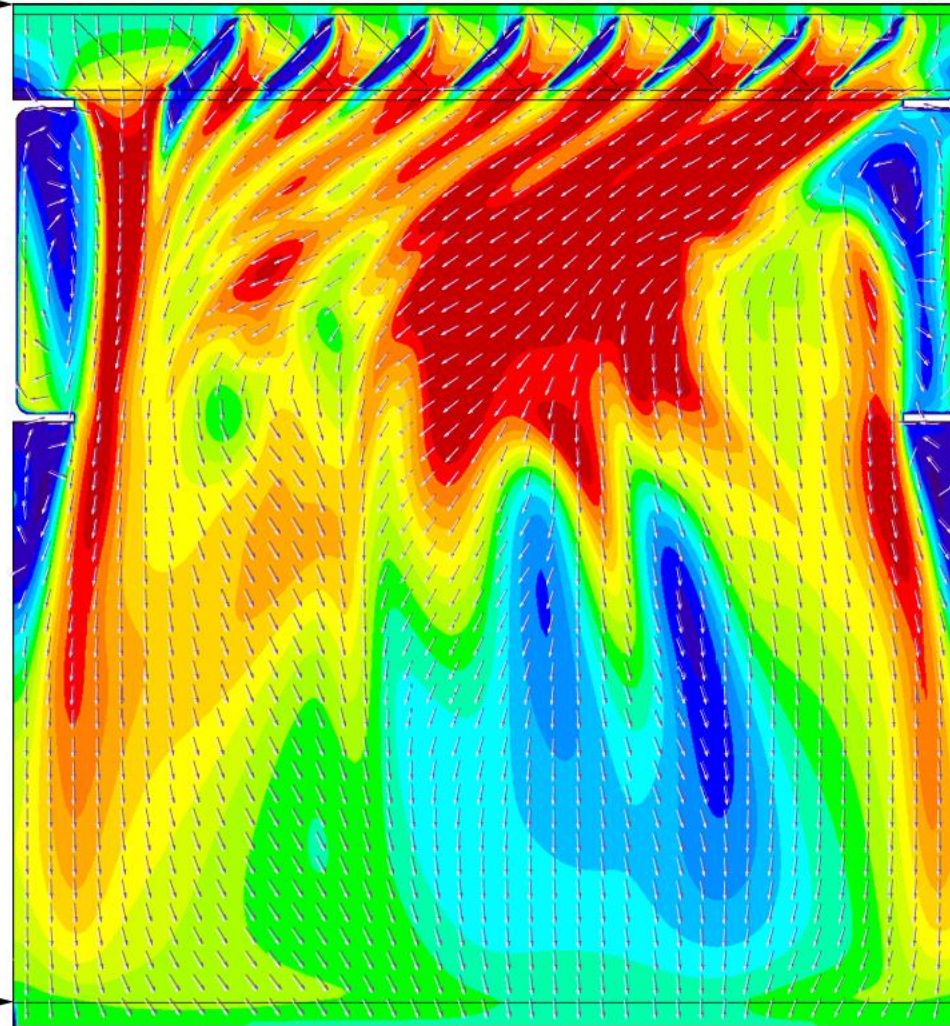


Velocity - Simple Mixer 1

Side View - 125 mm from Centerline

Catalyst Block 1 Outlet Surface →

→ Catalyst Block 2 Inlet Surface



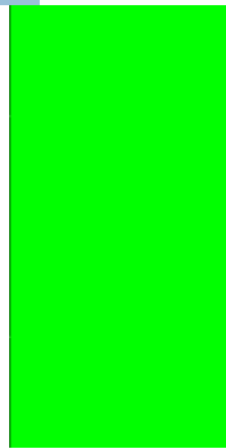
INTERLAYER MIXING SYSTEM

- Proven in Industrial applications for NO_x removal up to 99%

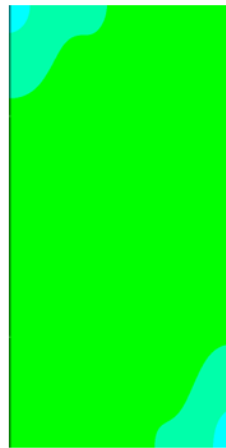
At Catalyst 2 Inlet Surface:



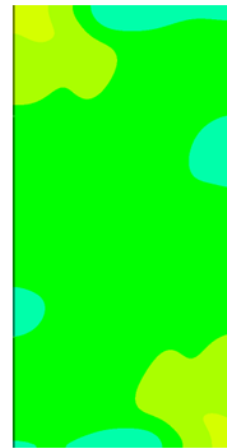
RMS = 0.6%



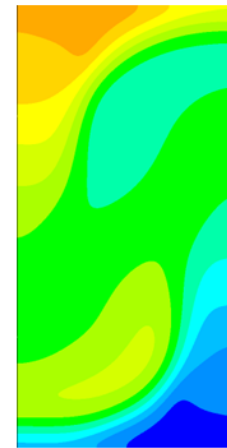
RMS = 0.8%



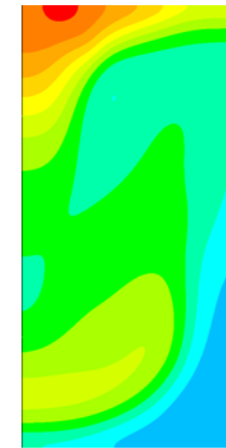
RMS = 3.8%



RMS = 5.6%



RMS = 20.9%



RMS = 19.1%

