

AE Power Plant Winterization

City Council May 17, 2021



Sand Hill Plant 2/15/2021





Plant Winterization Plans

- Begins in Fall and is affirmed to ERCOT by December 21st each year
- Consists of Permanent and Temporary Measures
 - Permanent Examples
 - Insulation in/on piping, cabinets
 - Metal structures around areas determined as concerns from past weather events
 - Heat Trace – electrical heating systems on critical components
 - Temporary Examples
 - Wind breaks, thermal blankets applied to critical components
 - Temporary Heat sources – portable propane or electrical heaters, lighting
- Temporary Measures are installed while Permanent Measures are checked for proper function as per the plant weather preparation check list





Plant Winterization Plans

- Measures are re-checked prior to a major forecast event like February
- Operators use remote monitoring and visual checks to confirm status
- Confirm function of emergency communications such as satellite phones
- Personnel Measures
 - Ensure adequate staffing levels – increased during major forecast events
 - Provisioning for food and on-site lodging





Winter Prep installed
around the lower areas
of Unit # 5 Freeze
Protection HRSG Wind
Wall East side



Sand Hill Plant

2021

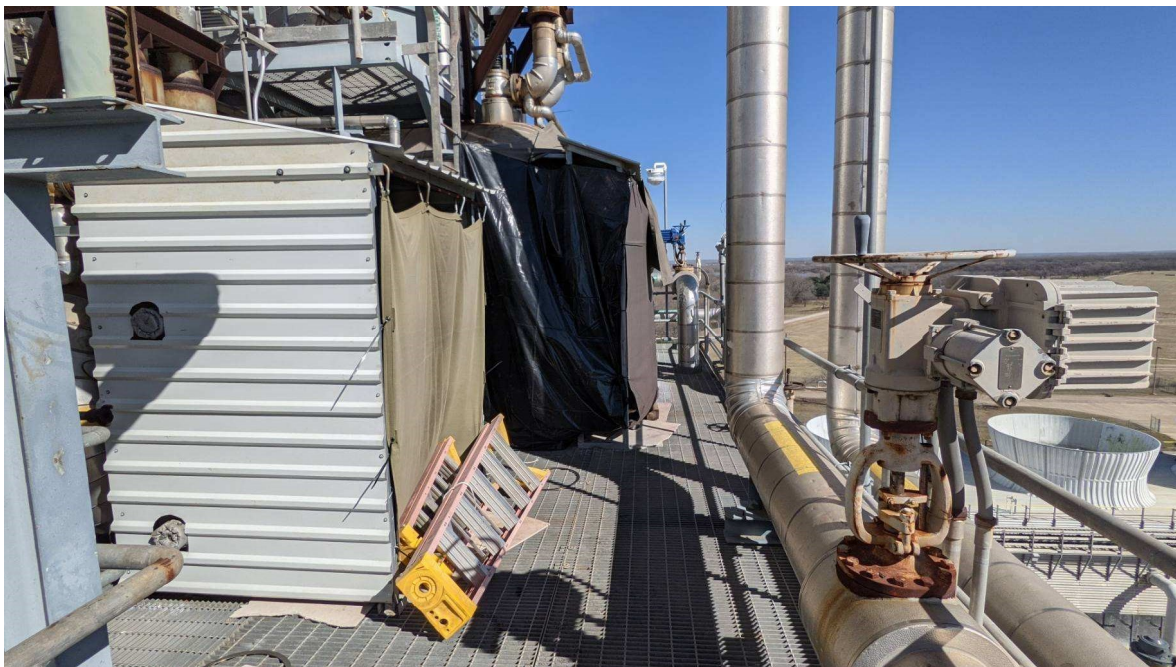


Freeze Protection at the HRSG Doghouse

Sand Hill Plant

2021





Freeze Protection HRSG Drums

Sand Hill Plant

2021

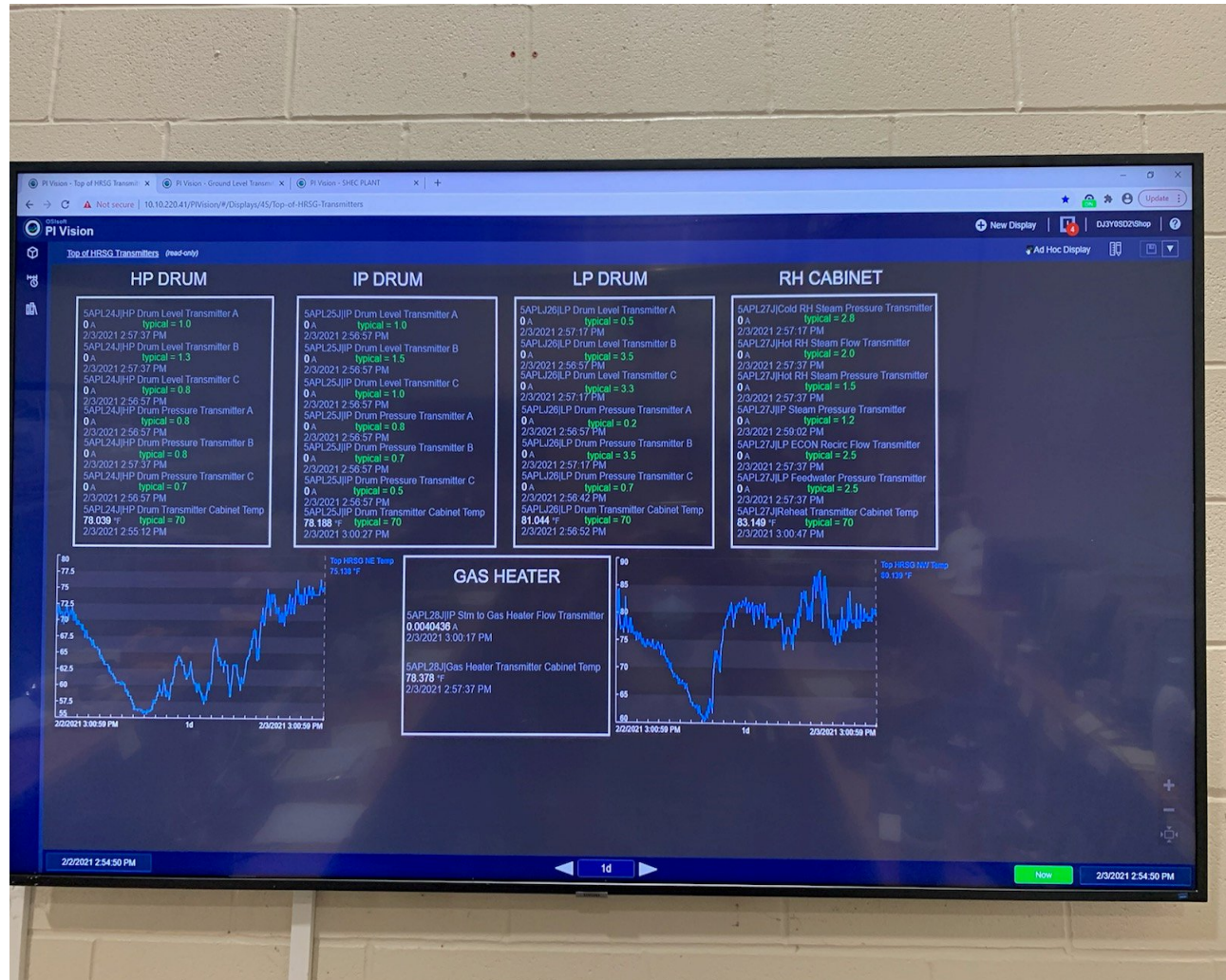


Freeze Protection Unit #5 Evaporator Backflow

Freeze Protection Critical Tracing on the Plant Data recorders

Sand Hill Plant

2021





Traveling Water
Screen Trash Pumps



Aux Cooling Water
Anti-scaling
chemical storage



Circulating water
pump gland water
tubing

Decker Power Plant

2021





GT Water injection
building



Diesel Generator
Building



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North drum level condenser pot



Decker Power Plant



2021



GT gas skid pressure control valves

Superheat and
Reheat spray valve
transmitters

Lights installed
inside boxes to
generate heat

Decker Power Plant

2021





North drum level
transmitter



Reheat spray valve



Superheat spray valve

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Instrument air pressure transmitter



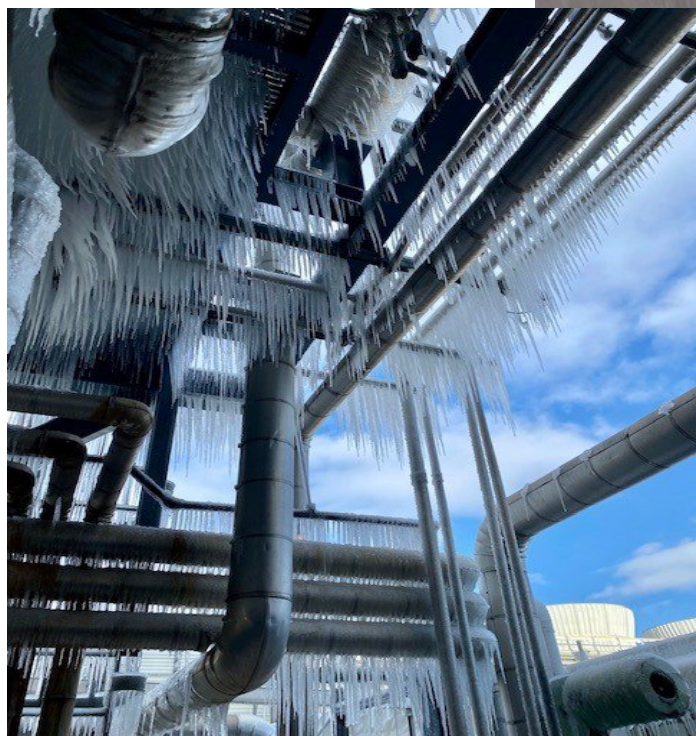
Instrument air intake



Decker Power Plant

2021





Sand Hill Plant

2/15/2021





Sand Hill Plant

2/15/2021

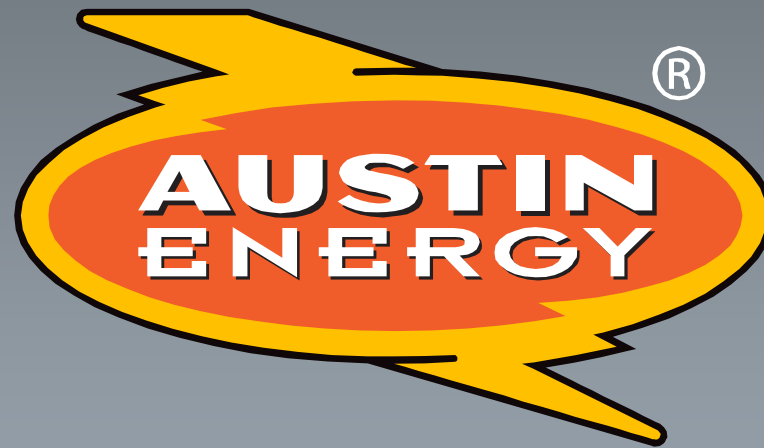




Looking Ahead

- Reviews are still underway but we have identified some opportunities for improvement such as:
 - 2011 improvements mostly worked but didn't in one instance – a protective controls cabinet proved inadequate – we've now added a heat source
 - Increased stocks for longer duration events:
 - Food for staff (ex. MREs)
 - Cots/bedding for staff
 - Fuel for portable heaters
 - Event/scenario training vs. check-list only
- Regular reviews and updates to address changing needs in the future





QUESTIONS ?



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