

# AE Power Plant Winterization

EUC June 21, 2021

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*Sand Hill Plant 2/15/2021*



# Plant Winterization Plans

- Begins in Fall and is affirmed to ERCOT by December 21<sup>st</sup> 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





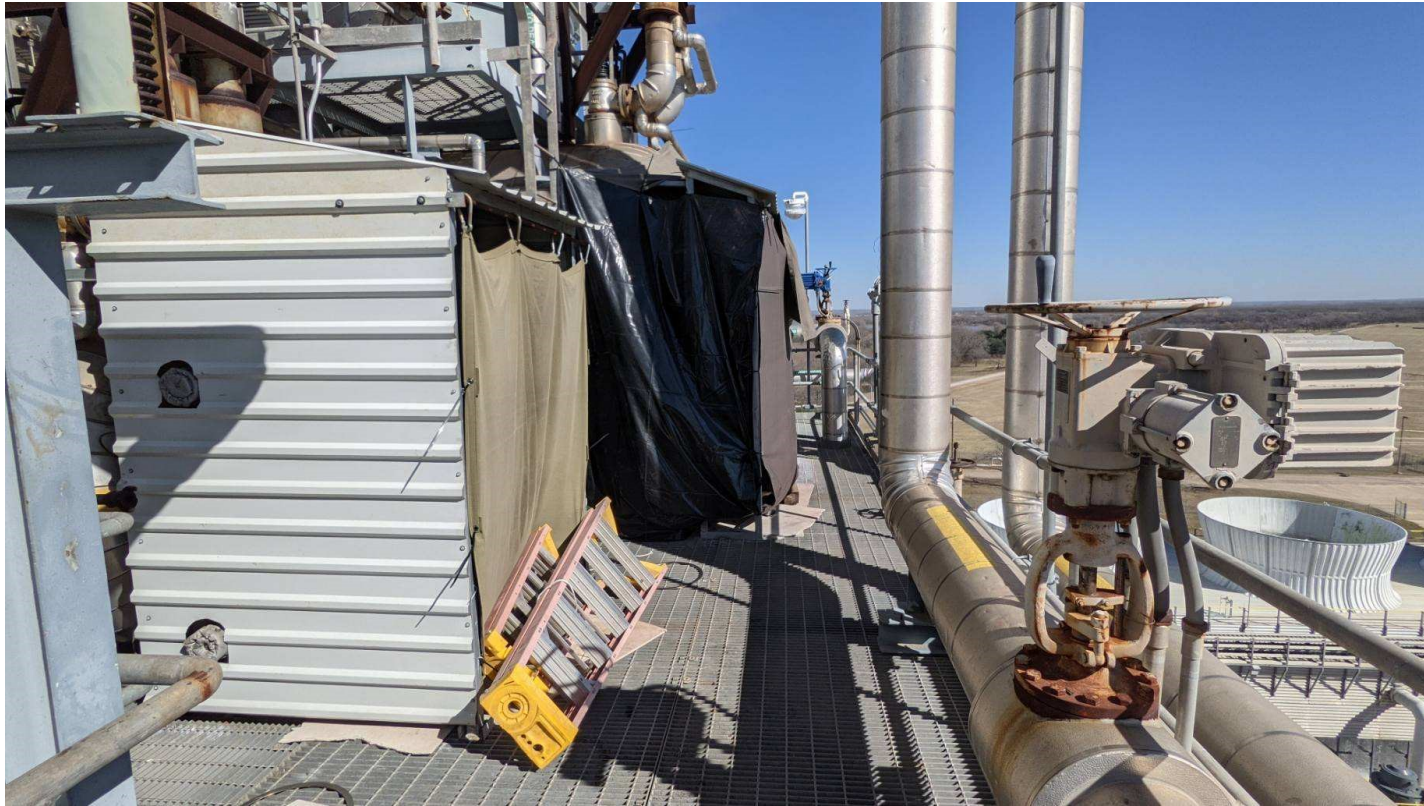
## Freeze Protection at the HRSG Doghouse

Sand Hill Plant

2021







Freeze Protection HRSG Drums

Sand Hill Plant

2021



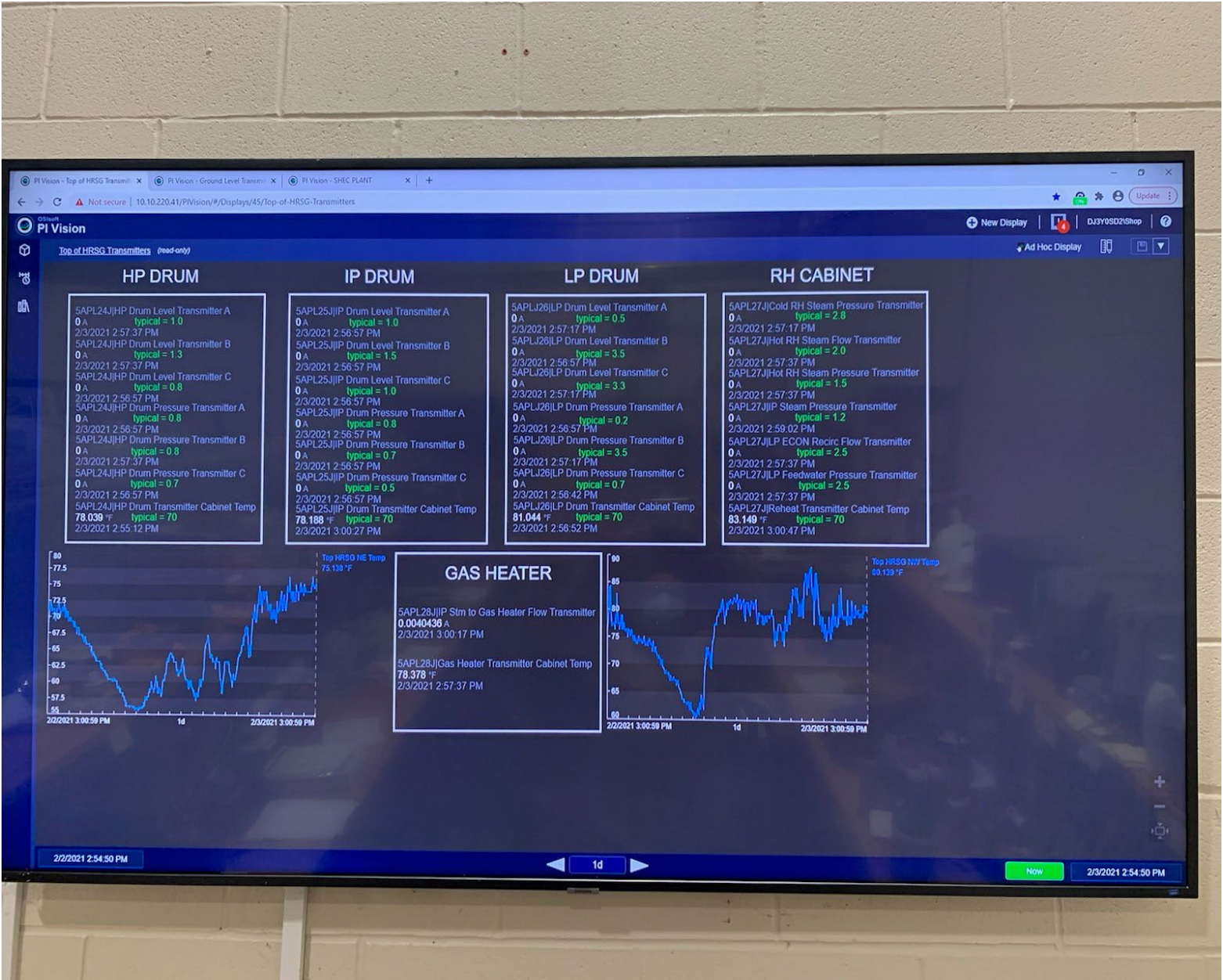
Freeze Protection Unit #5 Evaporator Backflow



# Freeze Protection Critical Tracing on the Plant Data recorders

Sand Hill Plant

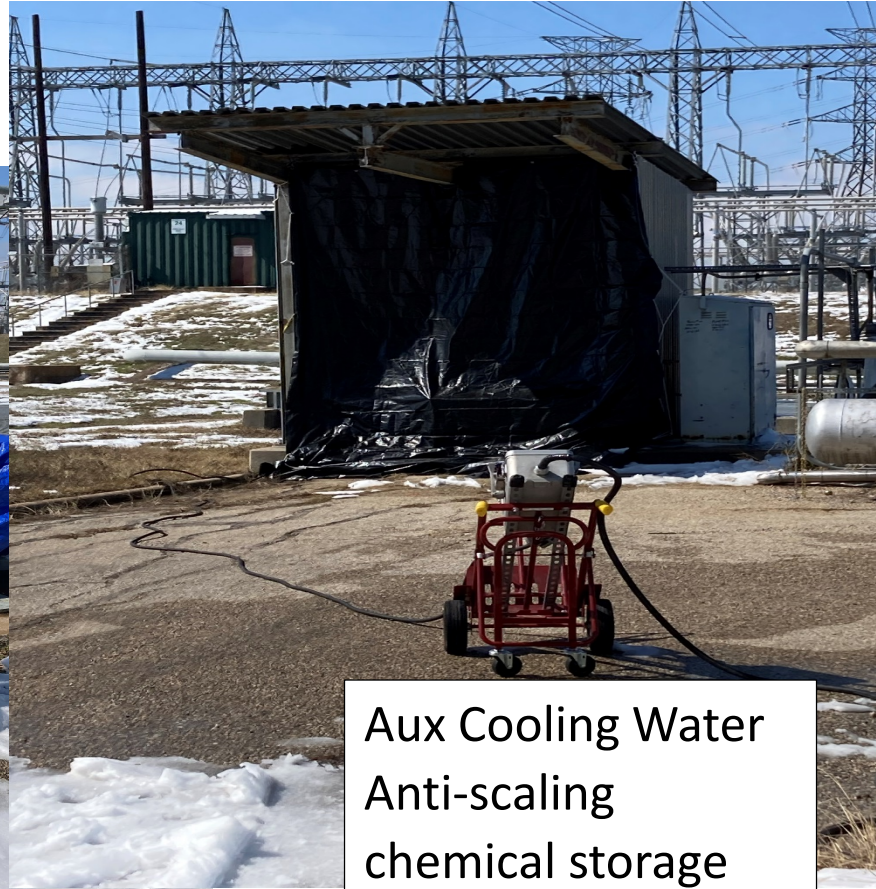
2021







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

Decker Power Plant



2021



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

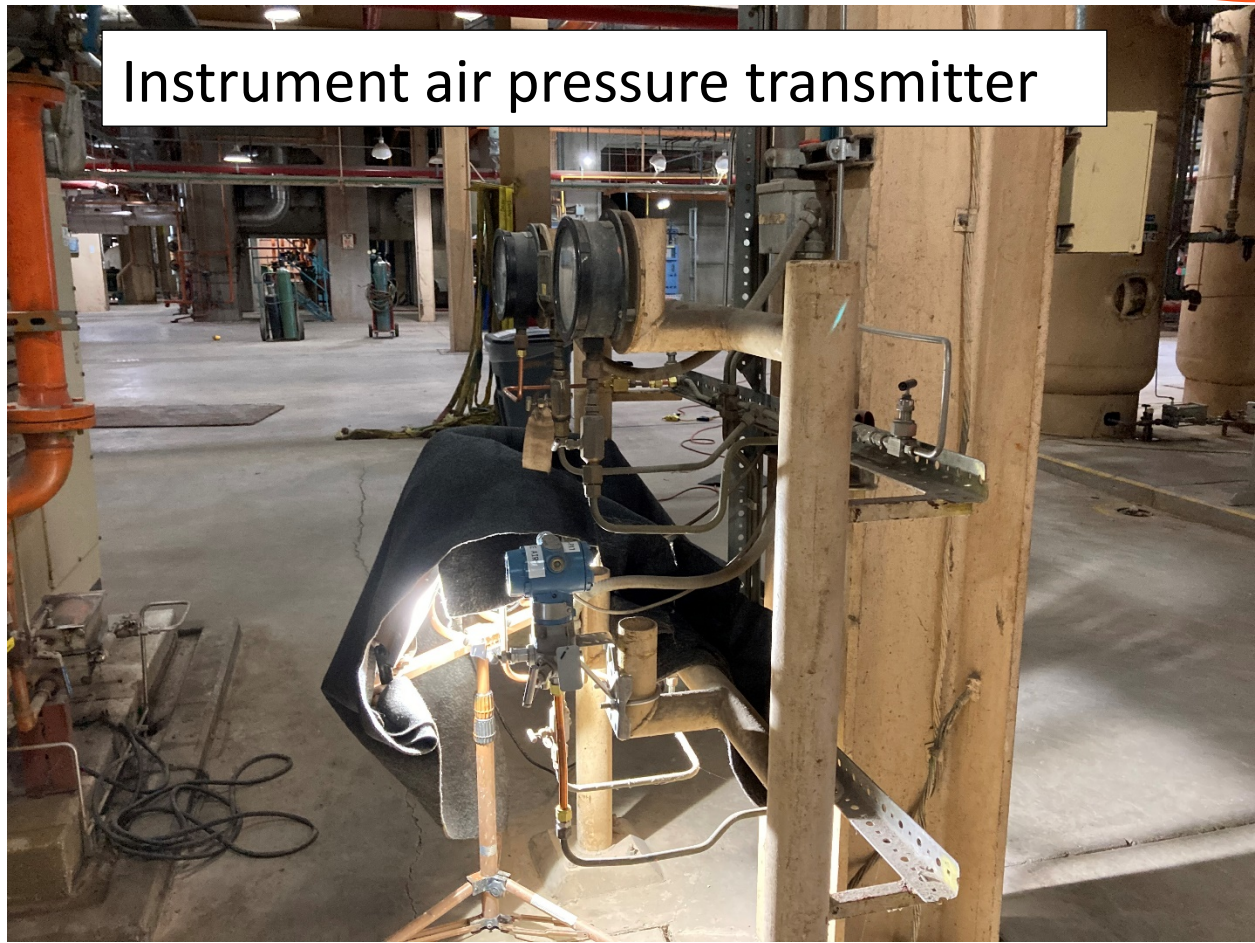
Decker Power Plant

2021





Instrument air pressure transmitter



Decker Power Plant

2021



Instrument air intake







## 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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