



TVRWRF NoxTech Project

● AQMD Biogas User Group Meeting
January 14, 2015

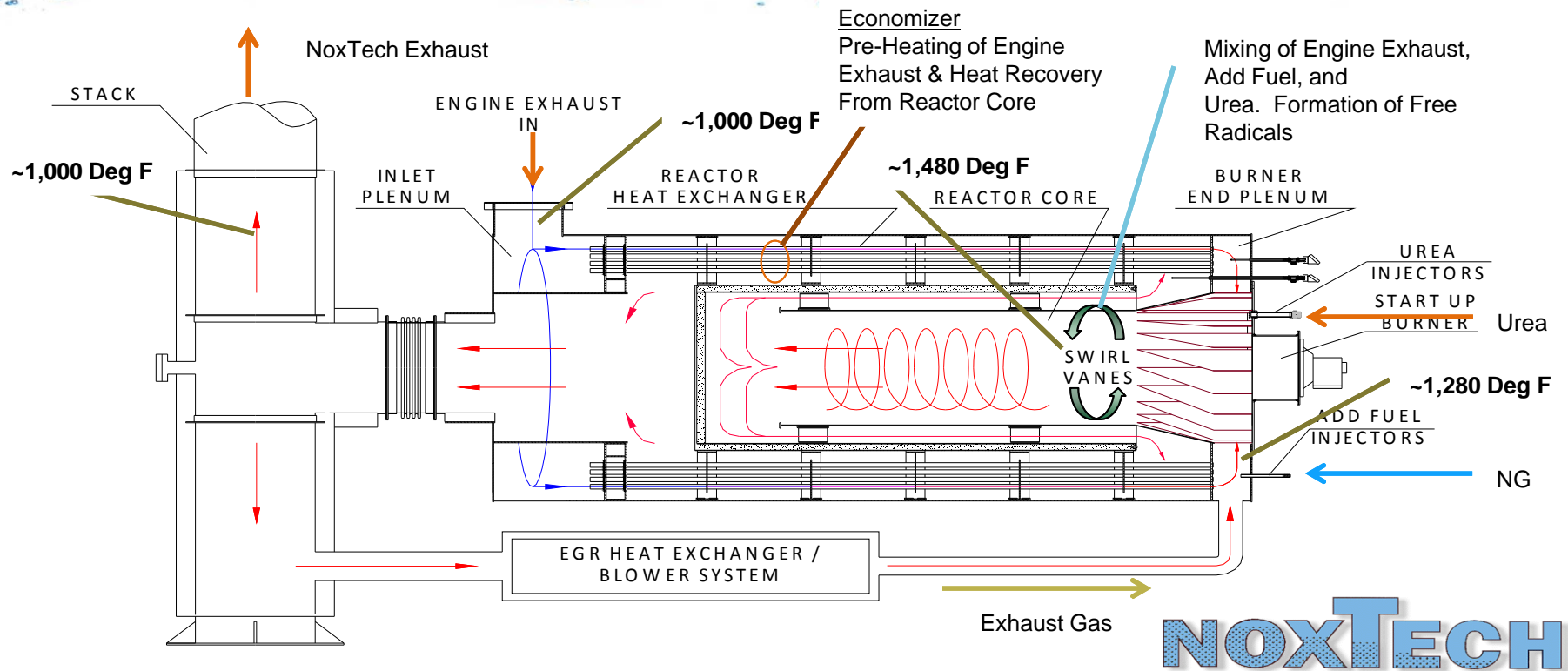
Mark E. Iverson, P.E.
Director of Maintenance

January 14, 2015

NoxTech at the TVRWRF



NoxTech Process



NOXTech

TVRWRF Start-Up Testing Summary



- Start-Up Testing: Sept 23 through Dec 6
- Total Run Hours: 425
- Overall: 78.9% Passing NOx and CO
- Last 131 Hours: 96.2% Pass NOx and CO

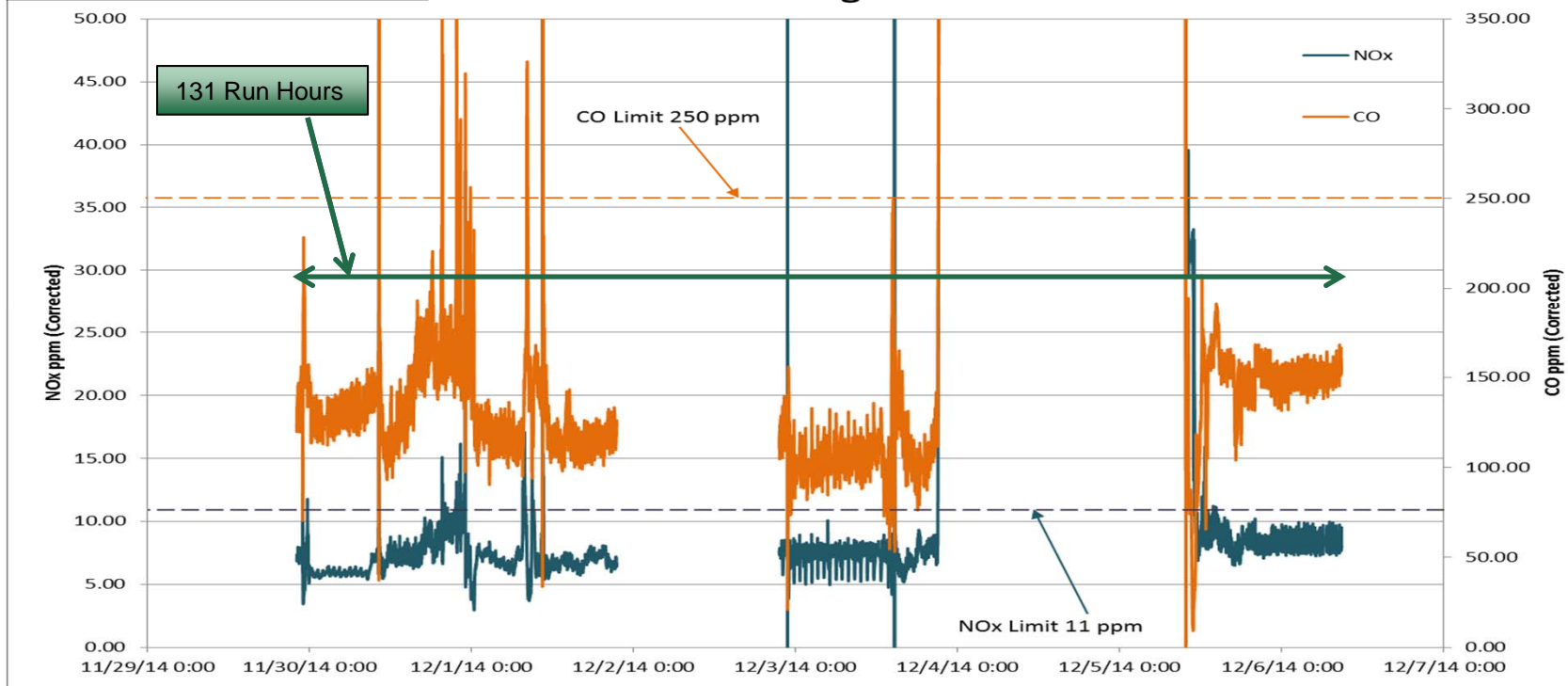
NOXTech

TVRWRF Final Testing Results



96.2% Passing

TVRWRF NoxTech Testing Results Nov 30 2014 Through Dec 6 2014



TVRWRF Key Findings



- System works well on biogas
- Number of engines has little effect on performance
- Engine fuel has little effect on performance
- NOx Analyzer key to system performance
- Existing Chemiluminescent NOx Analyzer difficult to maintain
- NOx analyzers needed both before and after NoxTech unit
- Automatic isolation valve with drip-tight seal needed for engine exhaust

Next Steps



- Get additional funding approval
- Start six-month demonstration testing
- Design and install drip-tight exhaust isolation valves
- Evaluate solid-state NOx analyzers
- Install NOx analyzers before and after NoxTech Unit
- Complete installation of NoxTech unit at TVRWRF



EASTERN MUNICIPAL WATER DISTRICT

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