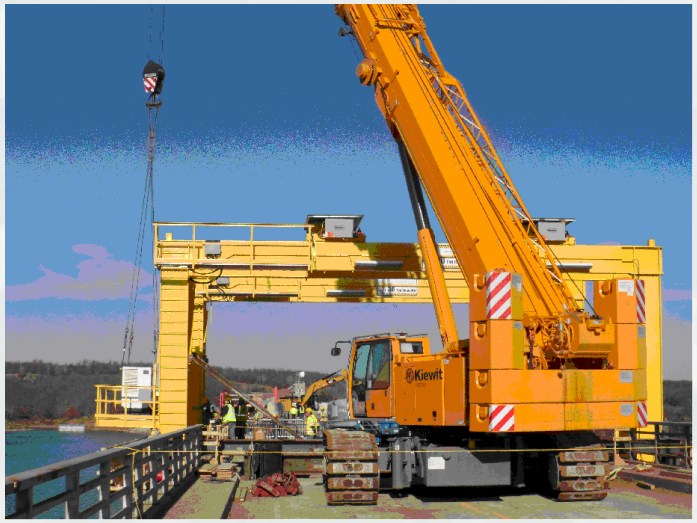
Construction Contracting Challenges and Initiatives

Meet-the-Corps Day Briefing
12 February 2014

Fort Sill TEMF



Keystone Bridge Replacement

Purpose

1) Share Recent Initiatives

- Acquisition Tools
- Improvements Based on Customer Surveys
- DPW Feedback

2) Cx Lessons Learned

Acquisition Tools

Fort Sill THAAD

Canton Dam Safety

- Current Direction (2012): 2 Step Selection for Design/Build (D/B)
  - Engineering and Construction Bulletin 2012-23
  - Unified Acquisition Instruction 36.303-100
  - MILCON is exempt
  - 2 Step Selections – minimum 150 days
  - Impacts use of existing indefinite delivery contracts for D/B, if not competed by 2 step (e.g., POCAs)
- Way Ahead
  - New SATOCs (3) being procured
  - Planning for additional MATOCs and SATOCs
  - Use existing POCAs when possible (i.e., D-B-B & simple scope/ workplan/construct)

2012 Customer Surveys - Areas of Improvement Needed: Engineering Design Quality, Construction Turnover, & Timely Completion of Construction

- Pre-award
  - Quality Control of RFP; properly resource selection boards; resolve conflicts with RFP & proposal
  - Better upfront coordination with Centers of Expertise; better planning for technical reviews of submittals
  - RFPs to better specify requirements, including milestones; design, testing, commissioning, & performance verification. Strengthen contract language to hold Designer of Record (DOR) accountable.
  - Realistic contract durations based on size & complexity rather than programmed amount
- Post-award
  - For Design/Build (D/B), ensure design comments are properly addressed, resolved, and closed out
  - For D/B, establish checklist of minimum QA design requirements for specific project. Includes spot checks of some critical calculations.
  - For D/B, distribute review schedule and required turnaround schedules
  - For D/B, schedule management meetings during design phase. Intensely manage schedule.
  - Fair & frequent CCASS appraisals. Consistently keep responsibility on the DOR and prime contractor to promote contract schedule adherence.
  - Establish communication between Contracting Officer & Prime Contractor

DPW Direct Feedback: BOD Slips Hard to Understand

Fort Sill Central Issue Facility

- Construction “Deep Dive” at Fort Sill
- Data: 50 Contracts (>$500K) from July 2012 to present
  - Late project: >14 days from BOD ⇨ 13 of 50 Late
  - On time: within 14 days ± of BOD ⇨ 23 of 50 On time
  - Early project: more than 14 days ahead of BOD ⇨ 14 of 50 Early
- Focus on late projects: 5 had explainable time growth beyond any control, e.g., user changes.

focus group ⇨ 8 late projects.

Construction Deep Dive – Common Factors

- **7 of 8** projects:
  - Design-build
  - Contractors new to working on the installation
  - Design duration >25% of total contract duration
  - Contractor field staff differed from proposal
- **6 of 8** awarded to small/small disadvantaged businesses
- **5 of 8** contractors experienced financial solvency issues
- **4 of 8** projects:
  - Infrastructure design or construction by others
  - Significant lag between design approval and actual start of construction
- **3 of 8** projects awarded by other than Tulsa District
- **1 of 8** had inadequate competition

Reception Battalion Headquarters

Construction “Deep Dive” – Improvement Initiatives

Fort Sill TEMF

AIT Barracks

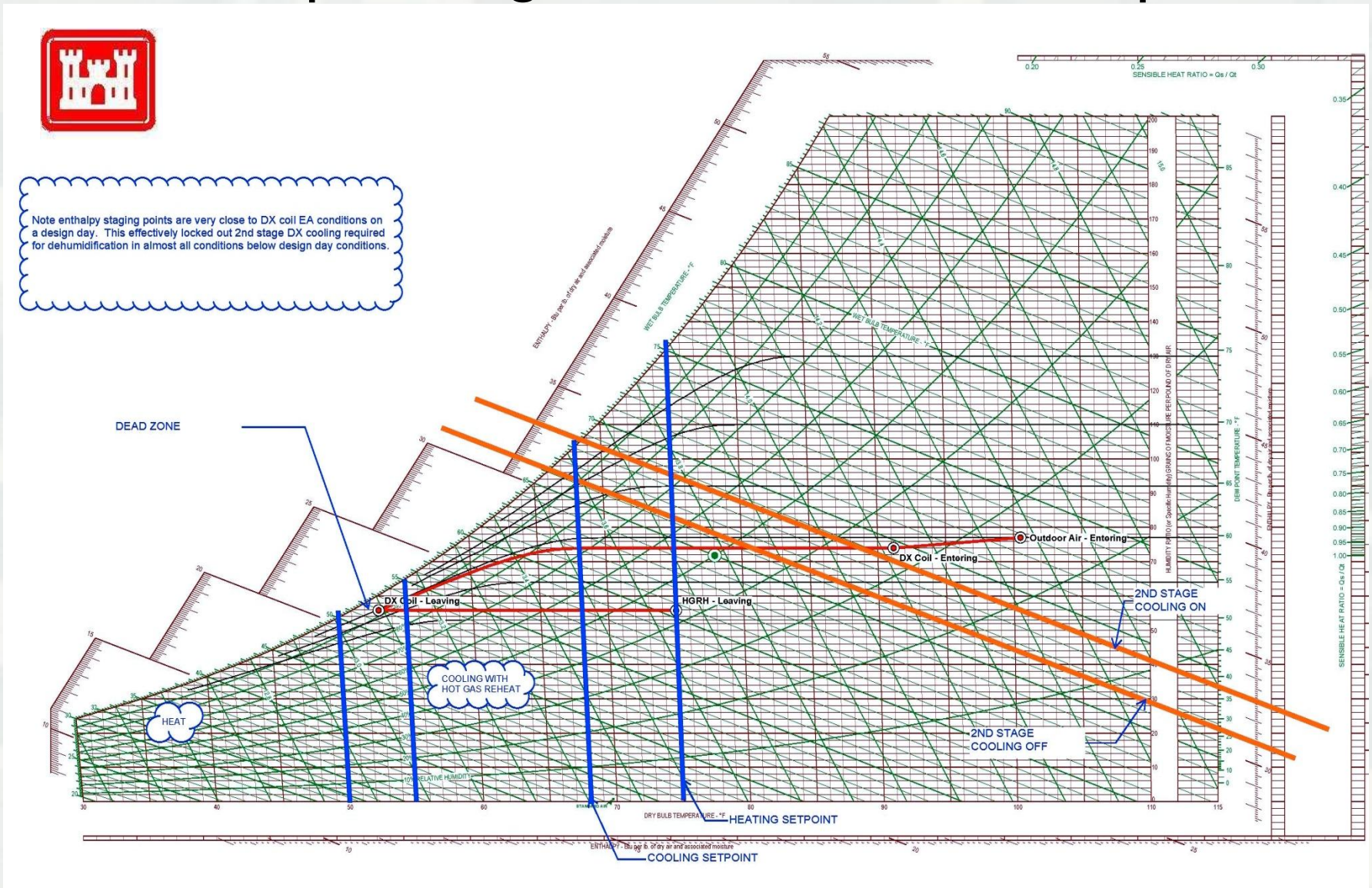
Mission Command Training Center

- Improve design phase performance requirements of D/B contract
- Rely more heavily on local contracts (Tulsa District awards)
- Avoid separate infrastructure design/construction activities
- Add RFP requirements/criteria to better evaluate contractor’s understanding of HVAC test, balance and commissioning

Cx Lessons Learned

- Initiate a collaborative exchange with all mechanical stakeholders to fully develop the construction logic sequence and durations for Test, Balance & Commissioning (TB&C) activities
- Review/verify the proposed sequence of operation and validate system design w/full participation by the Contractor, Designer of Record, Cx Authority and Mechanical/Controls subcontractors
- Overlay the psychrometric chart with planned operational control modes for a design degree day and check for possible “dead” zones
  - → Start by plotting all control sequence trigger points
- Review all leaving coil discharge air temperatures as a qualitative check of system performance/capacity
- Integrate graphical trends of system operation into the controls start-up report; ensure functional performance is smooth over the full band of operation

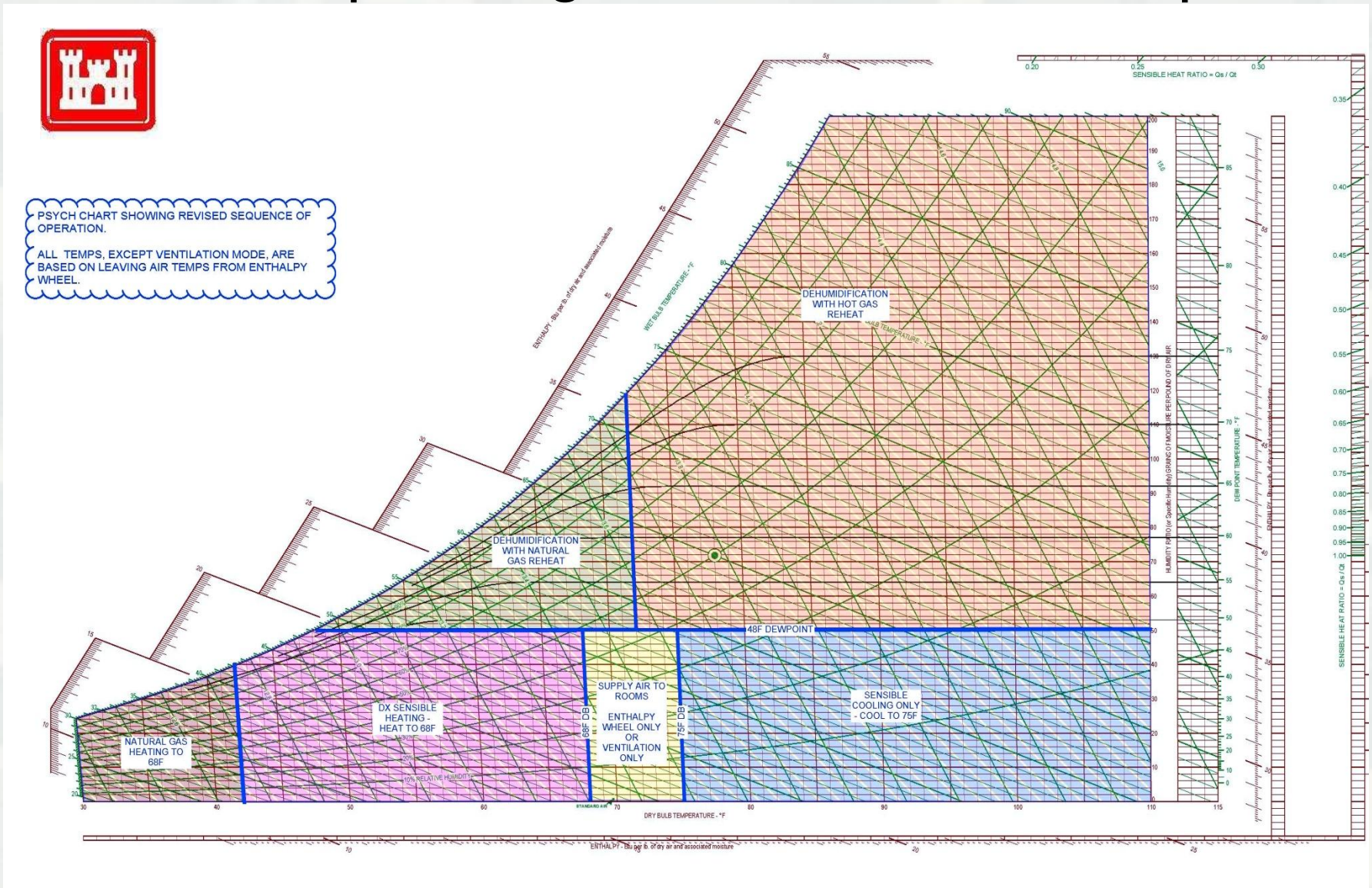
Initial Operating Modes for 48° Dew point



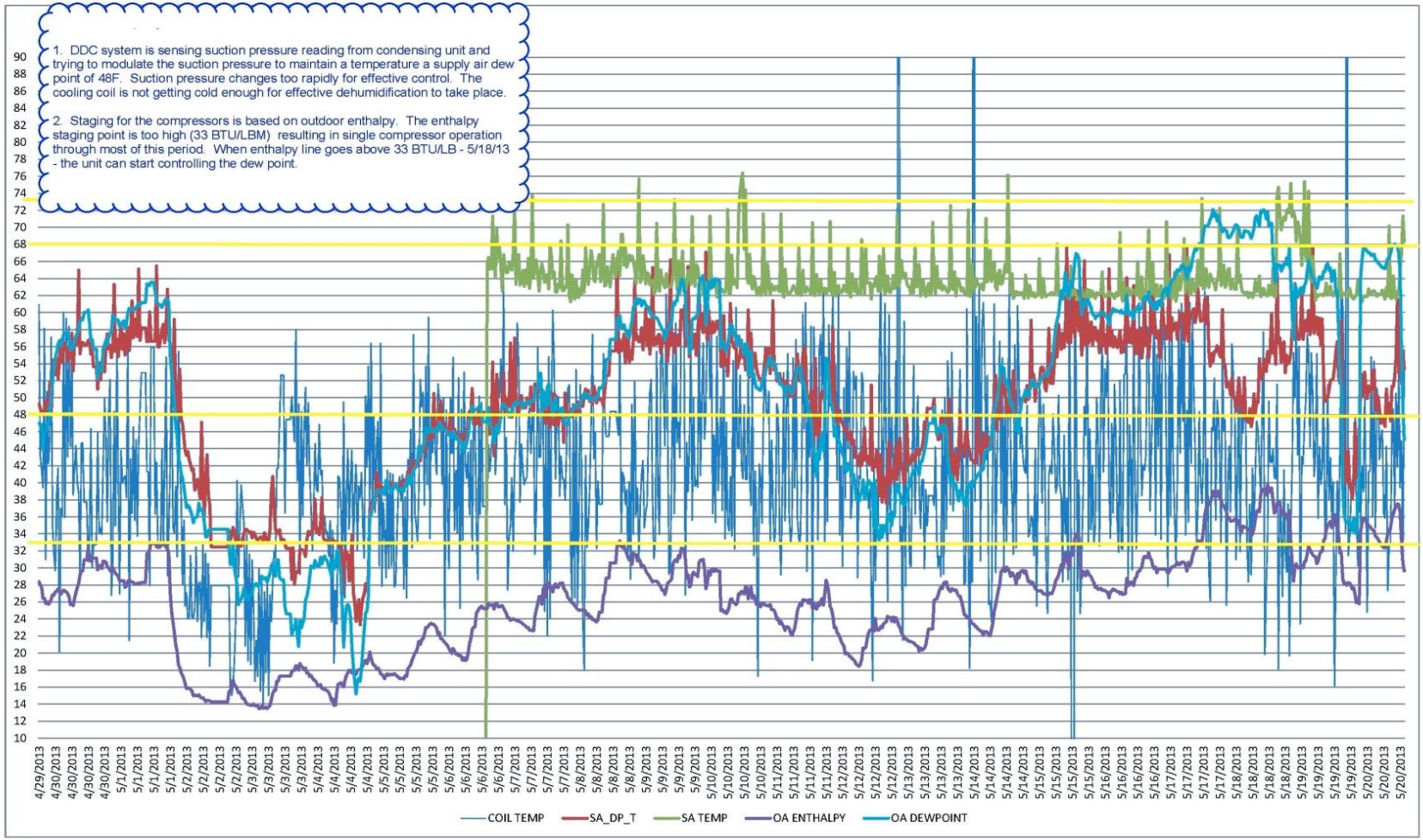
Revised Operating Modes for 48° Dew point

PSYCH CHART SHOWING REVISED SEQUENCE OF OPERATION.

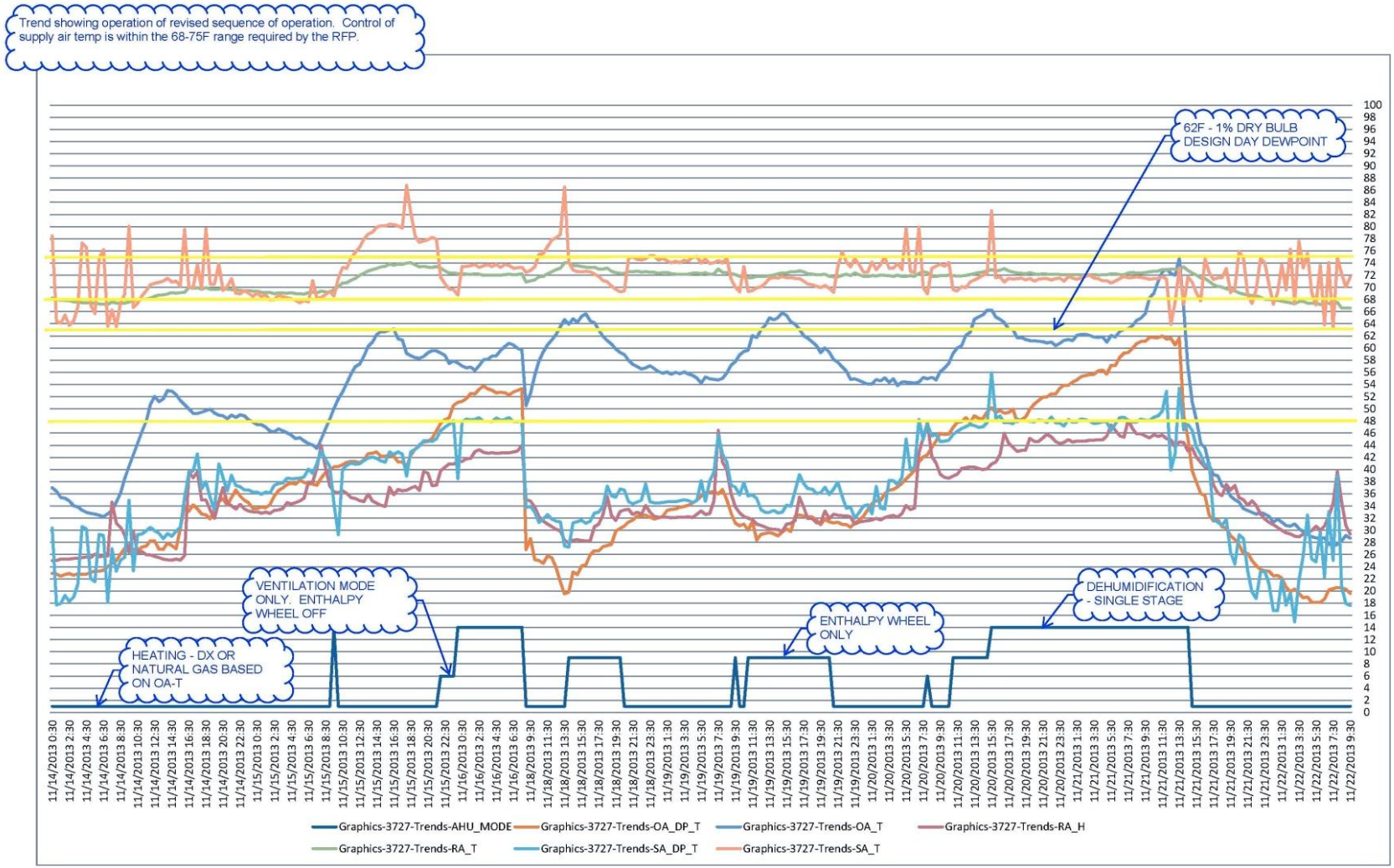
ALL TEMPS, EXCEPT VENTILATION MODE, ARE BASED ON LEAVING AIR TEMPS FROM ENTHALPY WHEEL.



Initial Operation Pre-Commissioning



Revised Operation Post-Commissioning



Thank You!

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