



Heating to Cooling Transition Kaizen

01/05/10 – 01/07/10

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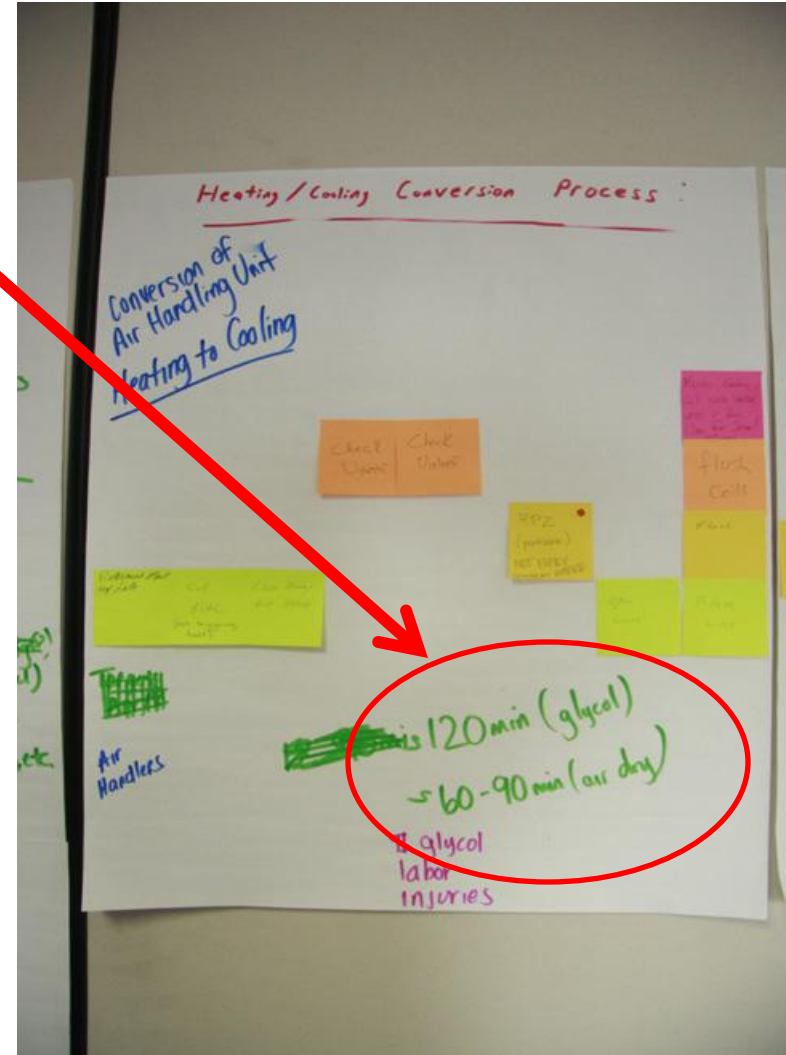


Kaizen Does...

- Document that many processes are “tribal”
 - unwritten and undocumented
- Increase awareness of the function and value of all roles
- Break down “silos” within and between departments and divisions
- Challenge the prevailing winds

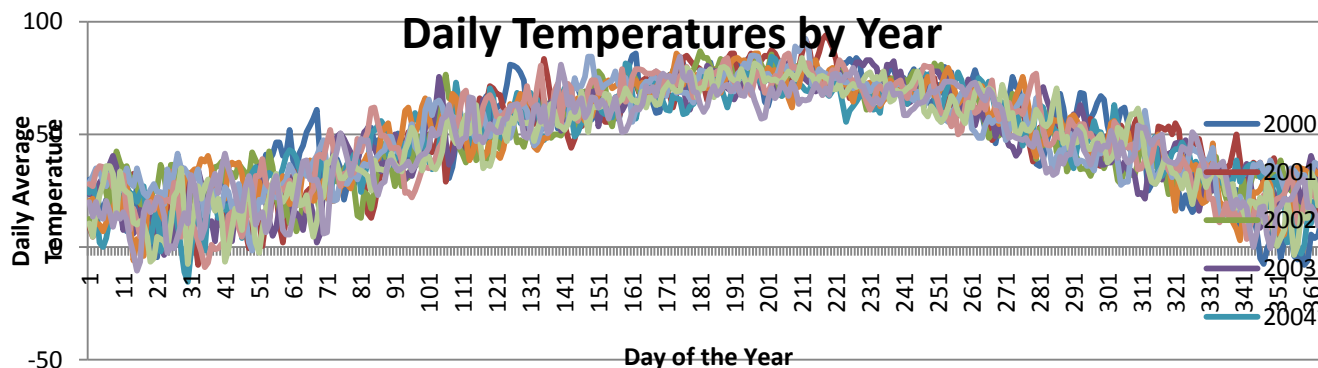
Goal

- Reduce cycle time 50%
- Improve customer satisfaction



Process Lessons Learned

- Folks nervous about early start breaking coils
- No such thing as an “average” time to start
- No formal process for planning & communicating transition
- Glycol process – expensive, labor intensive, higher risk solution



Three recommendations

- Unified start time Spring/Fall
- Set and post conversion schedule, updated daily
- Limit the use of Glycol



Issue – who says go?

- Each District does their own thing
- Too early – cracked coils
- Too late – sweaty students



S.T.A.R.T. at the Beginning

- EM already monitors weather for energy purchases, etc.
- Look at forecasts and pick a date
- Issue S.T.A.R.T. Memo



Issue – where are we at?

- What are the priorities?
- When will my building be done
- Angry customers



Communicate Plan

- Each District submits conversion plan
- Post on FM website
- Update daily

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It all adds up.

Mike's Memo
Read Associate Vice President Mike Berthelsen's latest memo to FM employees.
January 8, 2010
[Lost Time Injuries Down](#)

Past Memos

12/22/09	10,000 or Bust
12/18/09	Eyes & Ears
12/10/09	Finals Dec. 17-23
12/4/09	Thankful
10/22/09	Taking the Pledge

[See All Past Memos](#)

Facilities Management SAFETY NEWS
January 2010
University of Minnesota

FM Safety Newsletter -- New Design!
Read about the Top 10 findings from the 2009 FM Safety Audit, milestones reached this past year due to safety awareness

Conversion Plan on Web

FACILITIES MANAGEMENT

East Bank District Heating-to-Cooling Conversion Plan

Check the date your building's cooling system is scheduled to be on.

Status Color Code:

On
In Progress
Not started

Building Name	Building #	Date Central Cooling On	Status	Date Window A/C Units installed	Status
Burton Hall	8	03.16.10	Not started	NA	
Eddy Hall	1	03.11.10	On	03.15.10	In Progress
Nicholson Hall	4	03.15.10	In Progress	03.15.10	Not started
Pattee Hall	3	03.11.10	On	03.15.10	On
Pillsbury Hall	2	03.12.10	In Progress	03.20.10	Not started
Wesbrook Hall	10	03.10.10	Not started	03.20.10	In Progress
Wulling Hall	5	03.12.10	In Progress	NA	

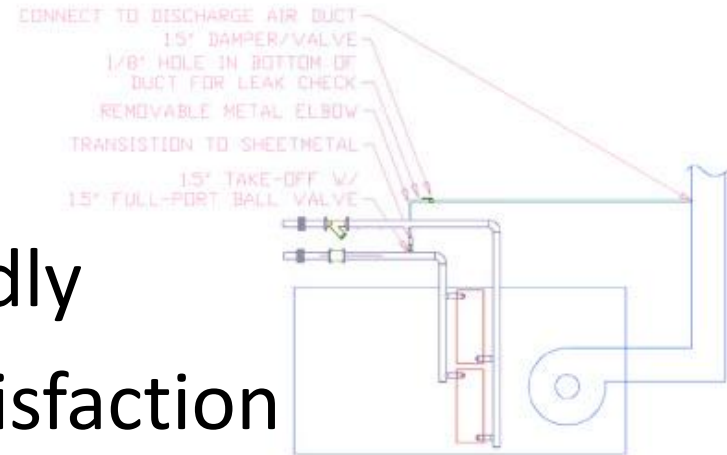
Issue - Glycol

- Expensive
- Corrodes coils
- Caustic chemical
- Glycol process physically difficult & time consuming



Limit Glycol Use

- Shift to air dry or load pump
- Environmentally friendly
- Improve customer satisfaction
- Save money



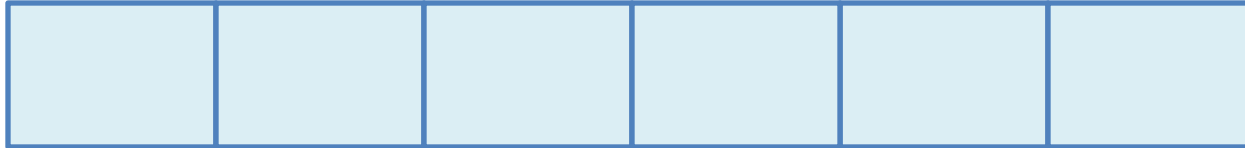
1 AIR-DRY WINTERIZATION
M-1 SCALE: 1/4" = 1'-0"

Business Case Numbers

Description	Initial Cost (\$)	On-going cost (\$)	Comment
Implementation Cost:			
Conversion of 514 cooling coils from glycol to air dry capability	\$1,542,000	\$0	Range from \$2-4K/coil
Conversion of coils from glycol to load pump capability	TBD		Roughly 2x the cost of air dry (additional labor savings, but added energy cost)
Conversion Cost	\$1,542,000	\$0	
Description	Cost savings (\$)	Increased revenue (\$)	Comment
Recurring Savings:			
Labor savings (3,000 – 4,700 hours per year)	\$260,000		50-80% reduction in labor expenses (\$190-\$300K)
Materials savings – glycol purchase	\$45,000		100% reduction (\$45K/yr). Saves additional admin time from ordering, receiving, and delivering
Annual Savings	\$305,000	\$0	
ROI (payback period)	5 years		

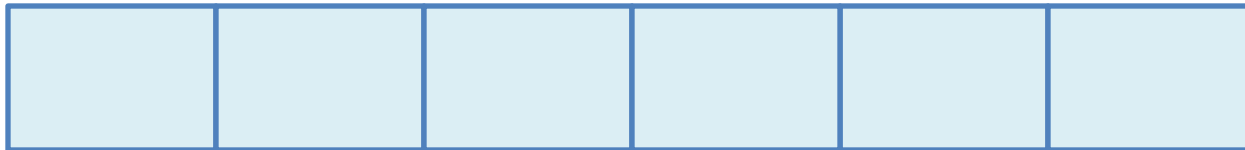
Meeting the Challenge

Old process takes 6 weeks



S.T.A.R.T.
Memo

Remove Glycol



New process takes 3 weeks

Questions?

