We Are In A Race, to the Bottom
Fred Hutchinson Cancer Research Center

- World Famous Cancer Research Center
- 13 Buildings (1 LEED)
  - 1.4 Million Square feet
  - 3,000+ employees
    - 3 Nobel prize winners
- Sunny shores of South Lake Union
Flexibility, Reliability, Sustainability, Innovation, Savings
We cover a lot of territory, Lots of Staff & Patients, a lot of Equipment, 24X7
We Are In A Race, to the Bottom
It's not a fun race

- Everyone can do it cheaper
- Standard of living is being recalibrated
  - Services are being cut
  - Pensions are being cut
  - People are working longer hours
  - We are traveling less
  - We are not even getting our 30% raises every year
- It's a race where the fun is being replaced by the bottom line
- It's being driven by the economy
In This Race

- There are Winners
- There are Losers
- And there are Survivors
The Losers aren’t in this room

- They’ve moved on
  - Outsourced
  - Better Job
    - Less Stress, better hours, more benefits
      - Think President here
If the losers aren’t here, by definition We’ve only got Winners and Survivors

- I’d like to give some tips
  - To Help the Survivors Become Winners
  - And the Winners stay Winners
    - Because this is really a marathon not a sprint
- How Fred Hutchinson Won the race
  - At least for the time being
I’m going to give you 6 Tips

- Tip # 1 How do you know when you’ve won the race
- Tip #2 Remember everyone wants you to win
  - And will support you
- Tip # 3: The Bottom line
- Tip # 4,5,6 Thoughts on Major Cost Centers
Tip #1

- If you don’t know where you are going, you are never going to get there
In the Race to the Bottom, You can fool a fool, but you can’t snow the Snowman

- In Finance Ice runs through their veins
  - They are all snowmen
    - They live the bottom line
  - They can call in really big snowmen
    - Think Auditing groups like Mckinsey
Bean Counters like beans

- Number crunchers like numbers
- In this race you are going to have to show #s
  - But numbers are good,
    - you can’t manage what you don’t measure
  - And those numbers are going to have to be in context
    - Its called Benchmarking
Benchmarking is a science until itself

- Get in front of the power curve on benchmarking
  - Do it with your peers
  - If the numbers make you look good, share up the food chain
    - If the numbers don’t make you look good
      - Figure out where you have opportunities
      - Work on it until the numbers make you look good
        - Then share it up the food chain
        - Best defense is a good offense, *Julius Caesar 58 BC*
            
    *Even if you don’t want to take the offensive keep them in your hip pocket*
Tip # 2, Everyone wants you to win the race

- Now is the time to make moves, that you might have been hesitant to make before
- But explain those moves and how they benefit the organization
  - You will be amazed at how supportive people are
Tip #3. The Bottom Line

- Is the Bottom line,
  - You have to know where your money is going
- You have to think about it
  - Strategically
My Budget

Breaks down into 3 or 4 major cost centers
Tips 4-6, strategic and tactical thoughts around major cost centers

- **Contracts/Supplies**
  - Mainly Service Contracts
    - Janitorial, Landscape, Garbage

- **Energy**
  - Almost as much as In House Labor
  - 98% management effort on Labor
    - 2% on Energy

- **In House Labor**
  - Its good to be lean
    - Because if your not, someone else will be
Tip #4 Contract/Supplies

- Ask Three Questions
  - How?
    - How do you do the Job
      - And how do you contract for it
  - How Much?
    - How Much ....What are the Service Levels
  - Who?
    - Who does the Job
      - It’s a contract, but when was the last time you bid it
        - Is it the same who you’ve had for the last 10 years
        - That’s not bad or is it?
How?
From Dumpsters to Compactors

Monthly Refuse Cost for Yale
Dollars ($)                     
05/2009 thru 03/2011
0
1,000
2,000
3,000
4,000
05/09 07/09 09/09 11/09 01/10 03/10 05/10 07/10 09/10 11/10 01/11 03/11

05/2009 thru 03/2011
Transparent to the end User

Monthly Refuse Cost for Fairview Building

Dollars ($)                     
04/2009 thru 03/2011
0
500
1,000
1,500
2,000
04/09 06/09 08/09 10/09 12/09 02/10 04/10 06/10 08/10 10/10 12/10 02/11
3 Buildings, $50K per year Savings
Less than one year payback
How you do it is important,

- How Much you do is even more important

What’s missing here is Quantity
Janitorial Cost Down, Satisfaction up

Annual Cleaning Services Cost for Day Campus: FHCRC

01/2006 thru 01/2011
Took a hard look at Service Levels

- I was vacuuming every day
  - I wasn’t doing that at home
- I was emptying trash every day
  - I wasn’t doing that at home
We reduced what wasn’t important

- Increased what was
  - More day porters
    - Bathrooms are better
    - Common spaces are better
    - Emergent conditions get quicker response
We also rebid the contract

- 5 year contract
  - 1 year base
  - 4 individual option years
  - Contractor has incentive to do good
Cut Cost 500,000 dollars / Satisfaction up
Tip # 5: I love to save Energy

- Why?....I’m not really a tree hugger
  - I appreciate its good for the environment
  - My kids are going to love me for it

- Because every therm saved is a dollar in my budget
  - Done Right….. No one notices
    - If I cut payroll 10%,
      - people are out on the street
      - Bob’s salary gets reduced

- Cut Energy 10%
  - I’m a Energy Hero
  - Not a maintenance Zero
How do you save Energy?

- Have a good Energy Philosophy
- What you can’t measure, you can’t manage
- It’s all about air
  - Perhaps more than you realize
- 98% of management time in personnel, 2% in energy, isn’t a formula for success
Energy Philosophy

- Deliver the Right Amount of Energy
- Deliver the Energy Just in Time
- Deliver the Energy as Efficiently as Possible
Deliver the right amount of Energy

- This doesn’t mean set your temp at 68
  - What’s the static pressure in your ducts
  - What’s the air change rate
  - What’s your percentage of outside air
  - What’s the lighting intensity
Deliver the Energy just in time

- **Learn your building**
  - When do you turn it on/off
    - Does that meet the needs of your occupants
      - Or is it more than they need

- **Do you have zone overrides**
  - So you don’t have to turn on an entire floor for someone working in their cube at night

- **Do you have occupancy sensors**
  Are your lights turning off automatically
  - Or are you counting on Bob to shut them off when I go home
Deliver the Energy as efficiently as possible

- This is all about VFD’s and third generation fan wheels, this is about energy efficient motors LED’s and T5’s, this is about those capital projects you’ve been afraid (too busy) to tackle
Don’t Know What to Do?

- You don’t have to!
  - You’re not an Energy Conservation Expert.
- You can get an Expert and you can get him for ½ his cost.
  - The utility will pick up the rest.
- I’m doing it
You can’t manage, what you can’t measure
Smart Meters, Smart Systems, Smart People = 20% reduction
Seattle, Meter Watch
# Elevator Traffic Survey

![Elevator Traffic Survey](image)

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We put them together...
We looked at Weekends & Holidays
We Save a Lot of money
06-$268,000 to 09-$187,000
Helps detects problems also...
It's all about Air; The savings are real and They’re Fabulous!!

• Fig. 1. Annual electricity use in Louis Stokes Laboratory, National Institutes of Health, Bethesda, Md.
Look at the energy savings, by reducing the amount of air provided to the spaces in this building.
Over 10%, 25% on weekends, doesn’t count heating or cooling savings
Why do we put 98% of our management effort into Personnel and 2% into Energy?
Lots of money to be made in Utilities

- Don’t forget the third Utility
  - It’s not the third rail, you can and should touch it
- Water/Sewer

![Annual Water Use for Day Campus: FHCRC](chart.png)

40% Reduction in 5 years
Tip # 6; You have to be successfully Lean
It’s easy to be Lean…

- The Trick is to be Successfully Lean
  - If your not, someone else will!
Is Fred Hutch Successfully Lean?

- Metrics
  - Indicators we are not just Lean, but successfully lean
Things that contribute to Fred Hutch being Lean

- Fantastic Team
  - The ECO-Social Engineering that shaped that team
- Great Design & Great Equipment
  - How we got it and how we got it better
- Communications
  - Up and down the food chain
- The Secret Ingredient (S)
Are We Lean?

- Operate/Maintain, Manage Service Contracts
  - With 46 in house
    - 34 Operating Engineers
    - 6 FTE support Scientific equipment
      - 860 Freezers
      - Lab equipment support
  - 5 FTE from Contractors
    - Low end stuff
      - Painting
    - Repetitive stuff
      - Fire alarm testing
    - Specialty support
      - Elevators
We cover a lot of territory, Lots of Staff & Patients, a lot of Equipment, 24X7
Tradeline says we are short 32 FTE

Fred Hutchinson Cancer Ctr

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<tr>
<th>Current data, 2010</th>
<th>MCS</th>
<th>Service ratio: Svc pp per 1000</th>
<th>Number of people served</th>
<th>Number of FTE svc pp reported</th>
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A. Number of FTE svc pp projected

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% Outsourcing

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C. Predicted OUTSRCD heads

B. Predicted all svc heads

55%
Bob’s Study says we cover twice the square footage of peer Institutions

92% more SQ FT/OE than peer institution ave
## In the last 3 Years

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<tr>
<td><strong>Freezer growth</strong></td>
<td>809</td>
<td>859</td>
<td>6.20%</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>11,250,000</td>
<td>10,272,000</td>
<td>-8.60%</td>
</tr>
<tr>
<td><strong>Engineering</strong></td>
<td>47</td>
<td>46</td>
<td>-2.10%</td>
</tr>
</tbody>
</table>
Are We Successfully Lean?
Customer Satisfaction

83%

Excellent: 45%
Not Adequate: 2%
Other indicators

- Our COO likes us
  - Thx to Fac Engineers - you all rock!
    Myra (Tanita, COO Fred Hutchinson CRC)

- Passed Every Inspection
  - Joint Commission, FDA, DoH, USDA, AAALAC,

- We won a lot of Awards
  - 20+ Energy Conservation Awards
    - Reducing consumption by 20%

- Insurance Companies have reduced our rates
We’ve handled every emergency thrown our way……priceless

If you don’t have a good plan B, you better have a good resume.
Bob’s still gainfully employed
What makes the magic happen?

Hundreds of little things cause the snowball to roll uphill...

1. Fantastic Team
2. Great Design & Great Equipment
3. Communications
4. Secret ingredient(s)
#1. Great Team
Organizationally: Round Pegs in Round holes
How do you get a great team?

- Get a great group of guys & gals,
- you make them friends,
- keep them around for a long time,
- train them, train them and train them
- recognize and reward them,
- make the work place fun
Eco-Social Engineering of a great team

- Eco in this case is not about tree hugging
  - It’s Economics

- Emphasis
  - Skills, longevity, flexibility and production
We have a unionized Work Force

- Local 286 Operating Engineers
  - One Union not 5
    - Electricians do boiler watches
    - Mechanics move freezers
Our contract pays for skills and longevity

- Base Rate OE1 $31.70/hr
  - Less $4.5/hr for Central Pension Fund
  - $27.20 net, Great Benefits

- We pay for (on site) experience
  - $0.50/hr every 5 years on site,
    - Average time on site 13+

- We pay for (Skills) Licenses (up to three)
  - $1.00/hr for every A license
    - Journeyman Electrician, Electrical Ad, Bio Med Engineer, Controls 1
  - $0.50/hr for every B license
    - 2nd grade boiler operator, Journeyman Carpenter, Maintenance Elec.
  - $0.25/hr for every C license
    - backflow preventer, 3rd grade boiler
We invest in training

- Weekly 1 hr training in house training session
  - Fire Alarm, Process cooling system
- We bring Vendors on site
  - One size doesn’t fit all (Tailor the training to the right level)
    - Controls System
      - Controls team level training, Management level training, OE level training
- We send guys to factory level training
  - Nurse Call, Tube system, Controls
- We run drills
- We build training into our specifications
  - Vendor training on all new systems
  - Video tape it
Recognize our employees…

- 3 Wyckoff (highest award Center bestows) in the department
- 17 Innovation Cups Highest Department total in Center
- 2 City wide Power Player Awards and 1 Better Brick Award
Promote friendships
Try to make the Work Place, Fun “Engineering Olympics”
Great Supervisors and Leads

- Bring Leadership, Energy and Enthusiasm to the team
  - Those are the most important ingredients
Who Multi Task

- Jim Walker – Assistant Manager
  - Staff Engineer, responsible for all Engineering decisions, maintains our archive room, In charge of our Energy Conservation program (Won over 20 Awards), He’s the head of our Engineering Department And….
    - He’s our entire Engineering Department

- Kenny Lind – Chief Engineer
  - Chief Engineer, Overall responsibility for all power plants, does all scheduling, Responsible for all training, Safety, maintains our 20 year plan, And …. 
    - Runs our CMMS system
Productivity across all shifts
#2 Great Design and Great Equipment

- It starts at the beginning during design and construction
  - Don’t let them VE out key features
- Make Lemonade out of the Lemons
  - Be an Energy Hero not a Maintenance Zero
- Replace a year early
  - Versus a year late
    - 20 year plan
Design and Build in 4 years
operate and maintain 4ever
Design in Maintainability & Operability

- Make Sure the Designers and Operators are on the same page.
  - What level of redundancy we want and where
  - Campus standards
    - Controls to numbering systems
    - How much Vendor training
- We give a list of 200 items
  - Permanently sealed bearings
    - 10 cents during design
    - 10 dollars after construction
Just because you asked for it, doesn’t mean you’re going to get it…

- You have to do a very careful design review:
  - Track all of our design comments
- And a very careful review of the submittals:
  - Make sure you are getting what you asked for
- Double check Maintainability
  - Can you get to the equipment to maintain it
How many Engineers does it take to change a light bulb?

All depends on where you put the light bulb.
Maintainability is not all that needs to be checked...

- **Space**
  - Have you ever seen a building with enough space for filters?

- **Operability**
  - Do we have to turn on all the lights on the floor if someone is working late at night in their cube?

- **Work Flow**
  - a MCC being located on one floor, motors it served on another
And At Some Point…

You are going to have to replace your:
- Chillers, Boilers and Generators
- Can you get them out/in
- You hope it’s not your problem, but it might be…
It Happened to Me...
We had to bring a New Chiller 300 feet into the Building
Once You have a Great design…

- Fight to keep it great.
- **Value** Engineering?
  - Tends to be more about reducing construction cost, rather than adding long term value
  - But you have to be an active participant to fight for what’s important!
Things we fight for:

- Maintain a campus standard for Equipment
  - Training
  - Parts
  - Maintenance Contracts
  - Emergency Response
- Maintain Quality Equipment
- Maintain Maintainability
  - Don’t let them VE out the Bypass feature on your Automatic Transfer Switch
If You have a Lemon make Lemonade

- But not every system is great
  - So we try to make it great
  - We identify key systems that are either problematic or lack redundancy
    - Then we improve them
      - Done it to over 10 systems, at least 1 per year

- The Story of AHU B2
  - Big Critical Air Handler, that was a lemon
  - Hired an Engineering firm to do a 50 year plan
  - 20 great ideas
    - 7 Energy savers
Key Air Handler

68,000 CFM
Serving a critical area
2 redundant fans, 150 HP, Econo Cone
Pain in the ..... 

- Twice burnt out motor
- Capacitor bank blew up once
- Numerous problems with Actuators
- Humidifier was 1 foot in front of coiling coil
  - Always had a lake
- Final filters were 3 ft downstream of humidifier
  - Always wet, actually blew out filter bank
    - We had to reinforce and put in blow out panels
- Etc., Etc.
- So we came up with a great 50 year plan to fix all problems
But before we could get to the 50 year plan…

- We had to get through a couple of tough days and nights
That’s where the contingency plan but even more importantly a great team, was priceless!
We implemented our Contingency plan...
Set the Wheels in motion
And 31 Days later the Damaged Fan was replaced
3.5 months later we had made 20 improvements

- No Econo Cone (known bad performer)
- No need to fix broken Actuator
- No Actuators (can’t be repaired or replaced)
- No linkage nor shocks to maintain
- VSD on motor, easier starts
- VSD on motor, more energy efficient
- No capacitor bank to worry about (problematic in past)
- Able to by-pass MCC in an emergency and wire directly to VSD
- Energy Efficient Fan
- Rebate from SCL for energy efficient fan and VSD on Motor
- More air capacity than old fan
- Filter bank in new location (another rebate from SCL)
- New Humidifier (another rebate from SCL)
- Replaced temperature, pressure and humidity Controls
- Improved lighting
- New duct reduced static pressure (another rebate from SCL)
- Drain pan under humidifier
- New Transducers, Electrical outlets in the AH, Emergency Interconnect
We were an Energy Hero, not a Maintenance Zero

- We got $75,000 in rebates from SCL
  - Plus we’ll save 17,000 per year
- We got $77,000 from the Insurance company
- That paid for 75% of the project
Replace key equipment a year too early rather than a year too late

- When do you replace?
  - Make a 20 year plan
Over 200 pumps in system...
3. Communicate, Communicate, Communicate
Standing meetings

- **Weekly Staff Meeting**
  - Supervisors and Front Office staff

- **Weekly Coordination Meetings**
  - Supervisors and LEADS
  - Lunch once a month

- **Monthly Crew Meeting**
  - All Hands, Morning and Afternoon

- **Labor Management Meetings**
Department Info Center

- Schedule, Department Calendar, Electronic Log
<table>
<thead>
<tr>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larson</td>
</tr>
<tr>
<td>Leisy</td>
</tr>
<tr>
<td>Colebank</td>
</tr>
<tr>
<td>Hungerford</td>
</tr>
<tr>
<td>Coburn</td>
</tr>
<tr>
<td>Riviera</td>
</tr>
<tr>
<td>Bedwell</td>
</tr>
<tr>
<td>DeVries 4-10</td>
</tr>
<tr>
<td>Shiozaki</td>
</tr>
<tr>
<td>Wendt</td>
</tr>
<tr>
<td>Claassen</td>
</tr>
<tr>
<td>Cun</td>
</tr>
<tr>
<td>McPhearson</td>
</tr>
<tr>
<td>Phillippe</td>
</tr>
<tr>
<td>Zook</td>
</tr>
<tr>
<td>B-Council</td>
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<tr>
<td>Irgens</td>
</tr>
<tr>
<td>Quam</td>
</tr>
<tr>
<td>Zimmer</td>
</tr>
<tr>
<td>McKillop</td>
</tr>
<tr>
<td>Metteer</td>
</tr>
<tr>
<td>Lamb 4-10</td>
</tr>
<tr>
<td>Wood 4-10</td>
</tr>
<tr>
<td>Coons</td>
</tr>
<tr>
<td>Jones 4-10</td>
</tr>
<tr>
<td>Lelek</td>
</tr>
<tr>
<td>Goes 4-10</td>
</tr>
<tr>
<td>Kats</td>
</tr>
<tr>
<td>Lewandowski</td>
</tr>
<tr>
<td>West 4-10</td>
</tr>
<tr>
<td>Givens</td>
</tr>
<tr>
<td>Lai</td>
</tr>
<tr>
<td>Weller</td>
</tr>
<tr>
<td>Yatskov 4-10</td>
</tr>
<tr>
<td>Cervene</td>
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<tr>
<td>Cowan</td>
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<tr>
<td>Lind</td>
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<tr>
<td>Mead</td>
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<tr>
<td>Raymundo</td>
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<tr>
<td>Schoneck</td>
</tr>
<tr>
<td>Walker</td>
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<tr>
<td>Brooks</td>
</tr>
<tr>
<td>Gallagher 4-10</td>
</tr>
<tr>
<td>Greene 4-10</td>
</tr>
<tr>
<td>Lotton</td>
</tr>
<tr>
<td>Ohendam</td>
</tr>
</tbody>
</table>
```
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Crew Meeting</td>
</tr>
<tr>
<td>9:00</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Process Improvement (Engineering conference room)</td>
</tr>
<tr>
<td>11:00</td>
<td>IPMA Board Meeting (L-F-118)</td>
</tr>
<tr>
<td>12:00</td>
<td>SCCA AUDIT (L-F-118)</td>
</tr>
<tr>
<td>1:00</td>
<td>Crew Meeting (Changes in the wind) (L-F-118)</td>
</tr>
<tr>
<td>2:00</td>
<td></td>
</tr>
<tr>
<td>3:00</td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td></td>
</tr>
<tr>
<td>5:00</td>
<td></td>
</tr>
<tr>
<td>6:00</td>
<td>PM of Filter chiller (GA-121)</td>
</tr>
<tr>
<td>7:00</td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td></td>
</tr>
</tbody>
</table>
```
Web based, Electronic log

- **Facilities Status**
  - Tells us what issues are out there, what the status is and what’s been done to resolve it

- **Log**
  - Tells us the good, the bad and the ugly of each shift

- **Pass down section**
  - What we want/need someone to do on shift

- **Review section**
  - No one can say they didn’t know that pump was down
    - All Leads, Chief Engineer, Director initials daily
## Facilities Status

### Status Log

<table>
<thead>
<tr>
<th>Status</th>
<th>Priority</th>
<th>Creator</th>
<th>Date</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>3</td>
<td>jcoons</td>
<td>2/18/2011</td>
<td>1.5 inch steam valve in BD Interstitial is leaking, no isolation nearby. Valve is located NW BD Interstitial marked with red traffic tape.</td>
</tr>
<tr>
<td>Open</td>
<td>2</td>
<td>diwest</td>
<td>2/18/2011</td>
<td>security and a nurse on the 5th floor at scca reported double door push button malfunctioning. I removed the strikes in the jamb.</td>
</tr>
<tr>
<td>Open</td>
<td>1</td>
<td>rlewando</td>
<td>2/18/2011</td>
<td>Julia Richardt request rounds to be done twice a shift on loaner minus 20 freezer in d3 313 until Monday.</td>
</tr>
<tr>
<td>Open</td>
<td>3</td>
<td>pmcphear</td>
<td>2/13/2011</td>
<td>SCCA on B level garage the automatic door to the elevator corridor has been bent bad enough to where the door will not open. Western Entrance will be here on 2.15 to repair. Bob 2.14 Repaired 2.18 Jan.</td>
</tr>
<tr>
<td>Status</td>
<td>Priority</td>
<td>Creator</td>
<td>Time</td>
<td>Comment</td>
</tr>
<tr>
<td>--------</td>
<td>----------</td>
<td>---------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Closed</td>
<td>4</td>
<td>bzook</td>
<td>2:45 PM</td>
<td>A B AND C BUILDING OFFLINE WITH STANLY AND FIRE PANAL BYPASSES ON FOR ONE HOUR TILL 3:30PM PER BRIAN B.</td>
</tr>
<tr>
<td>Closed</td>
<td>4</td>
<td>jimphilli</td>
<td>12:30 PM</td>
<td>SCCA building and boiler rounds are ok. HHS boiler rounds ok. Building B and D boiler rounds are ok.</td>
</tr>
<tr>
<td>Closed</td>
<td>2</td>
<td>rcoleban</td>
<td>10:09 AM</td>
<td>Found Edson Park water feature pump valved off and running. The pump was very hot and water steaming out of pressure gage</td>
</tr>
</tbody>
</table>
Pass down section

<table>
<thead>
<tr>
<th>Status</th>
<th>Priority</th>
<th>Creator</th>
<th>Date</th>
<th>Comment</th>
<th>Follow Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>1</td>
<td>rcolebn</td>
<td>1/27/2011</td>
<td>Check the low pressure condensate pump on Thomas building a couple times a shift. If the sight glass is full of liquid then tap the new pumps on order as of 2.16 (kl)</td>
<td>New pumps on order as of 2.16 (kl)</td>
</tr>
</tbody>
</table>
Review section

- Status: Closed
- Priority: 3
- Creator: mgivens
- Time: 6:04 AM
- Comment: AHU B10 is turn off UMC is in there working.

- Status: Closed
- Priority: 4
- Creator: mgivens
- Time: 2:25 AM
- Comment: building and boiler rounds. ok
  Chiller and freezer rounds. ok

- Status: Closed
- Comment: Fairview loading dock door is not locking.

- Plant Lead Reviewed: rcolaban: 2/10/2011
- Electrical Lead Reviewed: mhungerf: 2/14/2011
- Control Lead Reviewed: dgreene: 2/10/2011
- Mechanical Lead Reviewed: klesy: 2/10/2011
- Chief Engineer Reviewed: kkind: 2/10/2011
- Manager Reviewed: rcowan: 2/12/2011
Communications Go Up the Food Chain, as well as down...

- We brief the board.
- We really like giving tours
  - President, CEO, Virtually every VP, many PI’s,
  - Departments
    - Finance, HR, IT, Security, EH&S
  - Business Partners
    - Major Utilities, Major Suppliers
  - Other Organizations
Use Posters to Communicate to Staff
Radio’s
So we’ve got

- Great Team
- Great Equipment
- Great Communication

- But Wait, there’s more!!
There’s not one, not two, but three secret ingredients!
Maintenance Advantage

- 26 different entrance procedures to restricted spaces
Maintenance Comparison
Non Interstitial vs. Interstitial
A Repository of Knowledge
Final Secret

- Work Fast

Fantastic Team in Action
Follow the Money

- Contracts
- Energy
- Personnel

Ensure you and your team are winners in the race to the bottom
How Fred Hutch won the race

- Passed the Mckinsey audit with flying colors
  - Leadership understands and is oriented around mission
  - No egregious inefficiency or excessive spending
  - Opportunities to increase effectiveness far outweigh efficiency opportunities
    - This is key it says no outsourcing and that was our goal
  - Opportunities for cross cutting initiatives & centralization
  - Best in Class in Energy Conservation
  - Kudo’s for benchmarking and tracking #s
We’ll be back

- It’s a marathon, not a sprint