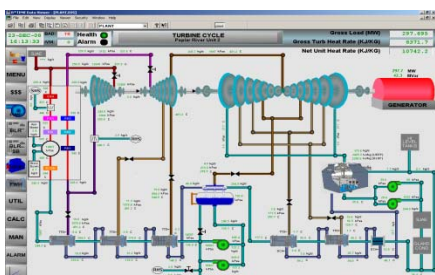


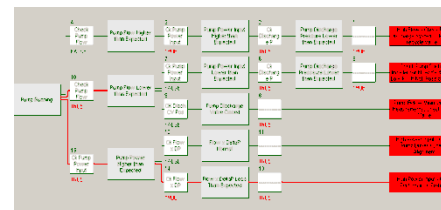
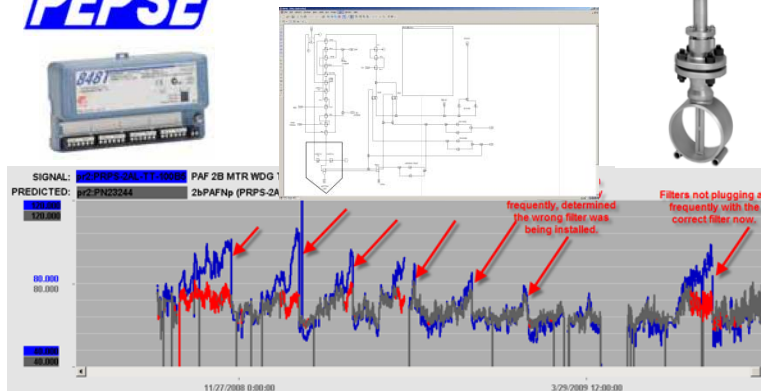
M&D Process Overview & Planned Enhancements



Presented by: Scott McLeod
August 6-9, 2013
Sciencetech Symposium
Clearwater, Florida



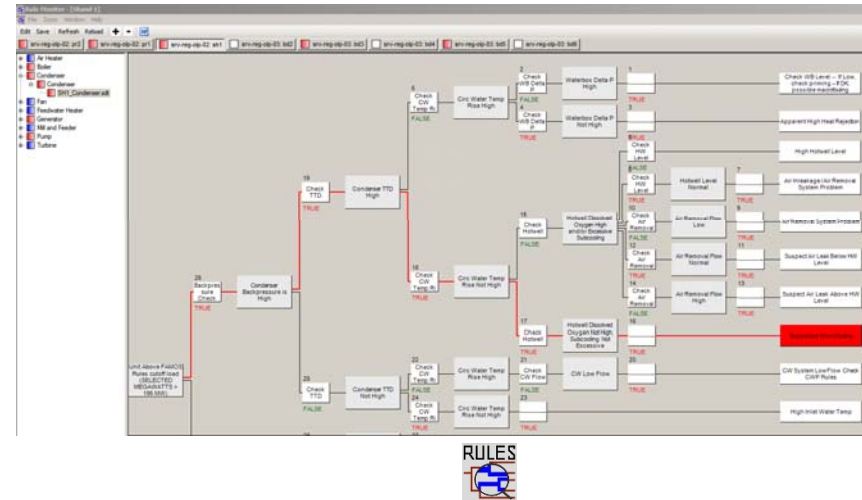
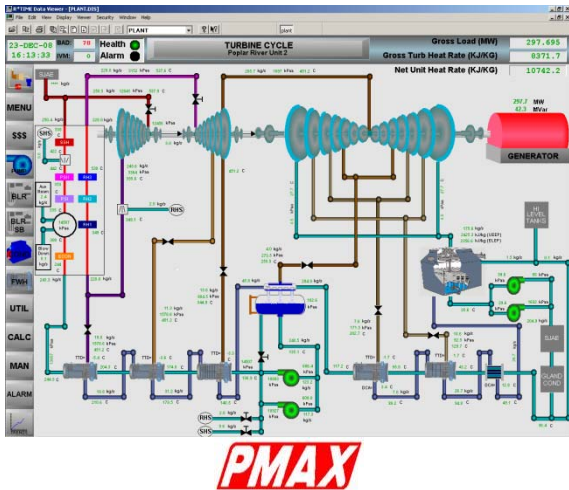
PEPSE



PMAX

| Sub-Component Assessment Matrix | | | | |
|---------------------------------|--------------|--------------|--------------|--------------|
| Sub-Component | Assessment | Assessment | Assessment | Assessment |
| Sub-Component 1 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 2 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 3 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 4 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 5 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 6 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 7 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 8 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 9 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |
| Sub-Component 10 | Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 |

SaskPower's FAMOS system



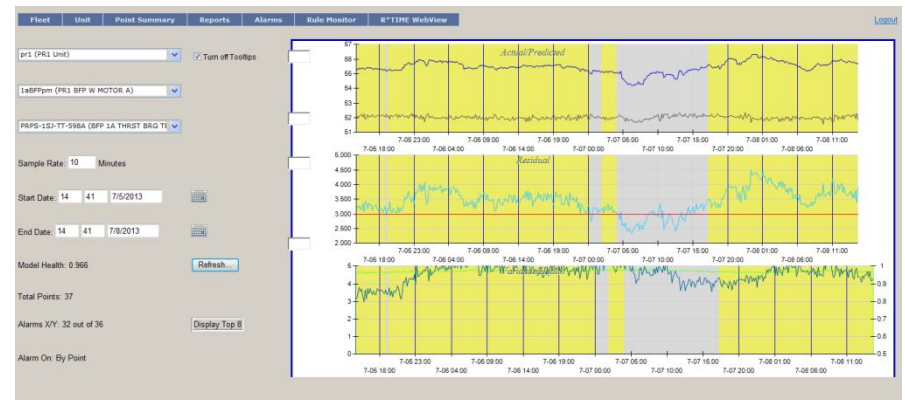
| WHAT IF INPUTS | | | |
|-----------------------------------|---------------------------|---------------------|---------------------------|
| What If | Comparison Data Retrieved | What If | Comparison Data Retrieved |
| Main Steam Flow (KG/S) | 259.52 | FWH1 FW OUT T (°C) | 96.23 |
| Main Steam Pressure (KPAA) | 12507.12 | FWH2 FW OUT T (°C) | 116.52 |
| Main Steam Temperature (°C) | 537.82 | FWH4 FW OUT T (°C) | 173.62 |
| Reheat Temperature (°C) | 537.82 | FWH5 FW OUT T (°C) | 202.62 |
| Circ Water Inlet Temperature (°C) | 21.72 | FWH6 FW OUT T (°C) | 202.64 |
| Circ Water Inlet Flow (L/S) | 76342 | | |
| Condenser Cleanliness Factor | 0.902 | FWH1 DRN OUT T (°C) | 49.72 |
| Condenser # of Plugged Tubes | 0.0 | FWH2 DRN OUT T (°C) | 101.8 |
| Reheat Spray Flow (KG/S) | 0.72 | FWH4 DRN OUT T (°C) | 143.2 |
| Superheat Spray Flow (KG/S) | 6.32 | FWH5 DRN OUT T (°C) | 179.2 |
| | | FWH6 DRN OUT T (°C) | 208.22 |

| RESULTS | |
|--------------------------------------|---------|
| Actual Gross Power (MW) | 315.000 |
| What If Delta Power (MW) | 14.885 |
| What If Gross Power (MW) | 329.885 |
| Actual Heat Rate (KJ/KWHR) | 8305 |
| What If Delta Heat Rate (KJ/KWHR) | 136 |
| What If Heat Rate (KJ/KWHR) | 8441 |
| What If Delta Heat Rate Cost (\$/HR) | -84 |
| Condenser Back Pressure (KPAA) | 8.47 |
| What If Delta Condenser BP (KPAA) | 0.68 |
| What If Condenser BP (KPAA) | 9.15 |

PROCESSOR: 1) Populate the blue "What If" manual fields by doing a) 1) or c) at clicking "Actual Inputs" to run a simulation based on current data, or by clicking "MCR Inputs" to run a simulation based on design MCR inputs, or c) manually populating the blue fields to run a simulation based on user defined inputs. 2) If a) or b) was selected, adjust any number of the blue What If parameters in the inputs table. 3) Click "Activate PEPSE" to run the simulation. 4) The results of the Power, Heat Rate, Cost, and Back Pressure simulations will be displayed in the "Results" table.

ACTUAL INPUTS MCR INPUTS ACTIVATE PEPSE

PEPSE



PdP

SaskPower

Roles & Responsibilities help file

The screenshot displays the R*TIME Data Viewer software interface. The main window shows a 'Help Topics' menu with 'Roles and Responsibilities' selected. The help file content is displayed in a multi-pane view. The left pane shows a table of contents for 'FAMOS Roles & Responsibilities Overview', including sections like 'FAMOS Monitoring & Diagnostics Programs', 'Operations Based Activities', 'Support Groups', 'Procedures', 'Reports', 'Meetings', 'Engineering & Maintenance Based Activities', 'Equipment Condition Reliability Optimization Program', 'FAMOS Continuous Improvement Program', and 'Appendices'. The right pane shows the 'Procedures' section, which includes a table of activities: 'Maximizing Boiler Cleanlinesses' and 'Minimizing Controllable losses'. Below this, a section titled 'Maximizing Boiler Cleanlinesses:' provides detailed information, including a 'Minimum Recommended Frequency' and a list of steps for launching the FAMOS monitoring system and reviewing boiler cleanliness bar graphs.

Roles & Responsibilities Overview

- FAMOS Monitoring & Diagnostics Programs
 - 1. Capacity & Heat Rate Optimization Program
 - Objectives
 - Methodology
 - Operations Based Activities
 - Support Groups
 - Procedures
 - Reports
 - Meetings
 - 2. Equipment Condition Reliability Optimization Program
- FAMOS Continuous Improvement Program
- Appendices

Procedures

Operations Based Capacity & Heat Rate Improvement procedures have been broken down into two main activities:

| Activities |
|---------------------------------|
| Maximizing Boiler Cleanlinesses |
| Minimizing Controllable losses |

Maximizing Boiler Cleanlinesses:

Minimum Recommended Frequency: To be determined after discussions with plant operations groups

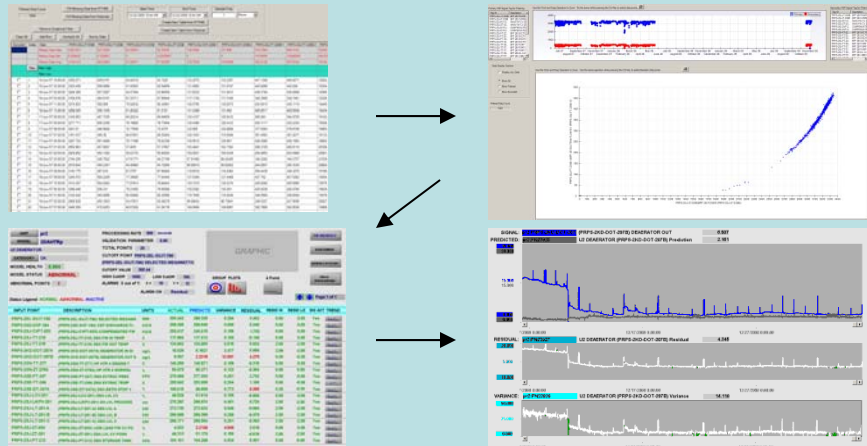
Boiler cleanlinesses are calculated by P_{MAX} and are based on the calculated enthalpy rise of the water and/or steam flowing through the tubes. Enthalpy rises are primarily dependent on water/steam temperatures. Boiler cleanlinesses can be an indicator of slugging/pluggage of platen tube sections, but operators should not assume that a superheater cleanliness of 0.50 means that the superheater is 50% plugged. Routine monitoring of boiler cleanlinesses and deployment of sootblowers is intended to be a supplemental activity to routine boiler visual inspections by operating staff.

- Launch the FAMOS monitoring system, then click on the unit display by clicking the P_{MAX} unit button (ie. BD5) from the FAMOS home page, then click the "Soot Blow" display on the left side button bar.
- Review the boiler cleanliness bar graphs on right side of the display. Boiler cleanlinesses are "tuned" to a target of 0.90. Cleanlinesses above 0.90 indicate the water/steam enthalpy rise in that section is above design. Cleanlinesses below 0.90 indicate the

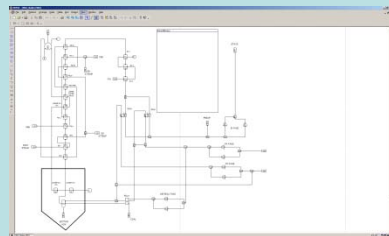
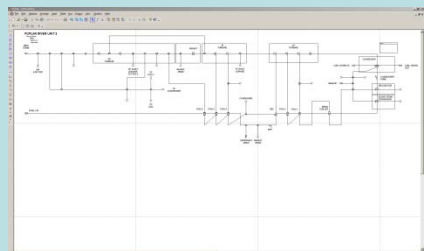
Roles & Responsibilities help file

Roles & Responsibilities (Sciencetech)

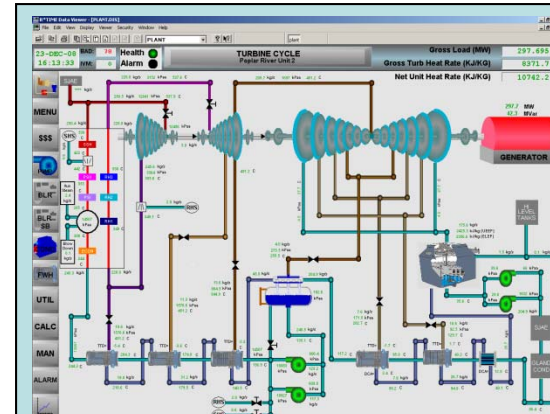
Monitor/Maintain/tune **PdP** models



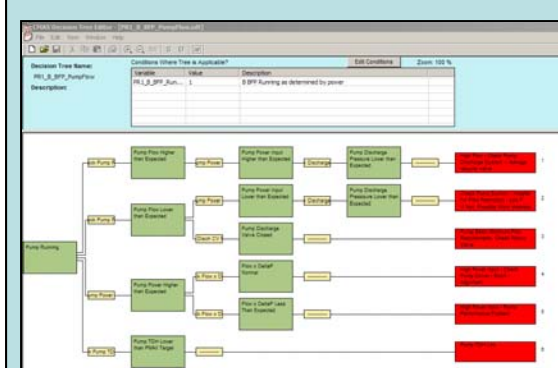
PEPSE Modeling, Upgrades & Tuning



Team Room
document
entry, cost
benefit
logging



PMax
Monitoring,
IVM's &
Tuning

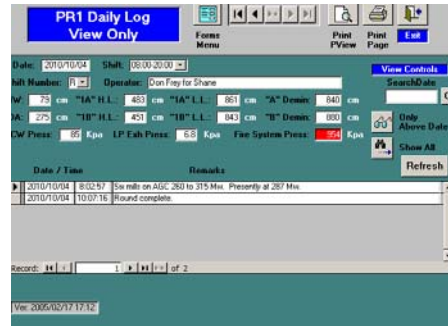


RULES
Rules
Monitoring &
Continuous
Improvement

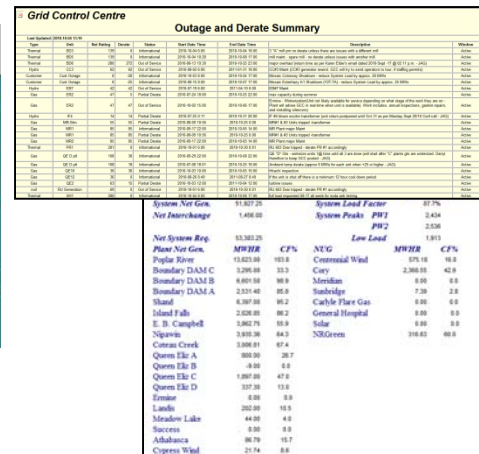
Roles & Responsibilities (Performance Group)



Review items
logged by M&D
Contractor



Review Unit
Logs

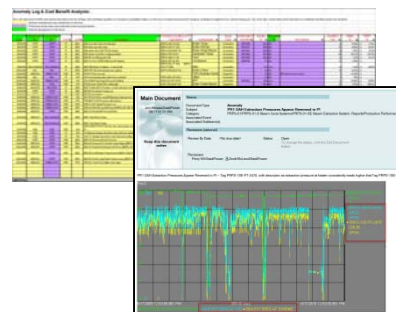


Review GCC
reports

Search existing /
enter SAP Work
notifications



Notify operations of
critical issues (liason
w Shift lead)



Manage /
prioritize issues



Site Inspections
& Testing



Bi-Monthly Site meetings

SaskPower

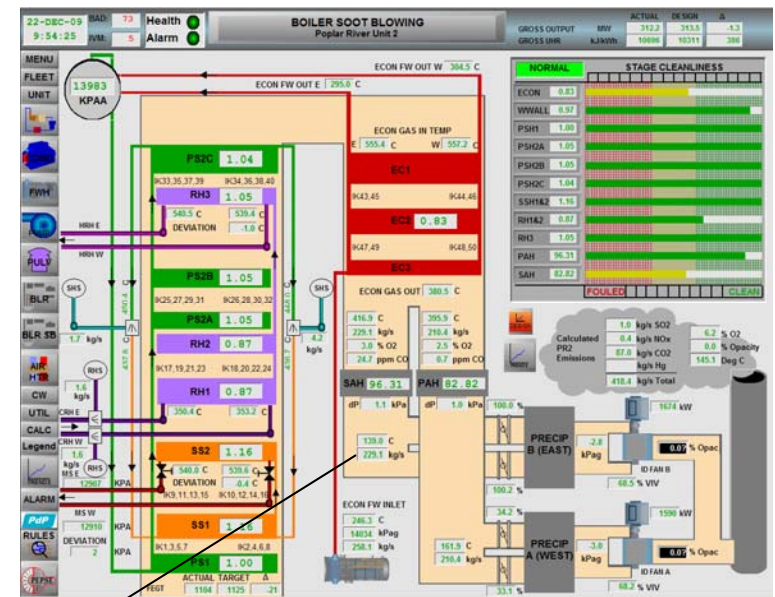
Roles & Responsibilities (Plant Operations)

Plant Operations: Monitor & Optimize variables that change frequently.

| UNIT PERFORMANCE | | | | | | | | | |
|-----------------------|---------|--------|-------|-------|--|--|--|--|--|
| | ACTUAL | DESIGN | Δ | | | | | | |
| Main Steam Flow | kg/s | 267.2 | | | | | | | |
| Gross Output | MW | 315.0 | 317.3 | -2.4 | | | | | |
| Net Output | MW | 292.5 | 297.0 | -4.5 | | | | | |
| Station Service | MW | 22.4 | 20.3 | 2.1 | | | | | |
| Turbine Heat Rate | kJ/kWh | 8423 | 8313 | 110 | | | | | |
| Boiler Efficiency | % | 78.2 | 80.6 | -2.4 | | | | | |
| Gross Unit Heat Rate | kJ/kWh | 10771 | 10319 | 453 | | | | | |
| Net Unit Heat Rate | kJ/kWh | 11597 | 11023 | 574 | | | | | |
| Unit Cycle Efficiency | % | 42.7 | 43.3 | -0.6 | | | | | |
| Missed Opportunity | \$/hour | 29480 | 0 | 29480 | | | | | |

| CONTROLLABLE LOSSES | | | | | | | | | |
|--------------------------|--------|---------|---------|--------------------|----------------|------|------|-----------------|--|
| | ACTUAL | DESIGN | Δ | HR Effect (kJ/kWh) | MW Effect (MW) | Rule | Link | HR Effect Chart | |
| Main Steam Temp | Deg C | 540.5 | 537.8 | 2.7 | -5.6 | -0.2 | OK | | |
| Main Steam Pressure | kPag | 12531.2 | 12415.6 | 115.6 | -4.2 | 2.9 | OK | | |
| Reheat Steam Temp | Deg C | 537.1 | 537.8 | -0.7 | 1.7 | -0.2 | OK | | |
| LP Exhaust Pressure | kPaa | 5.1 | 8.5 | -3.3 | -14.2 | 0.5 | OK | | |
| Condenser Subcooling | Deg C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | OK | | |
| Final Feedwater Temp | Deg C | 246.5 | 244.0 | 2.5 | -8.8 | -1.1 | OK | | |
| Superheat Spray Flow | kg/s | 8.7 | 6.9 | 1.8 | 3.1 | 0.2 | OK | | |
| Reheat Spray Flow | kg/s | 0.5 | 1.2 | -0.8 | -5.2 | -0.6 | OK | | |
| Auxiliary Steam Flow | kg/s | 0.8 | 0.0 | 0.8 | 7.3 | -0.7 | OK | | |
| Cont. Blow Down Flow | kg/s | 0.1 | 0.0 | 0.1 | 2.3 | N/A | OK | | |
| Make up Water Flow | kg/s | 0.6 | 0.0 | 0.6 | 12.9 | -0.1 | OK | | |
| Generator Hydrogen Press | kPag | 308.8 | 310.0 | -1.2 | -0.0 | 0.0 | OK | | |
| Station Auxiliary Power | MW | 22.4 | 20.3 | 2.1 | 98.6 | -2.1 | OK | | |
| Boiler Exit Gas Temp | Deg C | 161.4 | 121.5 | 29.9 | 147.0 | N/A | OK | | |
| Boiler Excess Oxygen | % wet | 2.5 | 2.5 | -0.0 | -0.5 | N/A | OK | | |
| Incomplete Combustion | % | 0.8 | 0.3 | 0.5 | 50.9 | N/A | OK | | |

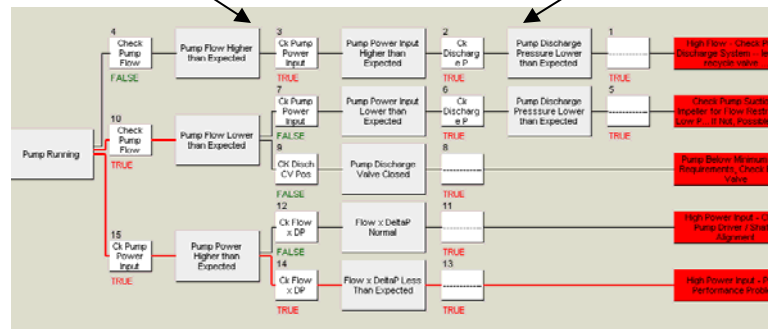
| UNCONTROLLABLE LOSSES | | | | | | | | | |
|-------------------------|--------|--------|-------|--------------------|----------------|------|------|-----------------|--|
| | ACTUAL | DESIGN | Δ | HR Effect (kJ/kWh) | MW Effect (MW) | Rule | Link | HR Effect Chart | |
| Internal Turbine Losses | kJ/kWh | 0.99 | 0.90 | 0.09 | -12.9 | -4.0 | OK | | |
| Generator Power Factor | kPa | 213.7 | 203.4 | 10.3 | 2.0 | -0.2 | OK | | |
| Reheater Pressure Drop | kPa | 0.0 | 1.9 | -1.9 | 1.7 | -0.1 | OK | | |
| CEP Enthalpy Rise | kJ/kg | 24.8 | 23.0 | 1.8 | -2.7 | 0.1 | OK | | |



Controllable losses

Boiler Cleanliness

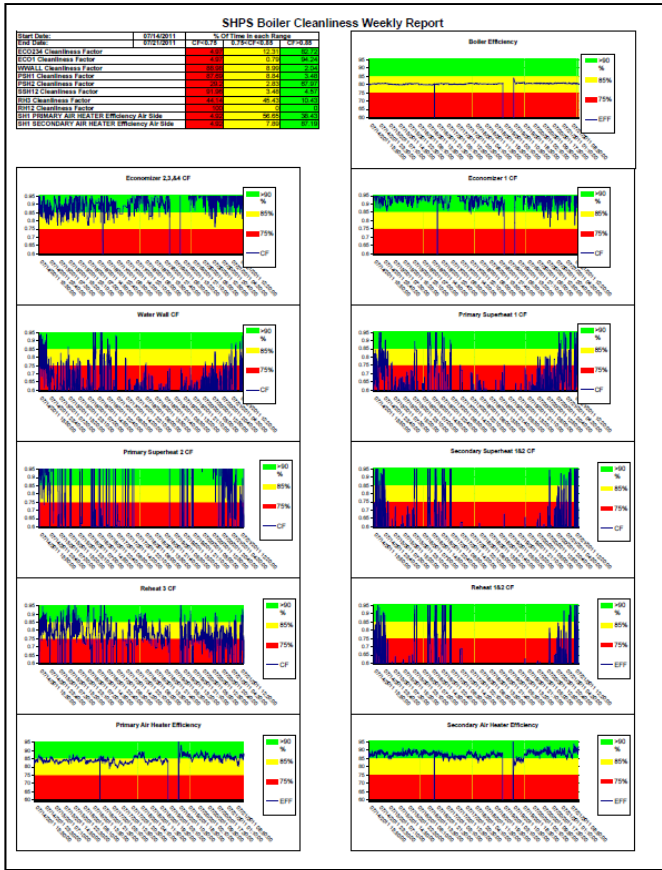
Diagnostic Rules



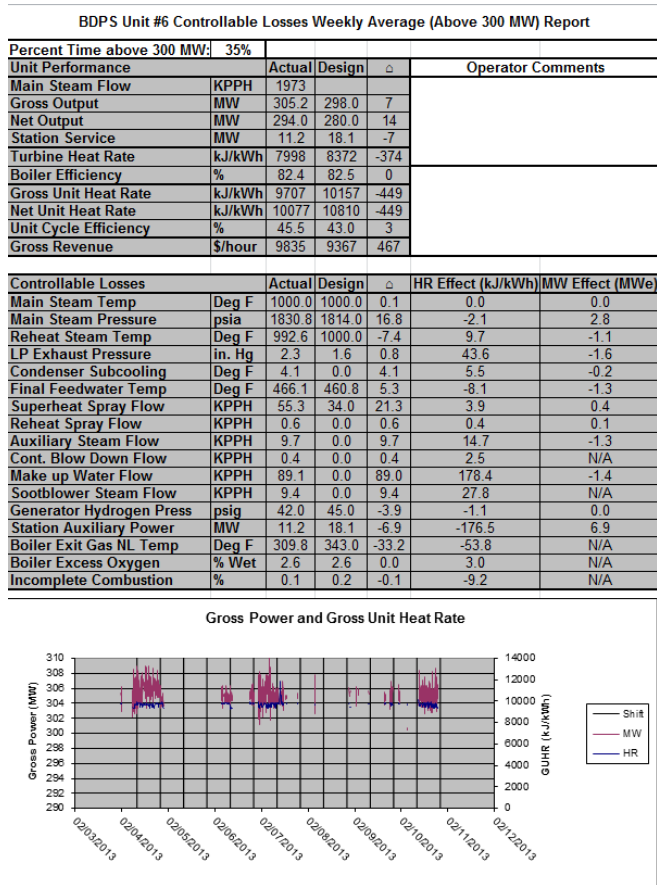


Roles & Responsibilities (Plant Operations)

Plant Operations: What reports do you need to support your responsibilities?



Boiler Cleanliness Report



Controllable Loss Report

Roles & Responsibilities (ongoing plant meetings)

Performance meeting concept

- Weekly (at Shand)
- Bi-monthly (other plants)



Technical Support

Operations

Maintenance

Performance Group

Historic discussion New Discussion Completed

| Goal | Action Items | Date Due | Person Resp. | Percent Complete |
|---|--|------------|-----------------|------------------|
| Implement and maintain effective PF Fuel Sampling | <ul style="list-style-type: none"> 2012-11-15: Verify if PRPS is using isokinetic fuel sampling equipment. 2012-12-17: Joe is going to double check they are using the new equipment. Joe will double check if there are probe plugging problems (if it does plug, Larry had suggested other purging probe). Ports changed out during Fall 2012 overhaul to permit using Isokinetic sampling equipment. | 2012-12-01 | Joe Beliveau | 50% |
| | <ul style="list-style-type: none"> 2012-11-15: Verify frequency of PF sampling 2012-12-17: Sampling done quarterly on a PM, or on ad-hoc basis. Discussed merits sampling before/after mill overhaul (Trent to build into existing PM job plan). Trent says nothing is done with the data right now. Agreed Trent would start sending PF data to Performance after each sample taken for review and recommendations. | 2013-01-31 | Trent Nystrom | 50% |
| | <ul style="list-style-type: none"> 2012-11-15: Obtain historic PF sampling data 2012-12-17: Trent will send the spreadsheet | 2012-12-31 | Trent Nystrom | 0% |
| Maintain rated Coal Sizing leaving crushers | <ul style="list-style-type: none"> 2012-11-15: Inspect coal size leaving crusher (on conveyor or at feeder inlet). Verify that coal handling is run fairly continuously, and using both crushers as much as available. 2012-12-17: No progress. | 2013-01-31 | Joe Beliveau | 0% |
| | <ul style="list-style-type: none"> 2012-11-15: Verify what coal top size setting for crushers (<1-1/4")? What is being observed for coal top size? 2012-12-17: Joe says crushers are set to <1-1/2". | 2012-12-15 | Joe Beliveau | 100% |
| | <ul style="list-style-type: none"> 2012-11-15: Investigate opportunity to sample coal after crusher, then use the data to trigger crusher maintenance. Investigate how to take a coal sample (stop belt and take sample?) 2012-12-17: Larry suggests sampling crusher & feeders by stopping the belt, and taking the contents. Sampling port above feeder is useless in Larry's experience. Trent to write job plan for sampling from crusher, and set up PM. PRPS to begin changing crusher rolls yearly. | 2013-01-31 | Trent Nystrom | 10% |
| Monitor Coal quality | <ul style="list-style-type: none"> 2012-11-15: Ongoing coal sampler maintenance, keep in service - suspicious of coal quality. 2012-12-17: Joes says sampler works well. Coal quality is acceptable (variance and quality is ok). Contract doesn't stipulate quality. Sometimes ash content rises. | 2012-12-15 | Joe Beliveau | 100% |
| | <ul style="list-style-type: none"> 2012-12-17: Howard would like Tim Schuster to allocate a person to investigate how to drop ash content (recently risen to 15%, historically has been as low as 9%). Mine doing some night shift mining, which may be potential source of quality issues. | 2013-12-31 | Howard Matthews | 0% |

Process Enhancements (Quarterly ECM Committee meetings)



TERMS OF REFERENCE

SASKPOWER “EQUIPMENT CONDITION MONITORING OPTIMIZATION COMMITTEE”

1.0. Statement of Purpose

- 1.1. Cross-pollenate best practices related to components of an Equipment Condition Monitoring (ECM) program (standards, tools, resources, software systems, personnel training) among participating SaskPower areas/facilities staff.
- 1.2. Extend run times on equipment by deferring major maintenance through predictive maintenance where practicable.
- 1.3. Reduce frequency and severity of major equipment failures

2.0. Scope of Committee

- 2.1. The following ECM related programs will be subject for review by the committee:
 - Vibration monitoring
 - Lubrication management and used oil analysis
 - Thermography
 - Cycle Isolation Monitoring
 - Preventative Maintenance Optimization (improve job plans, extend overhaul frequencies if possible, implement condition based triggers)
- 2.2. For each ECM related program, the committee will:
 - Assess and optimize data collection methods and frequencies,
 - Assess and optimize scope of equipment monitored,
 - Establish standards/thresholds for resulting inspection/maintenance activities, and publish these for wide-area access on the EIN.

3.0. Committee Membership:

- 3.1. Membership to include two Steering Committee Leaders, two Working Committee Leaders, and Working Committee Members comprised of 2-3 representatives from each participating area/facility.
- 3.2. Membership may include, but not limited to Maintenance Supervisors, Plant Maintenance/Mechanical Engineers, Plant Mechanics.
- 3.3. Specific names appointed to the Committee members are maintained in Appendix A.

4.0. Duties of Committee Members:

A. Steering Committee Leaders

- i. Shall assign projects to the Working Committee Leaders as required.
- ii. Shall review and approve the meeting agendas and meeting minutes.
- iii. Shall ensure that committee meetings are scheduled.



SaskPower Equipment Condition Monitoring Optimization Committee

- iv. Shall ensure that initiatives recommended by the committee are adequately supported and funded.
- v. Shall ensure benchmark the performance of the Committee versus historical performance.

B. Working Committee Leaders

- i. Shall assign projects to the Working Committee Members as required.
- ii. Shall prepare and distribute the meeting agendas and meeting minutes.
- iii. Shall schedule committee meetings.
- iv. Shall investigate opportunities for ongoing improvement of the ECM program through comparing existing ECM programs among SaskPower areas/facilities, and through benchmarking SaskPower ECM programs against industry standards. ECM Program gaps among SaskPower areas/facilities will be identified and managed accordingly.
- v. Shall ensure that relationships with third party experts are maintained and enhanced where it makes sense to sustain/improve the ECM program.
- vi. Shall investigate opportunities for ongoing improvement and availability of ECM program components (standards, tools, resources, software systems, personnel training).
- vii. Shall assess the training needs of committee members and staff at the areas/facilities they represent, and coordinate any resulting training courses required. Target is a minimum of one course per year to be hosted at a SaskPower facility, and made available to all interested SaskPower staff.
- viii. Shall investigate industry best practices, and pursue opportunities to continuously improve the ECM program.
- ix. Shall develop consistency of program implementation among participating areas/facilities where appropriate.
- x. Shall maintain and continuously improve availability of ECM program components on the EIN.

C. Working Committee Members

- i. Shall participate in committee meetings as scheduled by the Working Committee Leaders.
- ii. Shall participate in projects and action items assigned by the Working Committee Leaders as required.
- iii. Shall identify best practices being implemented at their area/facility which may be investigated by the Committee for implementation at other areas/facilities.

5.0. Committee Meetings

- 5.1. The Committee shall meet four times annually, twice in person, and twice via video-conference.
- 5.2. Minutes of each Committee meeting shall be kept, and distributed by the Working Committee Leaders.



Process Enhancements (Annual “M&D Summit” meeting)

Multi-plant meeting:

- Case studies
- Process improvements / new features
- Efficiency upgrades
- Two-way dialogue



| Schedule | Description | Presenters | Presentation |
|---------------|--|---|--|
| 08:00 - 08:15 | Opening remarks <ul style="list-style-type: none"> EIN posting | Scott McLeod | 1) 2013-02 M&D Opening Remarks.ppt |
| 08:15 - 09:00 | FAMOS Case Studies: <ul style="list-style-type: none"> Top 10 Major catches during the last period: | Alyssa Beisel, Scott Prokopetz, Jashandeep Chahal, Thomas Ingold | 2) 2013-02 Case Studies ppt |
| 09:00 - 09:15 | BREAK | | |
| 09:15 - 9:45 | M&D process overview and planned enhancements <ul style="list-style-type: none"> EIN - Performance Systems (PI, FAMOS, SPOAD, TP-PLUS) FAMOS V17 upgrades (web client) M&D service contract (expires year end 2013) Cost Benefits / Team Room integration Combustion Decision Tree FAMOS Roles & Responsibilities <ul style="list-style-type: none"> Operations based activities Engineering and Maintenance based activities reporting | Scott McLeod | 3) 2013-11 Process & Enhancements ppt |
| 9:45 - 10:15 | Shand CW System Evaluation <ul style="list-style-type: none"> testing, study, recommendations | Scott Prokopetz | 4) 2013-02-13 SH1 KE System Presentation.ppt |
| 10:15 - 10:30 | BREAK | | |
| 10:30 - 11:00 | Efficiency Survey Results <ul style="list-style-type: none"> Marbek report on efficiency upgrade potential at BDPS, SHPS, PRPS | James Holtom | 5) Efficiency Survey Results.pptx |
| 11:00 - 11:30 | SPOAD <ul style="list-style-type: none"> demonstration, planned upgrades | David Mah | |
| 11:20 - 12:00 | Fuel & Purchased Power Budget <ul style="list-style-type: none"> process overview, process enhancements, KIR Reporting | Dan Hemingway | 7) F&PP Budget Process - for M&D Summit 2013-02-13.ppt |
| 12:00 - 1:00 | LUNCH | | |
| 1:00 - 1:30 | TP-PLUS cycle isolation project status <ul style="list-style-type: none"> program overview, finds, future expansion | Alyssa Beisel | 8) Cycle Isolation Monitoring Project Status ppt |
| 1:30 - 2:00 | 2012 Boiler Tuning and controls modifications <ul style="list-style-type: none"> objectives, methodology, results, before/after trends, lessons learned | Jashandeep Chahal | 9) 2013-02 Combustion Tuning ppt |
| 2:00 - 2:15 | BREAK | | |
| 2:15 - 2:45 | 2013 Planned Work: <ul style="list-style-type: none"> Summary of plant specific work Summary of fleet-wide work (Performance Test Agreement, Combustion Tuning Agreement, Controls tuning agreement) | Alyssa Beisel, Scott Prokopetz, Jashandeep Chahal, Thomas Ingold | 10) Performance group 2013 work.ppt |
| 2:45 - 3:15 | Bear-pit session: | | |
| 3:15 - 3:30 | Closing remarks: | Scott McLeod | |
| 3:45 | Meeting Adjournment | Scott McLeod | |

Process Enhancements (EIN Webpage – Performance Programs)

Home > PPBU > Plant Performance Programs

Thursdays January 17, 2013

Maps & Glossaries
Power stations
Training & dev.
FOMIS
Business planning process
Business
Warehouse Reports
Fly Ash
Project Management
Quality Management
System and Quality Control Programs
Plant Performance Programs
Generation
Maintenance
Schedule

PLANT PERFORMANCE PROGRAMS  EMAIL |  ADD TO MYLINKS

OSI PI

- What is OSI PI?
- What's new/coming soon in OSI PI?
- SaskPower's PI Architecture
- PI Installation Instructions
- OSI PI Training material
- OSI PI Training courses

FAMOS

- What is FAMOS?
- What's new/coming soon in FAMOS?
- SaskPower's FAMOS Architecture
- FAMOS Training material
- FAMOS Training courses
- FAMOS Installation Instructions

SPOAD

- What is SPOAD?
- What's new/coming soon in SPOAD?
- SPOAD Training material
- SPOAD Training courses
- SPOAD Access Instructions

TP-PLUS

- What is TP-PLUS?
- What's new/coming soon in TP-PLUS?
- TP-PLUS Training material
- TP-Plus Training courses
- TP-PLUS Installation Instructions
- SaskPower's TP-PLUS Architecture

MYLAB

- What is MYLAB?
- MYLAB Access Instructions

Program owners

PI Processbook
Ken Wingert
Digital Systems Technologist
566-2305

FAMOS/MYLAB
Scott McLeod
Supervisor, Performance
566-2243

SPOAD
Dan Hemingway
Senior Performance Engineer
566-2868

TP Plus
Alyssa Beisel
Senior Performance Engineer
566-3171

Process Enhancements ("Catch of the Quarter")

saskpower.com | Employee Directory Type Size: A A A EIN Employee Directory

EIN
employee
information
network

HOME HR & EMPLOYEE SERVICES TOOLS & RESOURCES MY BUSINESS AREA OUR COMPANY PROJECTS & INITIATIVES

Home > PPBU

Maps & Glossaries
Power stations
Training & dev.
FOMIS
Fly Ash

POWER PRODUCTION
About PPBU | Contacts | Org Charts

EMAIL | ADD TO MYLINKS

LATEST ANNOUNCEMENTS

NERC compliance update
We are pleased to report that the structure for the SaskPower NERC compliance program has been approved.
Posted: June 26, 2013

Preparing for high waters
JULY 2 UPDATE
Posted: June 25, 2013

New 'Catch of the Quarter' reporting program highlights noteworthy findings.
Asset Management, Generation's approach to Monitoring & Diagnostics (M&D) services to power stations is an industry best practice.
Posted: June 21, 2013

MORE NEWS HEADLINES
Saying goodbye to Unit #1
May 1, 2013
New Administration Coordinator, Investments and Contracts Management
April 30, 2013
New Project Leader- Inventory Optimization in Business Performance & Planning, Operations
March 6, 2013

PROGRAMS & RESOURCES

- Equipment Condition Monitoring (ECM)
- Generation Maintenance Schedule
- Plant Performance Programs
- Project Management
- Quality Management System and Quality Control Programs
- System Planning and Development

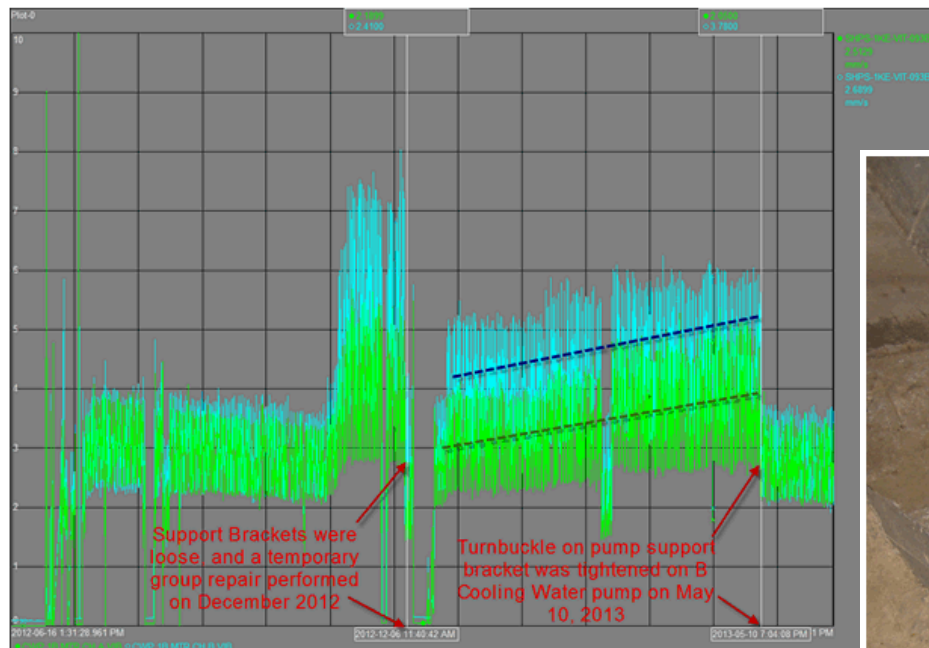
BUSINESS


- Business Planning & Process
- Business Warehouse Reports

Process Enhancements ("Catch of the Quarter")

Anomaly Identified:

The vibrations on both motor bearings on B Cooling Water pump had been gradually increasing since a grouting repair on the pump support bracket was performed in December 2012. The [PdP system](#) produced an alarm on these bearings, and the Performance group notified Shand plant staff of the anomaly. Shand deployed a mechanic to inspect the pump.





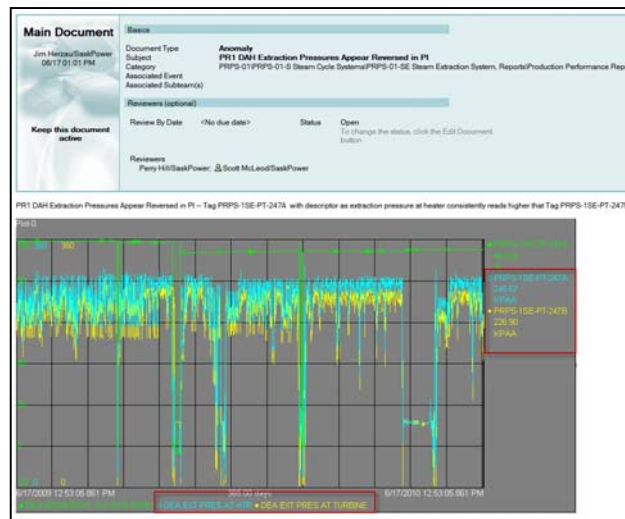
Process Enhancements (Issues Management database upgrades)

[illegible]

Integration of:

Issues Management + Cost benefits

Into single .NET application
(configured by SaskPower)



MDL
Search
Add Record
Reports
Admin
i SskPower

Search

Add Response
View Record
Delete Record

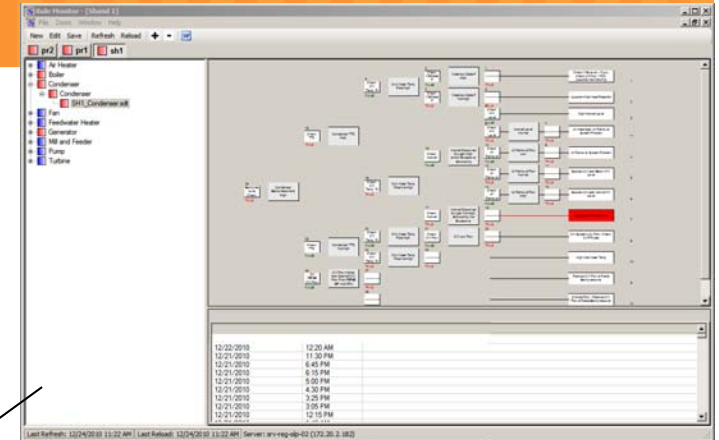
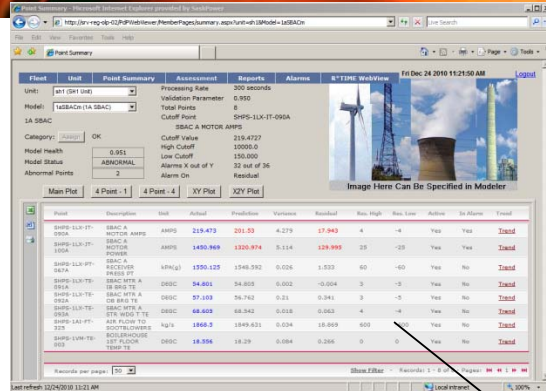
Show closed anomalies

Drag a column header and drop it here to group by that column

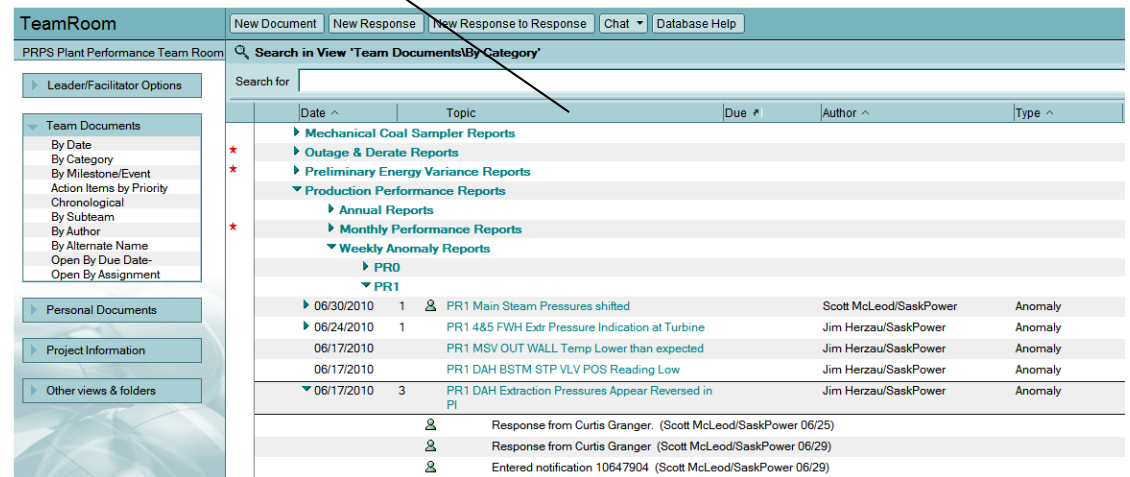
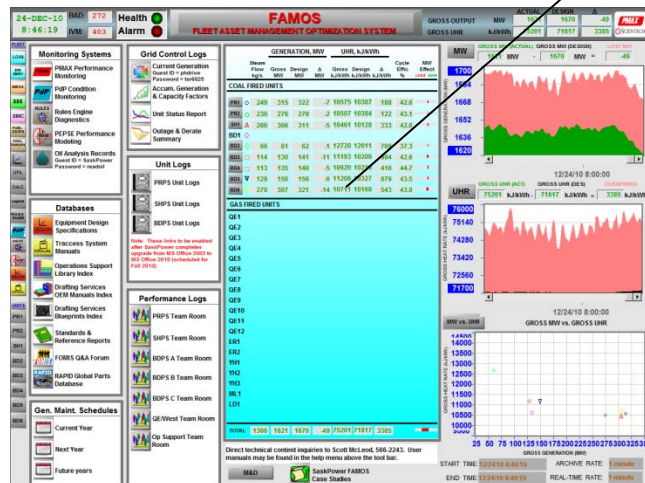
| | # | Record Type | Status | Date Identified | Plant | Unit | Subject | PDP Model Name | Tag Name(s) | Component | IssueType | PS | 30 Day Alarm |
|---|--------|-------------|------------|-----------------|--------|------|---------------------------------------|----------------|--------------------------|------------|--------------|----|--------------|
| + | 000084 | Anomaly | Identified | 2013-07-06 | BOPS-B | B04 | testing fix to workflow | 4aDFNp | BOPS-4AF-ETBR-074A | Air Heater | Instrument | | |
| + | 000083 | Anomaly | Identified | 2013-07-06 | BOPS-B | B03 | to test workflow email | 3aDFNp | BOPS-3AF/02 | BFP | Model Tuning | | |
| + | 000082 | Anomaly | Identified | 2013-07-06 | BOPS-B | B03 | to test workflow | 3aDFNp | BOPS-3AF/02, BOPS-3AF/03 | BFP | Model Tuning | | |
| + | 000081 | Anomaly | Identified | 2013-07-03 | BOPS-B | B04 | 4b pul anomaly 30 day trend test | 4bPULVpm | BOPS-4AL20 | Mills | Equipment | | |
| + | 000080 | Anomaly | Identified | 2013-07-03 | BOPS-C | B06 | test | 6aBFPgm | BOPS-6SJ-TE-203A-2 | BFP | Equipment | | |
| + | 000080 | Anomaly | Identified | 2013-07-03 | BOPS-C | B06 | test | 6aBFPgm | BOPS-6SJ-TE-203A-2 | BFP | Equipment | | |
| + | 000079 | Anomaly | Identified | 2013-07-03 | BOPS-B | B04 | 4B BFP Test | 4bBFPgm | BOPS-4SJ-FT-202 | BFP | Equipment | | |
| + | 000078 | Anomaly | Identified | 2013-07-03 | BOPS-B | B04 | b04 bfp anomaly | 4bBFPgm | BOPS-4SJ-FT-202 | BFP | Instrument | | |
| + | 000077 | Anomaly | Identified | 2013-07-03 | BOPS-C | B06 | B05 FD Fan SB Non driving End Bearing | | | Fans | Equipment | | |
| + | 000076 | Anomaly | Identified | 2013-07-03 | BOPS-C | B06 | B05 Separator Test | 5DAHTRp | BOPS-6SD-TE-075 | FWH | Equipment | | |
| + | 000075 | Anomaly | Diagnosed | 2013-07-03 | BOPS-C | B06 | testing for error | | BOPS-6SD-TE-186B-3 | CEP | Instrument | | |



Planned Enhancements (Sciencetech)



“Project Facelift” – Project “Facelift” - replace all MMI’s with a single .NET application.





Planned Enhancements (M&D Services architecture)



←
Manual VPN



Current communications

Proposed communications



Manual VPN
↔
Continuous VPN,
automatic
authentication





Questions?

