



### PSE&G Gas Delivery's Knowledge Management System



### PSE&G Background



- 1.7 Million GasCustomers
- Gas Delivery maintains 2000+ Employees
- Service Territory:2,250 square miles(2/3 of NJ)
- 40% Urban/60% Rural
- 17,000 miles of Main
- 16,200 miles of Services



### **Knowledge Sharing Strategy**

- Pursued "NJ Governor's Award for Performance Excellence" - sponsored by Quality New Jersey (QNJ)
- Gained Feedback from QNJ application
- Recommended more emphasis on "end-to-end"
   Process Management and Documentation
- Promoted Knowledge Sharing: Tacit vs. Explicit
- Supported Drive for Consistency "Gas Delivery Way (12-3-1)"



### Knowledge Management System - Development

- Major Items Launched in 2006:
  - Macro Process Classification System
  - Web-based Document Repository
  - Proven Practice Transfer Model
  - Future Web Enhancements (Identified)

### KMS Macro Process Classification System



- Classification structure major business areas organized into categories for storing supporting processes
- Template and architecture collected, analyzed and documented process flow information
- 1,000+ documents and links verified and posted
- Microsoft Word, Visio & PowerPoint documents converted to web PDF format

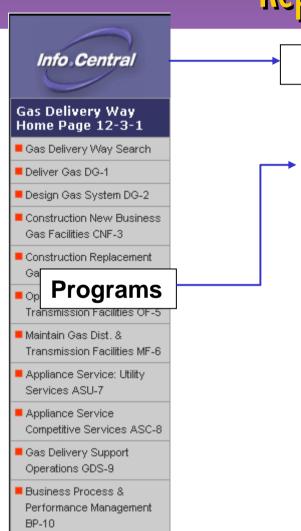


### KMS Web-based Repository

- Developed strategy for process ownership & gap analysis
- Established accountability for process documentation & validation
- Provided link for operational metrics related to each process
- Provided access to electronic standards and procedures
- Created "Search" engine for website navigation

# The KMS Web-based Repository Structure





Policies

Link to
Manuals
Connection
Administrative
Manuals

CNF-3: Construction New Business Gas Facilities

Process Owner: Kevin Powers, 973-430-8010, MC T14

CNF-3-1: Customer Inquiry Process

CNF-3-2: Design & Layout

CNF-3-3: Install Gas Mains

CNF-3-4: Install Gas Services

CNF-3-5: Install Gas Meters

**Processes** 

### **Key Web-based KMS Features**





**Gas Delivery's 10 Major Business Areas are Links in** the Left Navigation Bar

sday, December 07,

**Simple and Advanced** searches are linked on the **KMS Homepage** 

Delivery Way -

**Gas Delivery** Home Page

- Gas Delivery W Search
- Deliver Gas DG-1
- Design Gas System DG-2
- Construction New Business Gas Facilities CNF-3
- Construction Replacement Gas Facilities CRF-4
- Operate Gas Dist. & Transmission Facilities OF-5

Maintain Gas Dist &

The Gas Delivery Knowledge Management System

12-3-1

The KMS Website formalizes the strategic intent of the Gas Delivery Way in a format that includes program and process information, with links to Gas

Delivery po use and sh focus and i

**Major links to Gas Procedures, Standards and** Reports are easy to access

DG-1: Deli Gas Ordering, Monitoring & Control of ations (GSOC)

ss Owner: Jack Hainthaler 973-430-5050 MC B-1

: Gas Load Forecasting & 3rd Party Supplier

onitor Actual vs Est, Flows, Mon. & Oper, Gas.

**Sub-Processes and Owners** are in the center of each Web page

Competitive Services ASC-8

- Gas Delivery Support Operations GDS-9
- Business Process & Performance Management BP-10

DG 1-5 thru 1-8: Oper. & Maint, Peaking Plants, M&R Stations

DG-2: Design Gas System Design Gas System, Standards and Methods, & Capacity Planning

Process Owner: Brian Wagaman, 973-430-5559, MC T14

DG-2-1: Development of Design Standards/Procedures

Knowledge Management System



hing Knowledge Man ement

- Quick Search Gas Delivery Only
- Advanced Search Gas Delivery Only

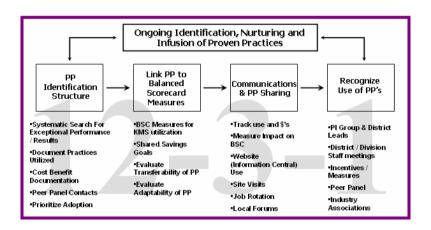
Gas Delivery Scorecards

- Gas Delivery Scorecards. Charts, Messages, Pip Goals
  - Manuals
- istribution Standards
- SIM Service Instruction Manual
- Gas Design Manual
- Safety Standards & Procedures



### Proven Practice - Transfer Model

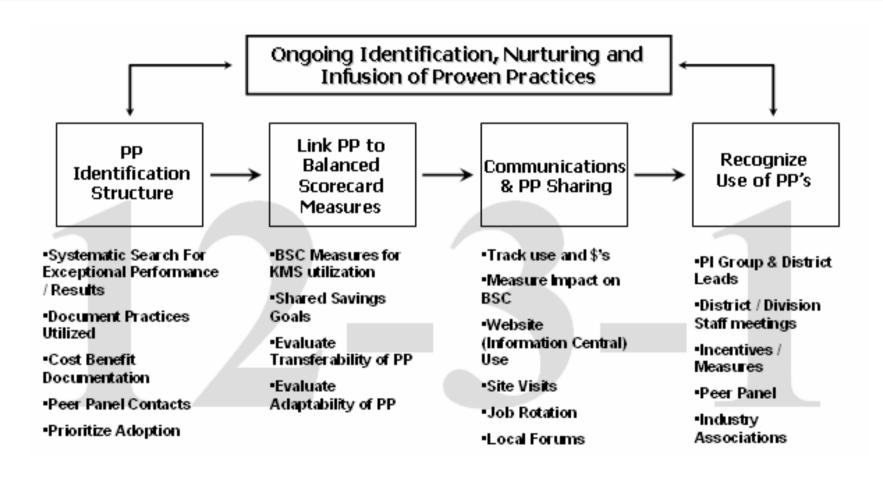
 Transfer Models are the building blocks for knowledge sharing systems to promote "Re-Use" of PP's:



- Structure to identify practices: internal & external
- Solid linkage to Scorecard Measures
- Structure to communicate & to promote replication
- Recognition for idea generation



### Proven Practice - Transfer Model



### Proven Practice Matrix

#### % Jobsite Time GD / Initiatives

Have a process in place to ensure that crews are leaving the yard in a timely manner.

Have a process in place to ensure that crews are at the jobsite and doing valuable work until the end of the work day.

Project work is reviewed for Jobsite Reporting / Use of the Cost-Benefit model by local management to evaluate and track jobsite report projects.

Increased field presence by Supervisors to provide assistance and remove obstacles for field crews.

Transferable			Implementation Status P=partial / C=completed A=Completed & assessed		
Barrier, Hilliam			■ -21 × - に N × N → L		
X:	×	x.	P	P	С
x:	X:	x:	×		×
Y	Y	Ÿ	P	c	c
x:	X	x:	x		x
	Yes M	Northern Centra Yes No Yes No x x x x	Northern Central Southern Yes No Yes No  X X X  X Y Y Y	Transferable Northern Central Southern Yes No Yes No Yes No	Transferable Northern Central Southern Yes No Yes No Yes No  X X X X  P P  P=partial / C=cc A = Completed & Northern Central Yes No Yes No Yes No Yes No  X X X X  P P  X X X X  Y Y Y Y P C

#### Additional Comments / Enablers

Do FQA's on a regular basis (a minimum of 2 per week per Supervisor / one per Crew Leader per month). FQA's should be time and date stamped.

Have Supervisors rotate an assignment to monitor crews in the morning and afternoon.

A percentage of the FQA's should be completed at the start, end, and on overtime assignments.

Potate the Work Management assignments to allow

Rotate the Work Management assignments to allow beginning and end-of-day field supervision.

As projects are identified and completed, quarterly review should be held with the local union and MAST associates. The financial and operational benefits should be evaluated at these reviews.

The Districts should develop and maintain remote report sites and monitor for potential projects.

Supervisors need to do first job / last job field visits at least once per week (tie this into the FQA process). Recommend that the duty Supervisor fill this role in each District.

\*Note: investigation of wireless laptop for use by Duty Supervisors to be piloted via PUG Team.



### Future System Enhancements

### Planned KMS Improvements:

- Web-based "Bulletin Board" threaded discussions
- "Ask the Expert" functionality
- "Change Log" record for document updates
- Electronic "Proven Practice Submittal Forms"
- Automated "System Scorecards" for tracking website usage



### KMS Benefits

- Proven Practice initiatives to run the business and align Gas Delivery operations (12-3-1).
- Centralized & standardized process management approach.
- Maximized value creation across all core activities.
- Process gaps identification and improvement opportunities for future areas of focus.



### KMS Benefits

- Systematic Proven Practice assessment and accountability
- Community knowledge sharing and transfer.
- Enhancement of process focus and continuous learning throughout the organization.
- ☐ Increased process owner accountability to drive and monitor core business activities successfully.

### Critical Success Factors

- Senior management support
- Robust "Change Management Strategy"
- Staffing to sustain KMS system
- Defined roles and accountability



### FOR MORE INFORMATION

#### Paul Pirro

- Technical Support Leader
- Gas Delivery Business
   Development & Technical
   Services Springfield
- 24 Brown Avenue
  Springfield, NJ 07081
  973-912-3239
- paul.pirro@pseg.com

#### Chris Agans

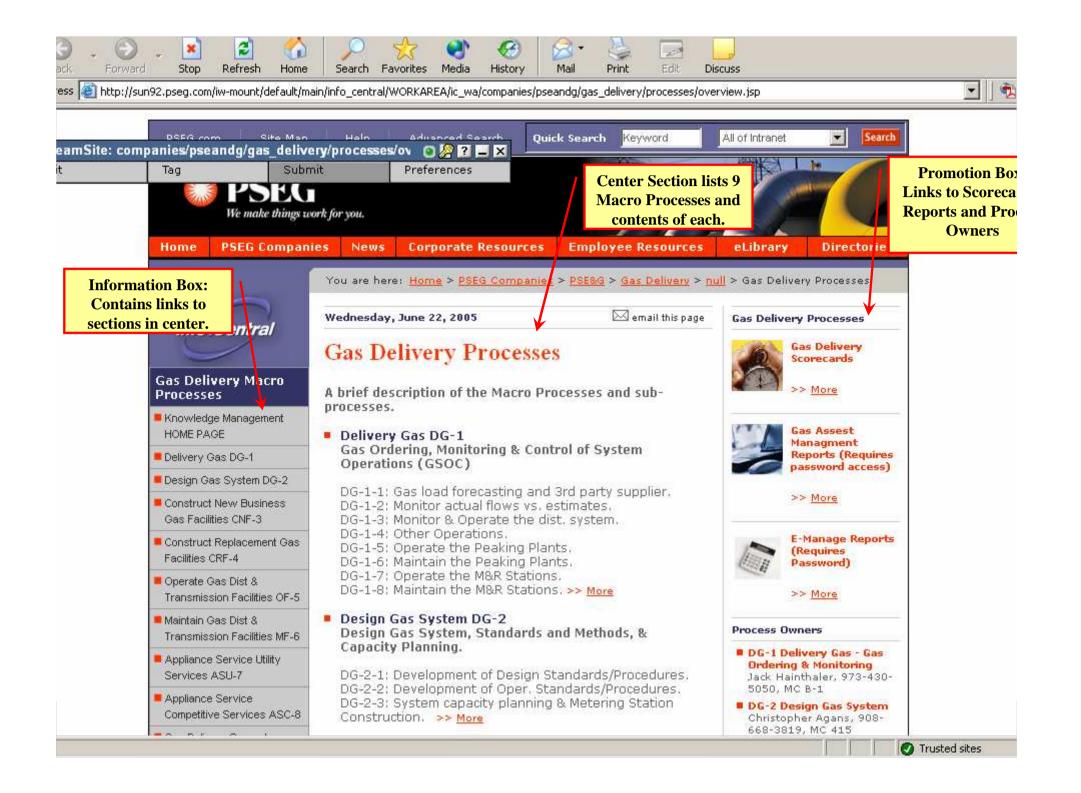
- Process Improvement Manager
- Gas Delivery Business
   Development & Technical
   Services Plainfield
- 40 Rock Avenue, Plainfield,
   NJ 07063
   908-668-3239
- christopher.agans@pseg.com

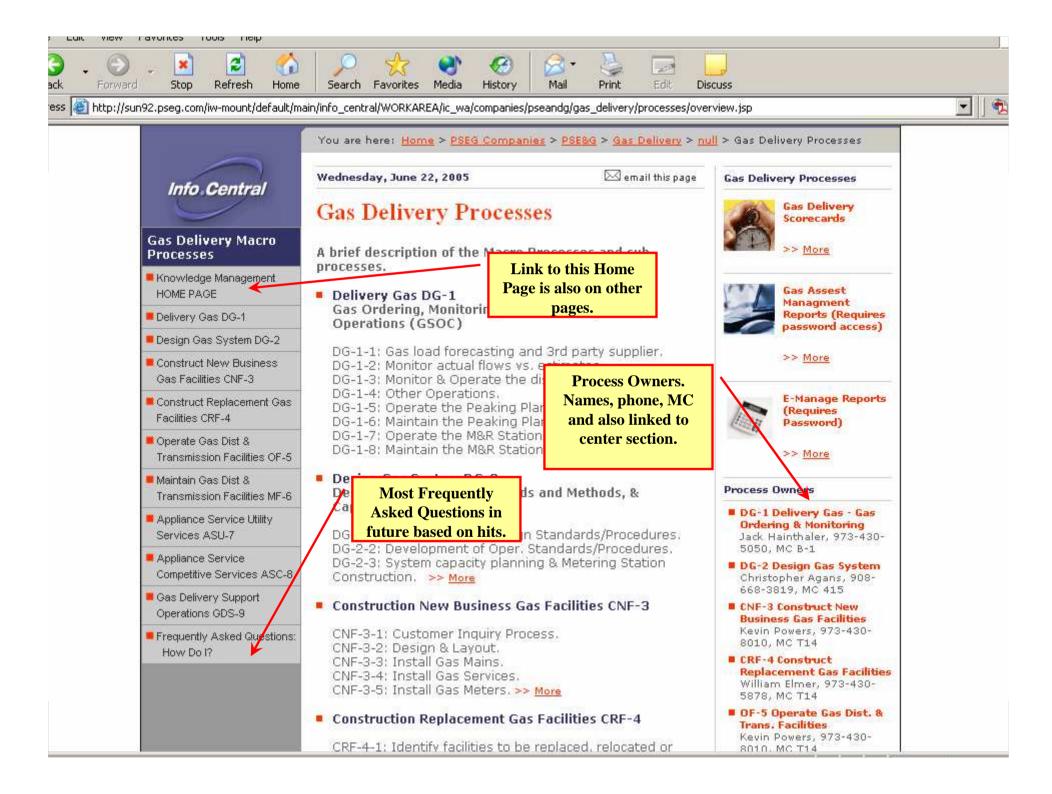
### Questions and Comments

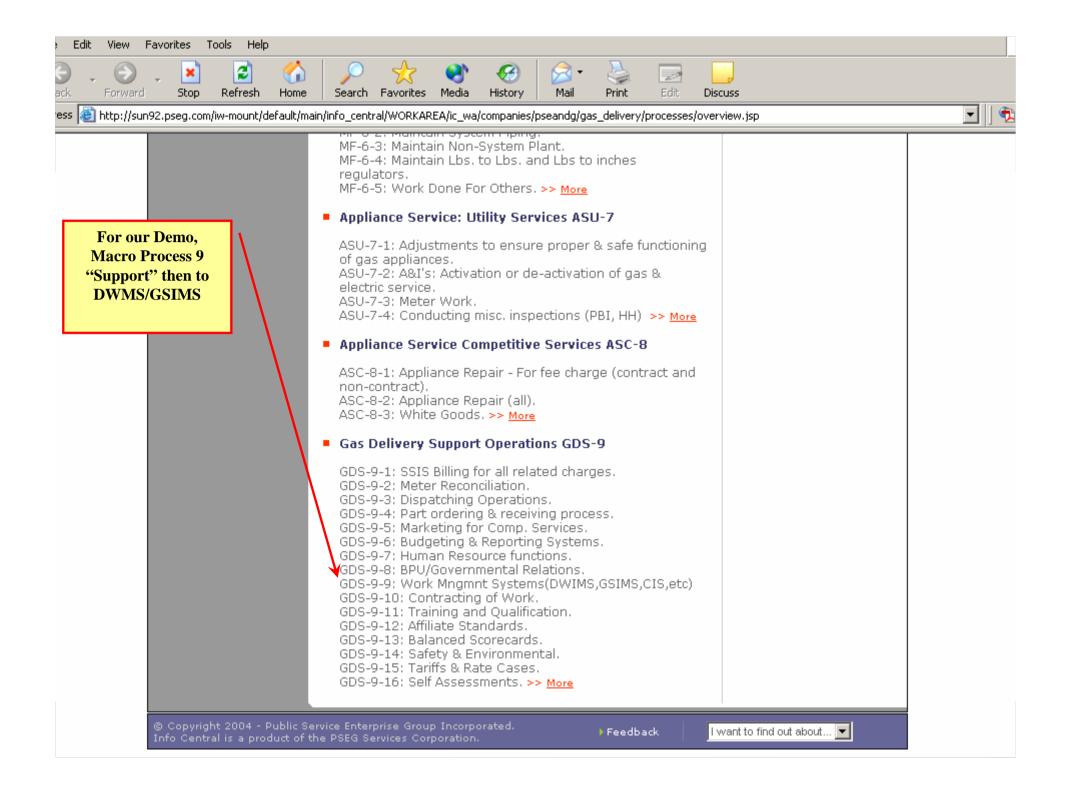


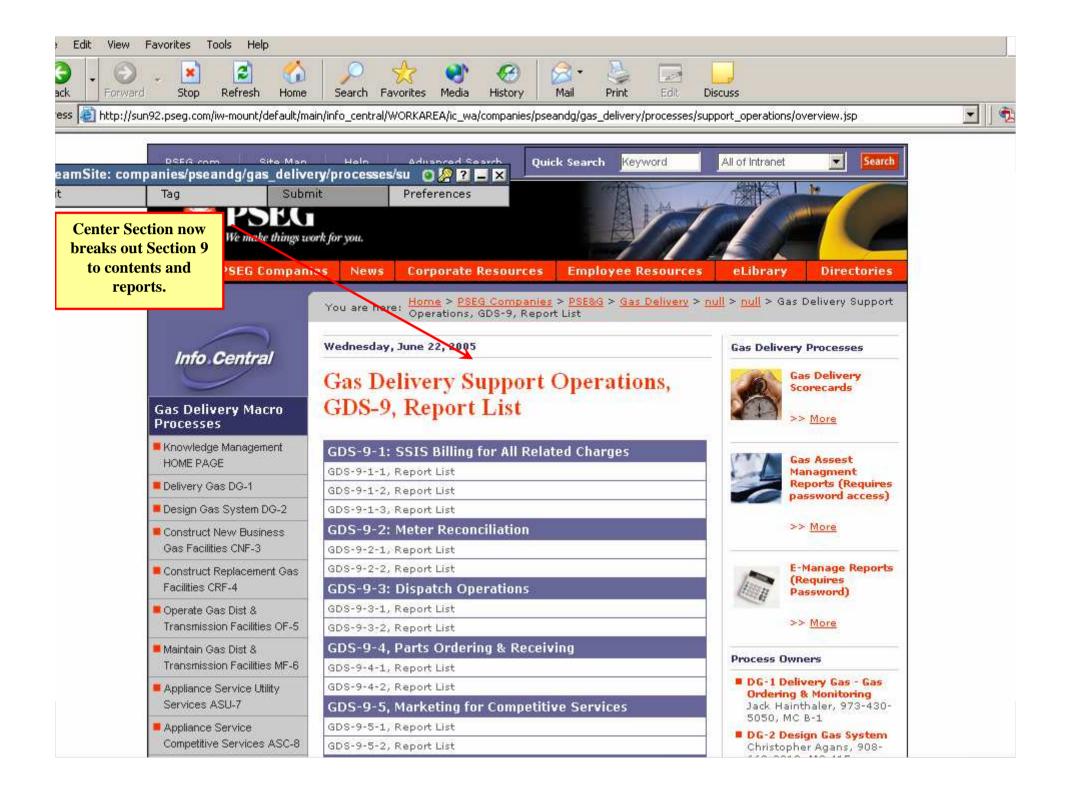
Demonstration of the KMS System...

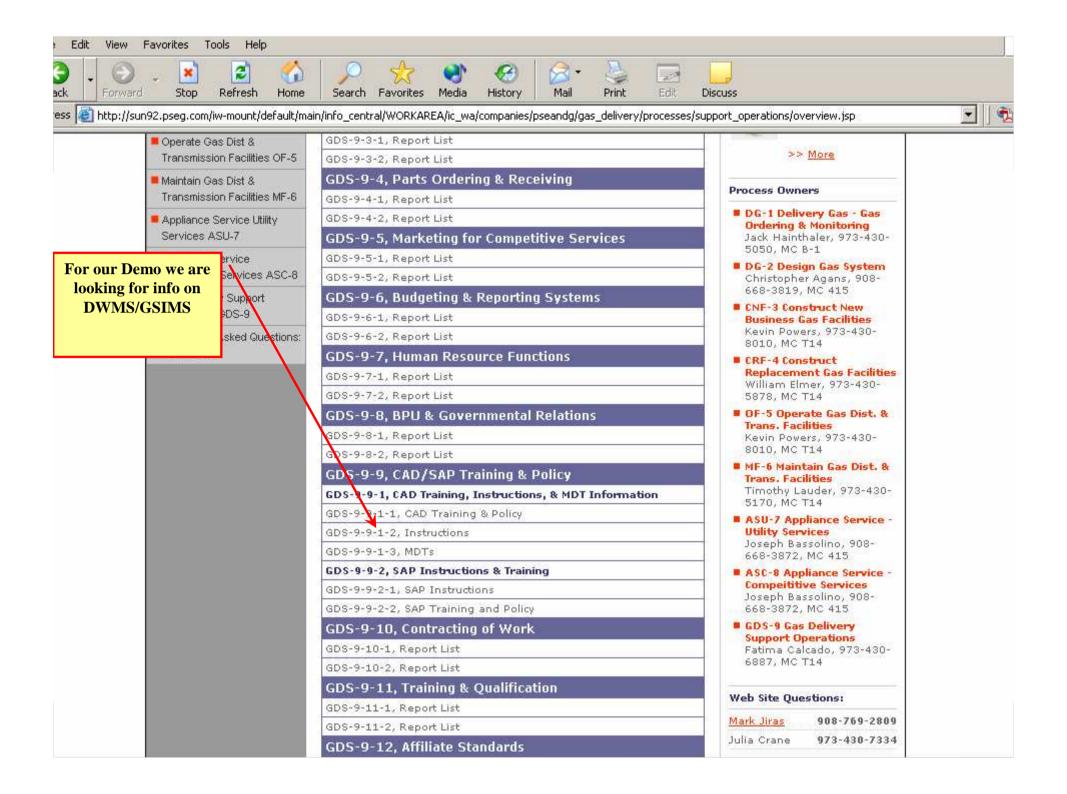


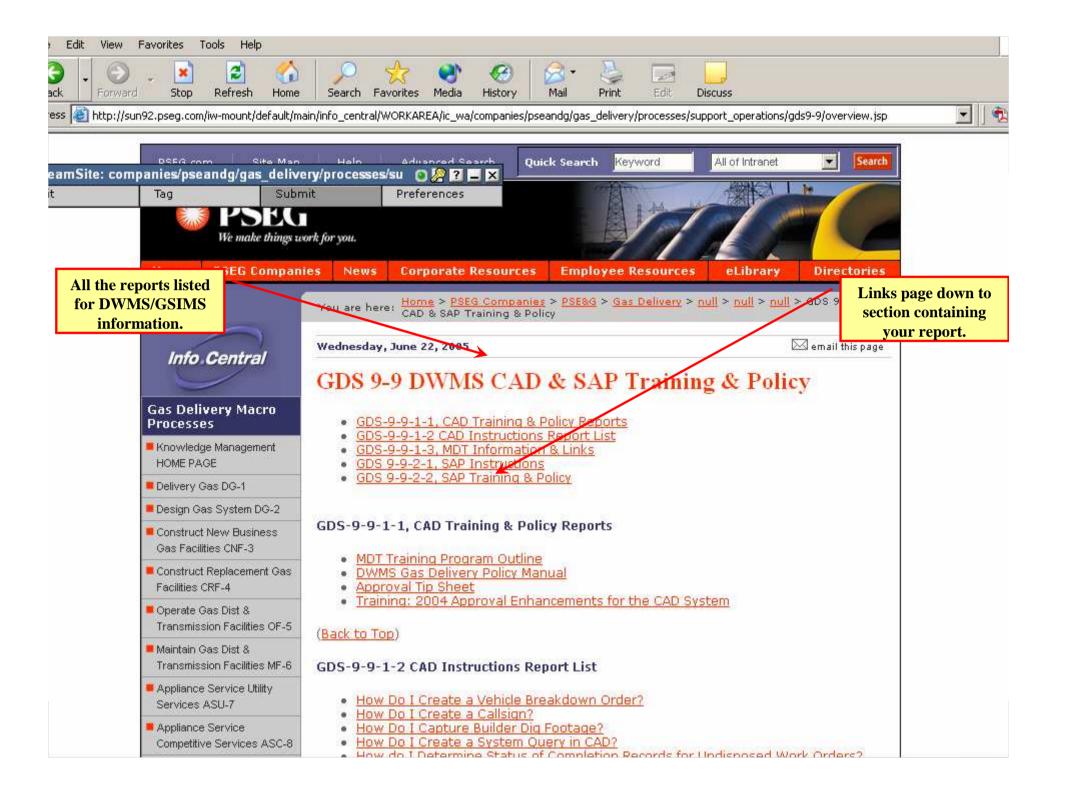


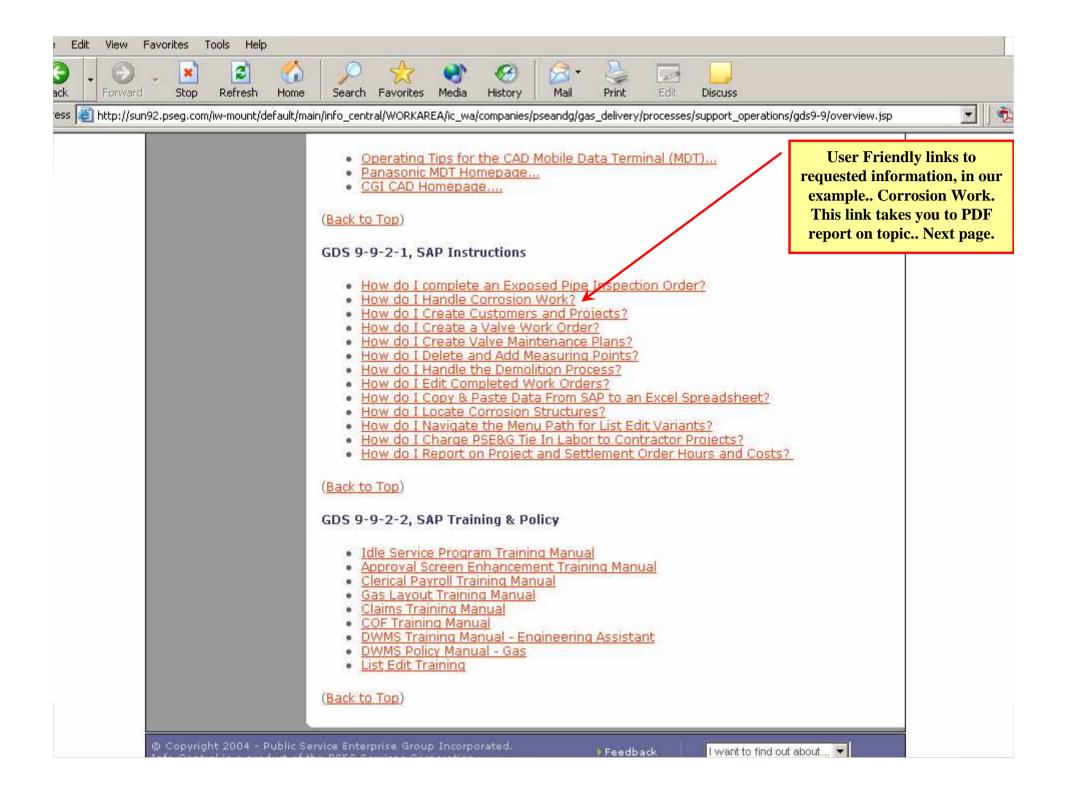


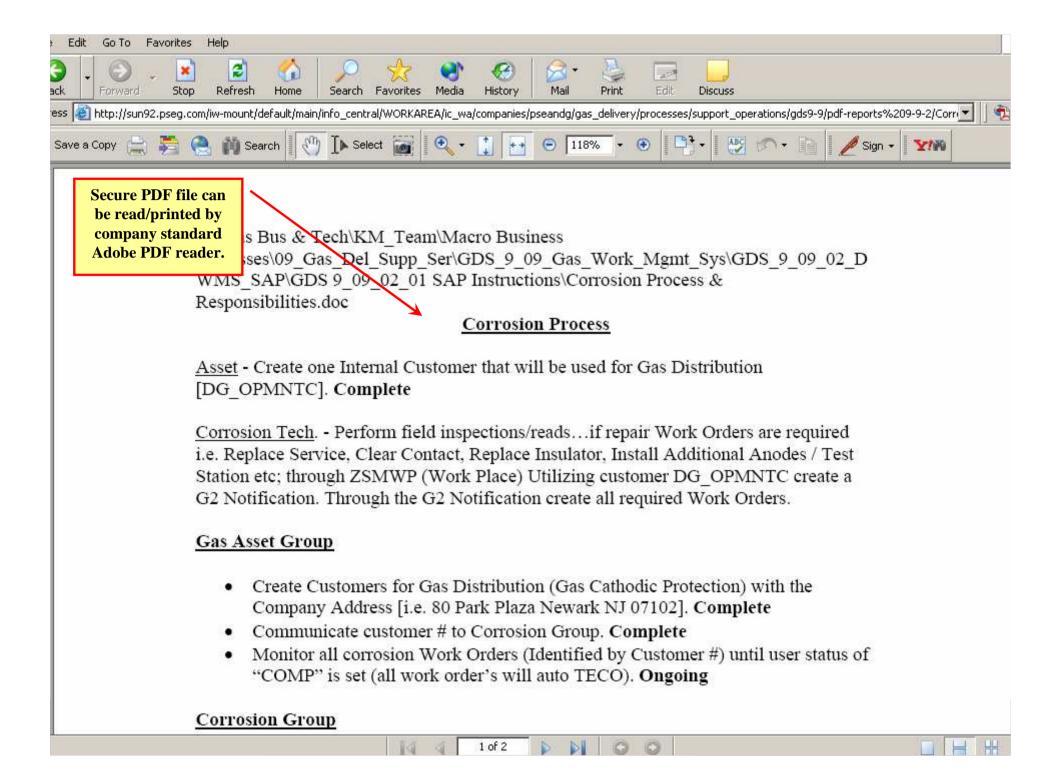


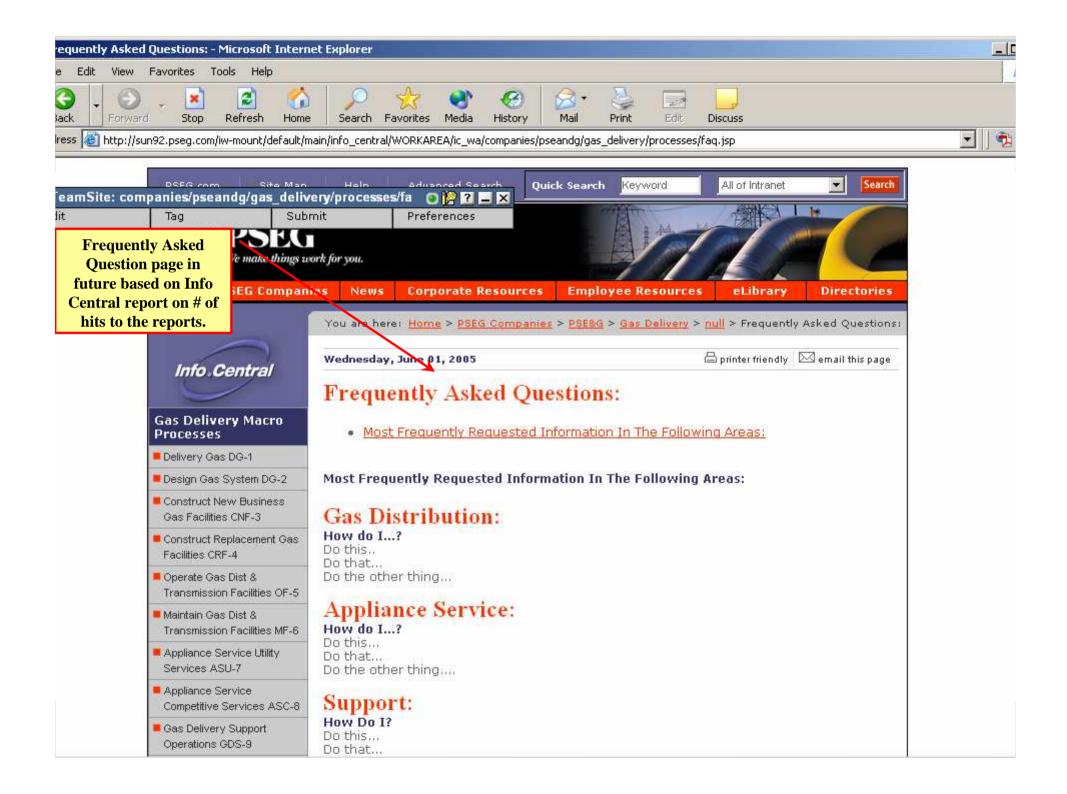












## THANK YOU!!!

