SCIENTECH®

DAS Upgrades

CURTISS WRIGHT
Flow Control Company
SCIENTECH

Anatomy of DAS Upgrades

- Wolf Creek
- Susquehanna
- Seabrook

CURTISS WRIGHT Flow Control Company
SCIENTECH

Common Elements

- Existing RTP Installations
- 2000M Eligible upgrade

CURTISS WRIGHT
Flow Control Company
SCIENTECH

Differences

- Westinghouse PWR
- GE BWR
- Thermocouple compensation
- DALCAL Implementation

CURTISS WRIGHT Flow Control Company
SCIENTECH

Wolf Creek

- Full Plant Computer Upgrade
- DAS in conjunction with Applications
- Transition during declared PPC INOP period

CURTISS WRIGHT Flow Control Company
SCIENTECH

Wolf Creek Approach

- Input point spot check
- 5 Point Cal on “Critical Points”
- System engineer verification through application

CURTISS WRIGHT Flow Control Company
SCIENTECH

Wolf Creek – The Install

- Transition well staged and executed by Utility.
- Issues
  - Thermocouples
  - Pulse Points
  - RTP Engine bug
  - Scan Speed (Input Impedance Issue)

CURTISS WRIGHT Flow Control Company
SCIENTECH

Wolf Creek – Lessons Learned

- Track Firmware versions
- Alert new clients to possible similar issues.
- Press for accurate information

CURTISS WRIGHT Flow Control Company
SCIENTECH

Susquehanna

- Phased Upgrade
  - DAS Phase – R*TIME feeds existing system with no application changes.
  - Transparent to existing PPC

CURTISS WRIGHT Flow Control Company
SCIENTECH

Susquehanna – Install

- Planned for 3 back shifts, partial transition each night.
- Work Crews well briefed
- Cooperative Operations Staff
- Automated validation well crafted and executed.

CURTISS WRIGHT Flow Control Company
SCIENTECH

Susquehanna – Issues

- System released for work several hours late however expectation was for install to complete at original time.
- Dark Fibers
- Switch Reconfiguration
- TIP Tuning
- Communication Protocol

CURTISS WRIGHT Flow Control Company
SCIENTECH

Susquehanna – Lessons Learned

- Automated validation proved fast and efficient.
- Client knowledge of existing system smooth transition

CURTISS WRIGHT Flow Control Company
SCIENTECH

Seabrook

- Phased Upgrade
  - DAS Phase – R*TIME feeds existing system with no application changes.
  - Transparent to existing PPC
- Only DAS phase approved.

CURTISS WRIGHT Flow Control Company
SCIENTECH

Seabrook - Install

- Non-aggressive installation plan
- Ongoing

CURTISS WRIGHT Flow Control Company
SCIENTECH

Seabrook - Lessons Learned

- Install plan needs to accommodate immediate remediation for minor issues.
- Scientech needs to press clients harder to embrace prior lessons learned

CURTISS WRIGHT Flow Control Company
SCIENTECH

Questions?

CURTISS WRIGHT Flow Control Company
SCIENTECH