Virginia Power

Nuclear Power Station Uses Adobe Acrobat for Faster Access to Up-to-Date Information

Adobe™ Acrobat™
In Public Utilities

Solutions Area

Document Management

Key Benefits Summary

- New procedures go into effect in hours rather than days.
- Full-text search capabilities help employees locate procedures quickly.
- Password protection ensures document security.
- Print on demand to Adobe PostScript™ and non-PostScript printers at any resolution.
- PDF files maintain integrity and visual quality of original hard copy.
- PDF files address need for application and platform independence.

Controlling every action is the key to safety at a nuclear power plant. At Virginia Power's North Anna Power Station, distributing, tracking and updating the thousands of technical procedures required for plant operation used to involve volumes of hard-copy procedures that took days to distribute. Now, using Adobe Acrobat software, the plant distributes these procedures electronically, ensuring that employees are working from the latest document versions, putting new and updated procedures into effect within hours.

Virginia Power provides electricity to most of Virginia. The North Anna Power Station employs approximately 1,000 people and provides 20 to 25 percent of Virginia Power's total output when running at full capacity. Like all nuclear power stations in the United States, North Anna's two reactors are licensed and regulated by the NRC to ensure public safety. The NRC requires written procedures for all major operations and maintenance tasks. These procedures must be approved, before use, by a committee of upper-level managers. There are more than 5,000 ever-changing procedures at the North Anna Power Station, and it is essential that each employee work from the most recent versions to ensure administrative compliance.

Previously, paper procedures were distributed by the plant's Records Management Office. Five copies were kept in every location where workers needed them. Copies often needed replacing because workers would use the distributed copies to perform required tasks, or because new revisions would supersede those copies already placed in the user files. It took several days to produce and print the number of paper copies needed, and additional time for the plant's safety committee to approve each revision or addition. Consequently, updated procedures were not put into effect for several days.

"The obstacle was to find a means to distribute documents including multiple fonts and integrated graphics created on Apple® Macintosh® computers to a PC environment," says Gary Shifflett, network manager of North Anna's Station Procedures Department. "At the same time, we had to ensure employees could access only the most recent versions. Procedures had to remain exactly the same as the original and retain excellent resolution both on-screen and printed. To satisfy our requirements, documents can't be close, they must be exact."

Operation Procedures Go Electronic

The North Anna Power Station created PROMIS (Procedure Management and Information System), a secure client/server-based electronic document distribution system that is based on Adobe Acrobat software. To ensure document integrity, essential administrative functions, such as entering final approvals, converting files and distributing documents, are limited to authorized personnel and can only be accessed through password-protected interfaces. Procedures are still developed and revised on Macintosh computers using internally developed software, and PROMIS Manager, to control and track

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Adobe

document revisions. Upon completion, higher security, or "controlled," documents are converted into Adobe PostScript language files. When authorized employees want to print a controlled procedure, the PostScript language file is sent directly to a printer in a secure location. "Non-controlled" documents are converted to Adobe's Portable Document Format (PDF). When

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—*Gary Shifflett, Network Manager of North Anna's Station Procedures Department*

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employees want to view and print a non-controlled procedure, the PDF file is accessed and printed to any local or network printer. Distributing procedures in PDF maintains document integrity by restricting users from altering documents.

Faster Updates

The PROMIS system ensures that only current revisions of procedures are available for electronic distribution. Without a secure, server-based system, out-of-date documents could become available for use in the station, which would be a serious administrative violation. The plant's paper use has dropped dramatically and the delay to put new procedures into effect has been reduced from three days to a few hours. Shifflett says an unexpected benefit of the system is the ability to zoom in on graphics, such as exploded parts illustrations or detailed valve diagrams, without sacrificing resolution. The plant will also be using the full-text search capabilities in Acrobat 2.0 software to help employees locate specific procedures more quickly.

"What used to be a time-consuming process using volumes of paper is now an efficient process using very little paper," says Shifflett. "This is all without sacrificing security or document integrity."

Virginia Power
Systems at a Glance

Hardware
Client: Windows® 386, 486 PCs and Macintosh computers
Servers: Novell® NetWare® 3.11 file server running NetWare for Macintosh.

Software
Acrobat Pro
Clipper
FoxBASE+®/Mac®

For more information on Adobe products, call 1-800-833-6687.