Fuel-Handling System Maintenance

Background

Westinghouse, offers pre- and post-installation service and support for both fuel-handling and outagecritical cranes. A year-round support program, it was developed to focus on this equipment before, during, and after an outage. By targeting these areas, our procedures remain current, maintenance items are addressed quickly, spare parts are optimized, and upgrades are evaluated.

Benefits

Westinghouse maintains long-term, multi-outage contracts with several major utilities. This long-term approach to fuel-handling equipment and outage-critical cranes provides the utility industry with continued optimal performance. PaR's pre- and post-installation services are integral to keeping your fuel-handling and outagecritical equipment operating optimally during fuel movement.

These services also minimize the likelihood of system failures during unload and reload. Based on experience, the combination of the pre- and post-installation services has reduced the average equipment-caused delay for fuel unload/reload by over 12 hours during refueling.

Description

Westinghouse field engineering performs a pre-operational checkout of your Fuel-Handling Transfer System prior to unload. This is done to identify and solve equipment problems caused by the extended idle period, and to minimize system malfunctions during the refueling operation. As part of this service, we provide onsite 24-hour coverage for unload and reload.

From this evaluation, our staff generates a Performance Appraisal Report, which includes:

- Equipment survey
- Equipment reliability evaluation
- Recommendations for condition and performance improvements based on plant's outage goals

Certain conditions must be met prior to performing pre-operational maintenance and testing:

- The plant must be in cold shutdown, allowing access to controlled areas inside containment.
- Power supplies (in and out of containment) must be available and instrument loop energized for at least one hour before calibration.
- To facilitate detailed inspection of the system, the refueling canal must be dry on both the pit and reactor side.
- To facilitate a 100% functional checkout, the entire fuel canal must be flooded (reactor and spent fuel cavities) and the transfer tube g ate valve must be open.
- A dummy fuel assembly must be available for use during functional checkout.

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Deliverables

The Fuel-Handling System Maintenance is performed during outages in two service trips based on the current outage schedule. The first trip consists of preoperational maintenance and testing followed by 24- hour onsite advisory coverage during core unload for the Fuel-Handling System and the refueling machine. A second trip is required for the core reload advisory coverage.

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