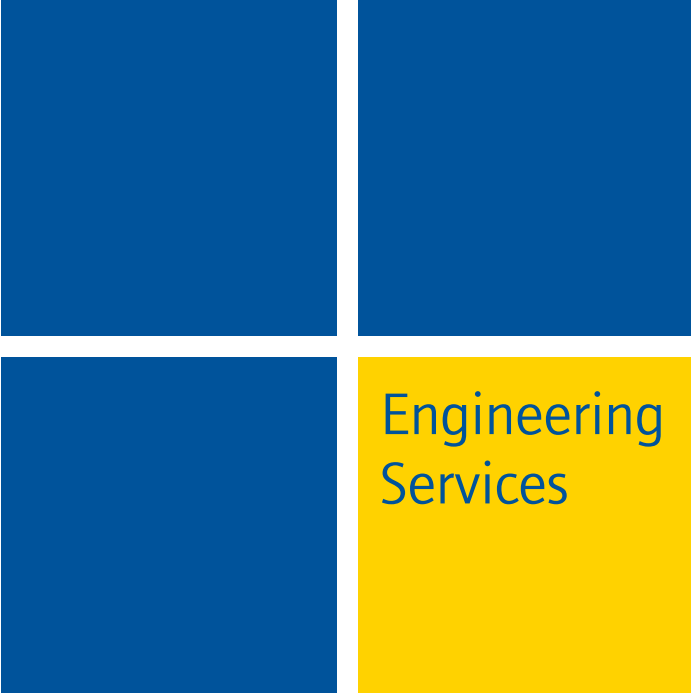


TracWorks® Data Management System



Background

The TracWorks data management system provides nuclear plant operators, engineers, and administrators with a comprehensive, current, single source of fuel- and component-related information.

In most cases, utilities manage the various fuel assembly data sets (special nuclear materials [SNMs] data, inventory information, refueling campaign information) as separate entities and integrate the various pieces by hand. The same information required by different organizations can have different sources, histories, and pedigrees, which can lead to inconsistencies and the potential for errors. TracWorks provides life-cycle tracking, data management, and reporting for all fuel assemblies and components.

Benefits

The TracWorks system provides an exceptional level of protection against costly, time-consuming errors in assembly selection and placement. It can also help reduce the time needed to perform both routine and specialized plant operating, maintenance, and administrative activities.

- TracWorks can significantly reduce the probability of fuel selection errors (e.g., selecting the wrong assembly or attempting to place a spent assembly in an occupied storage location) during refueling, thereby eliminating the time required to resolve errors and reducing the possibility of NRC involvement.
- TracWorks can reduce the effort in generating and checking the fuel shuffle by several man-weeks (versus preparing the shuffle by hand), and the shuffle itself can be optimized to potentially minimize critical path refueling time.
- TracWorks virtually eliminates the effort required to generate SNM reports for the NRC.
- TracWorks can reduce the administrative controls required, even for very complex burnup credit racks, by automating the controls, thereby reducing the required effort and improving reliability, as well as providing support for whatever controls might be required to account for absorber degradation.
- TracWorks increases the availability of the fuel rod and fuel assembly manufacturing data, significantly reducing the time required onsite for an audit of the manufacturing plant.
- TracWorks provides a single, universally available, controlled access source of the various fuel assembly data.

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Description

TracWorks software streamlines tracking, data management, and regulatory reporting for the entire life cycle of fuel assemblies and core components. It collects, maintains, and provides information about assembly and component locations and movements during the refueling process and operation, assembly burnup and isotopic inventory (both in-core and out-of-core), fuel rod burnup and isotopics for fuel that has been removed from its original assembly, fuel assembly and component inspection results, and manufacturing data.

TracWorks has six modules:

Baseline Modules

- Inventory management — provides inventory management for assembly and core components from delivery to final disposal.
- Fuel properties tracking — provides up-to-date information about individual fuel assemblies, including isotopic histories and burnup histories.
- Reporting — creates documents for regulatory requirements.

Additional Modules

- Fuel-movement planning
- Move-sequence tracking
- Manufacturing data integration

Available services include continuing hardware procurement services, the support of the initial historical data load, base or full Engineering System Control Module (ESCM) installation, upgrades, and maintenance.

TracWorks can be integrated with the Westinghouse ALPHA/PHOENIX/ANC (APA) core design system and the BEACON™ core monitoring system. It uses the APA-developed final core loading plan information to make sure that the reload move sequence provides the proper in-core fuel and component arrangement. BEACON provides TracWorks with burnup and isotopic information during core operation for current inventory and depletion information, move-sequence generation, burnup-credit-compliance monitoring, and SNM reporting.

TracWorks is a registered trademark of the Westinghouse Electric Company.

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