

Nuclear Plant Fire Safe Shutdown Services



Expertise for All Aspects of Fire Protection Programs

AREVA, the world's leading nuclear supplier, is recognized throughout the nuclear industry's fire protection community as the premier provider of fire protection engineering, design and analysis services. Our seasoned, responsive personnel have experience in all aspects of evaluation, development and implementation of nuclear fire protection programs. We actively participate in industry initiatives, forums and standard / code development to best serve the interests of our customers and the industry at large. With our extensive global resources, we can tailor nuclear plant fire safe shutdown services for the specific needs of our clients.

A Long History of Success

AREVA has a proven track record and long history of resolving generic industry fire protection issues and plant-specific concerns. We consistently provide cost-effective analytical techniques and compliance methods to help our clients meet regulatory requirements and plant-performance goals.

Cost-Effective Solutions

We have provided Fire Safe Shutdown Analysis and related services since the promulgation of the Fire Protection Rule, 10CFR50, Appendix R. Our in-depth understanding of safe shutdown licensing bases and technical requirements allows us to deliver the most cost-effective solutions for Appendix R licensing and technical issues. This includes re-analysis scopes in support of NFPA 805, "Performance Based Standard for Fire Protection for Light Water Reactor Generator Plants."

Comprehensive Service

Our multi-disciplined staff provides comprehensive services to address a broad spectrum of issues and concerns. We garner repeat business from numerous clients by consistently demonstrating our ability to resolve industry issues and plant-specific concerns and optimize performance of their Fire Safe Shutdown Programs.

Features and Benefits

- We apply proven technical methods to resolve fire protection and safe shutdown concerns, and address compliance with applicable regulatory requirements.
- Cost-effective solutions are tailored to your specific needs.
- Our services optimize the performance of your plant's fire protection and safe shutdown program.
- Our multi-disciplined staff of systems engineers, electrical / I&C engineers, and database programmers provide the full spectrum of fire safe shutdown services.
- Our DATATRAK software fully integrates all aspects of your safe shutdown analysis into a single design-control tool.

Safe Shutdown Analysis Software (DATATRAK)

The AREVA DATATRAK program is an engineering software tool that develops a configuration control model of safe shutdown analysis data relationships such as equipment, cable, raceway, fire area, fire zone and compliance disposition data in support of a plant safe shutdown analysis. The analysis model supports the necessary relationships between equipment, cables, routing and their locations in order to identify the impact on safe shutdown capability in each fire area and fire zone. The analysis model design is based on extensive safe shutdown analysis expertise and familiarity with key safe shutdown-related issues including associated circuits from spurious and circuit coordination concerns.



The DATATRAK application is versatile since it is designed to link with existing plant cable-raceway systems. Plus, DATATRAK can easily import most of the necessary data relationships from existing Appendix R database programs. AREVA can customize DATATRAK to support specific client needs, and it can operate in a client /server environment using either a backend database management system (e.g., SQL Server or Oracle) or an Access database.

AREVA Inc.

7207 IBM Drive, Charlotte, NC 28262

Joel Drennan

Product Manager

Joel.Drennan@areva.com

Cell: 682.216.4510

us.areva.com

The main features of the program include the following:

- Component Selection
- Cable Selection
- Routing/Equipment Location
- Drawing Reference and Revision Tracking
- Power Source Dependencies
- Interlock Dependencies
- Sub-Component Relationships
- Fire Area Impacts
- Fire Zone Impacts
- Compliance Assessment Dispositions
- Fire PRA Basic Event Cable Mapping
- Fire PRA Cable Impacts by Location
- NFPA 805 Transition Support
- Link to Existing Cable-Raceway Data
- User Access Level Control
- Data Revision Tracking
- Cable Block Diagram Generator

Fire Safe Shutdown Services include:

- Fire safe shutdown logic diagrams
- Component circuit analysis
- Separation analysis and compliance assessments
- Breaker / fuse coordination calculations
- Fire safe shutdown procedures
- Ampacity-derating calculations
- NEI 00-01 circuit analysis method
- NFPA 805 performance-based, risk-informed fire protection program development and analysis
- NFPA 805 Data Management Software (DATATRAK)
- Manual / Recovery Action Feasibility study and timeline analysis

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