

## **I&C SERVICES**

- + Project Management
- + Independent Design Reviews
- + Setpoint & Scaling Calculations
- + Instrument Loop Uncertainty & Drift Analysis
- + 50.59 Evaluations
- + Statistical Error Analysis
- + Procedure Writing
- + Extended Power Uprate Support
- + Surveillance Test Interval Extensions



## Instrumentation & Controls Services

EPM has over thirty-five years of I&C experience in the nuclear industry, with specific expertise related to I&C safety-related setpoints and setpoint analysis and conformance to NRC Regulatory Guide 1.105 and ISA S67.04 "Setpoints for Nuclear Safety-Related Instrumentation for Power Plants".

## **Overview**

Since its inception, EPM has been involved several extensive scope of services to develop Setpoint and Scaling Calculations at both nuclear and non-nuclear facilities. Our team produced baseline calculations and performed review of the Technical Specifications and FSAR for the impact of any changes to determine the potential of an unreviewed safety question. We have also developed scaling setpoint documents, calibration data sheets, and functional test procedures for an entire fleet of fossil units.

Our efforts include providing resolution of difficult I&C-related problems dealing with instrument setpoints and safety limits and resolving I&C-related Limiting Conditions of Operations. Our team of I&C engineers have a comprehensive understanding of both BWR & PWR systems and associated instrument loops based on a long history of Nuclear Steam Supply System I&C interface with General Electric and Westinghouse.

We have a thorough knowledge of PWR I&C technology and have worked with I&C vendors and manufacturers including Rosemount, Foxboro and Westinghouse. Our team of engineers bring with them a complete understanding of instrument loops and corresponding documentation.

EPM can handle all phases of establishing and performing an instrument setpoint calculation program. This includes preparing plant procedures to control setpoint calculations and design output documents. EPM's strength in performing setpoint calculations is in the personnel available to perform the work. Our engineering team's experience in performing setpoint calculations at various nuclear sites prevent any front-end learning curve and assure quality results.

EPM has personnel with many years of experience in performing setpoint calculation for nuclear power plants and DOE facilities. These engineers have experience with all types of plants (GE, Westinghouse, B&W) and equipment, including microprocessors and radiation monitoring. Below are area diagrams showing sites where EPM has experience in Instrument Control and Setpoint Calculations.



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For more information contact: Paul Ouellette - Vice President, Safety & Systems Analysis Direct - 508-532-7126, cell - 508-873-1489, pro@epm-inc.com.

