

ROOT CAUSE FAILURE ANALYSIS

An Interactive Workshop for Sustainable Corrective Action Programs



PROJECT HIGHLIGHTS

- Advance effective RCFA through the development of a systematic approach aimed at reducing repeat equipment failures and improving reliability.
- Facilitate hands-on learning and information sharing among key stakeholders.
- Provide employees with skills to sustain corrective action programs.

Background, Objectives, and New Learnings

As power plant operations come under increased scrutiny, constrained resources are driving many energy companies to look for ways to improve organization efficiencies and reduce costs, while maintaining asset availability and reliability. As a result, access to efficient and effective tools has become even more important. The implementation of these tools can be challenging, requiring considerable effort and resources.

To help address this industry challenge for the benefit of customers, EPRI intends to provide a Root Cause Failure Analysis (RCFA) Workshop focused on preventing repeat and acute equipment failures.

The primary objective of this two-day workshop is to deliver in-person, instructor-led RCFA information-sharing and training based on best-in-class and international standards, including EPRI standards. The workshop is designed to provide participants the information needed to conduct a quality and fit-for-purpose RCFA.

The training/workshop material will enhance business continuous improvement initiatives using the Six Sigma DMAIC (Define, Analyze, Measure, Improve, Control) process toward a systematic, measurement-based approach to RCFA, to create a problem-solving culture in an organization.

The non-proprietary results of the training will be shared through EPRI's Integrated Asset Management program (Program 224), helping advance industry-wide best practices and continuous improvement for the ultimate benefit of the public.

Benefits

The Root Cause Analysis (RCFA) Workshop is designed to offer multifaceted benefits that extend across the spectrum of organizational efficiency, problem-solving capabilities, and long-term operational improvements.

By addressing the challenges power plants today, the training aims to support a culture of efficiency and equipment failure reduction within utilities. Equipping a diverse audience, including senior

management and employees in various operational roles, with RCFA skills can help ensure a comprehensive and targeted approach to identifying and addressing equipment failures. The incorporation of the Six Sigma DMAIC process provides a structured and systematic, measurement-based framework for RCFA, which can foster a disciplined problem-solving culture.

Practical exercises and the sharing of real-world problems during the training sessions helps facilitate hands-on learning and immediate applicability to the workplace. Upon implementation, skills refined and knowledge gained through the workshop can contribute to increased equipment availability and a reduction in unexpected shutdowns, supporting enhanced reliability.

Project Approach and Summary

The scope of the RCFA Workshop encompasses the delivery of two-day, in-person, instructor-led training aimed at enhancing the capabilities of participating employees in conducting effective RCFA. The comprehensive curriculum covers various RCFA tools, including but not limited to Change Analysis, 5 Whys, and Fault Tree. The project's components include holding a kickoff meeting, confirming workshop dates, performing the two-day training, and providing digital copies of course materials.

Deliverables

The deliverables for this project are as follows:

- One two-day RCFA Workshop (approximately eight hours per day, including lunch and breaks), conducted by an EPRI instructor in person at an appropriate training facility designated by the funder (with a maximum limit of 25 attendees).

Price of Project

\$35,000 for one two-day training workshop in North America. This project is eligible for self-directed funds (SDF) and tailored collaboration (TC) funding. Please inquire for pricing in the following situations:

- Outside of North America
- Multiple workshops
- Class size over 25 participants

Project Status and Schedule

The RCFA workshop may be scheduled based on the participants' and instructor's availability over a two-day period.

Who Should Join

This course is also recommended for all personnel, including first-line supervisors, engineers, managers, and anyone else who needs to solve and prevent simple to complex equipment failures in power generation.

Contact Information

For more information, contact the EPRI Customer Assistance Center at 800.313.3774 (askepri@epri.com).

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