

Structured problem solving & root cause analysis (RCA).

Consultant/Trainer: Peter Bitter.

The Petrogenium Structured problem solving & root cause analysis (RCA) course is a customized, high-intensity workshop to understand and fix operational issues and find root causes of incidents effectively. Petrogenium shares its operating experience and best practices to help identify and solve incidents and resolve operational problems using a tried and tested methodology.

Participants

This Petrogenium course can be tailored for awareness/inexperienced staff, for intermediate and for experienced personnel. Furthermore the course can be customized for a specific refinery, plant or unit. The option for post-course consultancy/help-desk support is also available, as is the training of site RCA facilitators.

Participants may include: reliability engineers, maintenance and operations team-leads and engineers and selected operations staff and/or process technology staff.

Learning objectives

This course will be tailored to client needs. The ideal course size is maximum 14 participants with one, or 24 participants with a two, lecturer course. Typically, the course is a 4 or 5-day programme.

Programme

Day 1

- Kick off, introductions, course objectives and expectations
- Specifics of problem solving
- Summary of well-established investigation methods e.g. 5 Why, Tripod, RCA, Causal Reasoning, Structured Problem Solving.
- Various exercises to learn the methods by application: group work and report out

Day 2

Structured problem analysis and problem resolution

- Why a structured approach
- Facilitation lecture
- Structured problem solving in 5 phases
 - Incident capture, risk assessment, ranking and prioritisation
 - Problem identification and problem statement
 - Data collection (timeline; drawings; trends; data assessment)
 - Cause and Effect Diagram and validation (verification and elimination)
 - Failure scenarios and cause selection
 - Solution development and selection decisions
 - Implementation plans and learning sessions
- Various exercises: group work and report out

Day 3

Full Day work on a case study to apply the structured problem analysis methodology, formulate the problem and produce timeline development and data analysis and reporting.

- Split in teams; exercise analysing and solving a problem
- Incident description and risk ranking
- Problem statement
- Timeline development and data analysis
- Cause and Effect Diagram
- Report out

Day 4

Full Day work on a 2nd case study, solution development and implementation plan

- Split in teams; exercise analysing and solving a problem
- Incident description and risk ranking
- Problem statement
- Timeline and data analysis
- Cause and Effect Diagram
- Failure scenarios and cause selection
- Solution development and Implementation plans
- Report out

Day 5

Lessons learned & any site specific subjects

- Presentation of case studies
- Lessons learned session
- Any client specific subject(s)
- Evaluation

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Because Experience Matters

Contact

Gary Hays

Organisation & People Practice Lead

Phone number: +31 (0) 6 55 838 162

Gary.Hays@petrogenium.com

Anna Kryzhanovskaya

Client Manager

Phone number: +31 (0) 6 30016327

Anna.Kryzhanovskaya@petrogenium.com

www.petrogenium.com

