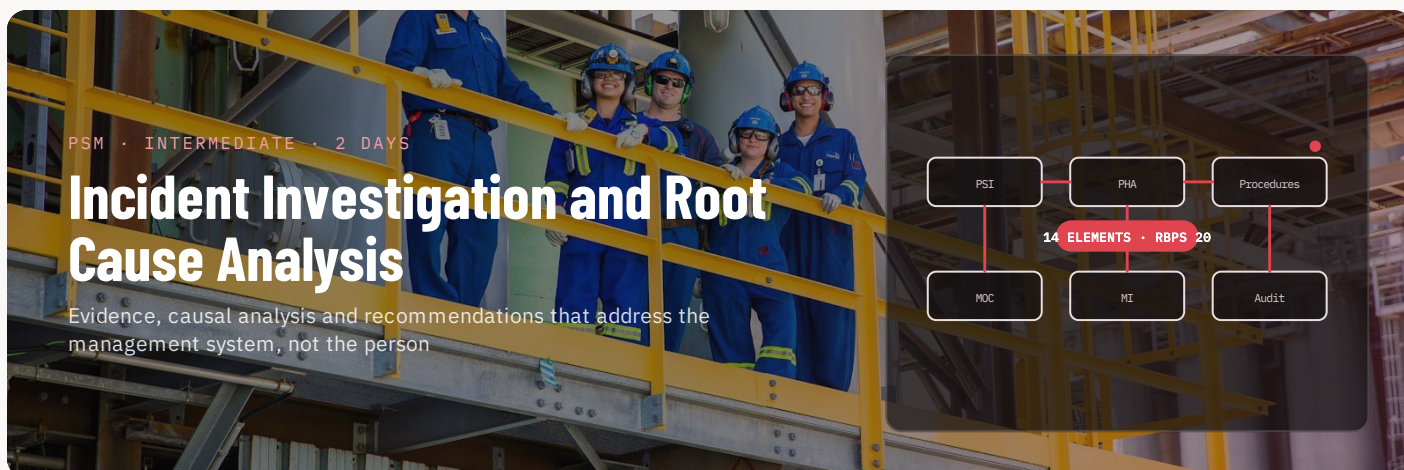
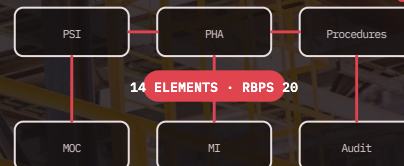




PSM · INTERMEDIATE · 2 DAYS

Incident Investigation and Root Cause Analysis

Evidence, causal analysis and recommendations that address the management system, not the person



DURATION
2 days

LEVEL
Intermediate

FORMAT
On-site classroom · virtual instructor-led

LANGUAGE
English

MAX. PARTICIPANTS
16

2

full investigations run in class

4

RCA methods practised

CauseIQ

hands-on from evidence to report

Overview

Most investigations stop at the operator error and never reach the reason the error was possible. The course covers the full investigation cycle: initial response and evidence preservation, timeline construction, causal analysis with 5-Whys, fault tree and barrier analysis, then recommendations that are specific, verifiable and aimed at the management system. Two complete investigations are run in class, one on paper and one in CauseIQ, with reports written and critiqued.

Learning outcomes

- Meet the 1910.119(m) requirements: 48-hour start, team composition, report content, action tracking
- Secure and document physical, electronic and human evidence, including historian and logbook data
- Build a timeline that separates fact from inference
- Apply 5-Whys, fault tree and barrier analysis and know the limits of each
- Identify root causes in management systems and link them to PSM elements
- Write recommendations and reports that survive review and lead to change

Who should attend

Incident investigation team leaders and members; HSE, operations and maintenance engineers; PSM coordinators owning the investigation element

Course outline

DAY 1

Investigation-related lessons: CSB case studies · OSHA 1910.119(m) and near-miss reporting · initial response and evidence preservation · interviewing witnesses · historian and DCS data recovery · timeline construction · investigation 1 on paper

DAY 2

Causal analysis: 5-Whys, fault tree, barrier and bow-tie analysis · human factors in causation · root causes in management systems · recommendation quality and hierarchy of controls · report writing · investigation 2 in CauseIQ with PHA linkage · sharing lessons

Standards referenced

OSHA 29 CFR 1910.119(m)

CCPS Guidelines for Investigating Process Safety Incidents

CCPS Risk Based Process Safety

EI Human Factors Briefing Note 13 (Incident Investigation)

API RP 754

Tools & exercises

Timeline, causal analysis and reporting performed in CauseIQ

What's included

- ✓ Course manual and slide pack
- ✓ Software access for the course
- ✓ Post-course Q&A with the instructor
- ✓ Exercise and case-study pack
- ✓ Competency quiz and certificate
- ✓ Templates used in the exercises

PREREQUISITES

None; prior incident investigation participation helpful

CERTIFICATION

Certificate of completion; qualifies participants as investigation team members on the training matrix

INSTRUCTORS

Practising engineers — TÜV HAZOP Leader, CCPS and IEC 61511 Functional Safety certified — with 200+ years of cumulative plant experience.

Book this course or build a custom curriculum

On-site at your plant or virtual · in-house groups · competency assessment included

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