

Founded in 1980, the Radiation Safety Institute of Canada is an independent, national organization dedicated to promoting and advancing radiation safety in the workplace, in the environment and in the community. Our commitment to the principle of "good science in plain language®" underpins everything we do.

The Radiation Safety Institute of Canada is incorporated under the laws of Canada as a not-for-profit corporation and is also a registered charity

## INSTRUCTOR INFORMATION

**PRINCIPAL INSTRUCTOR** | Dr. Michael Quinn has invested over 40 years into the public health and safety of the nuclear industry operations, entailing 25 years in power block operations at two nuclear power stations. He earned a US NRC Senior Reactor Operator License on a PWR. Over the past 16 years he has been a consultant to the nuclear industry, engaged in the safe operation of nuclear units, as well as in the new build, refurbishment and decommissioning sectors of the nuclear industry while consulting to more than two dozen nuclear units and facilities in the US and Canada.

Michael conducts assessments on operational/ organizational events and investigates contractor incidents at nuclear power facilities, performs root cause evaluation on significant events, and has led recovery project management for nuclear licensees and suppliers. He has provided root cause training to nuclear station staff, large suppliers (e.g., NSSS and reactor plants), small nuclear suppliers (e.g., refurbishment, new builds), labour providers to nuclear projects, regulatory agencies (US Nuclear Regulatory Commission, Japan Nuclear Regulation Authority), and to non-nuclear high reliability organizations.

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### National Education Centre

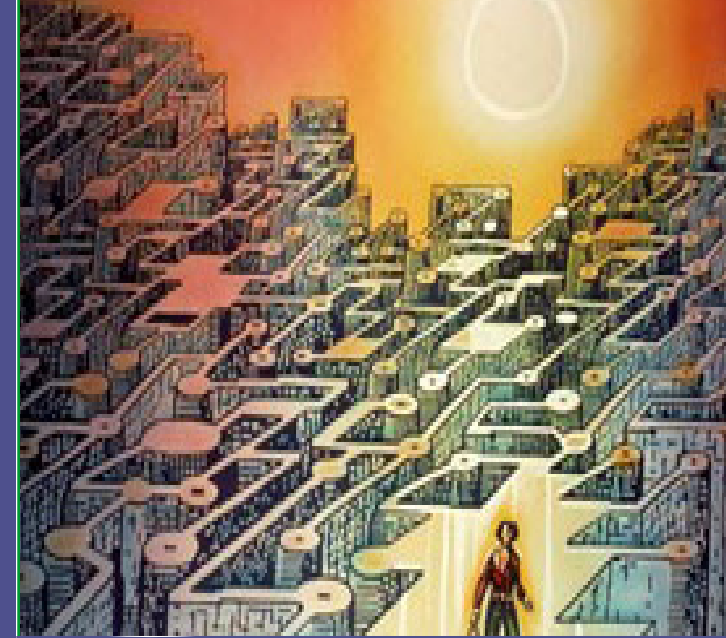
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## 2017 ROOT CAUSE ANALYSIS INVESTIGATION

Engage proven techniques to conduct causal analysis for high consequence/ high significance events



## REGISTRATION FORM

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

### 2017 ROOT CAUSE ANALYSIS EXECUTION COURSE (5 day):

For regular course schedule and information go to [www.radiationsafety.ca](http://www.radiationsafety.ca)

### Location:

RSIC National Office, 165 Avenue Road, Suite 300, Toronto, ON M5R 3S4

Course is available as an on-site option, call us today for a quote

### Four Convenient Ways To Register

Web | [www.radiationsafety.ca](http://www.radiationsafety.ca)  
 E-mail | [info@radiationsafety.ca](mailto:info@radiationsafety.ca)  
 Phone | 416-650-9090 ext. 21  
 Fax | 416-650-9920

**COURSE DESCRIPTION** | Unexpected events in a nuclear project frequently have significant consequences - delays, dose, rework, disruptions, discharges, dollars . . . and much worse.

In this comprehensive five-day course, participants will learn and engage proven techniques for conducting focused and effective causal analysis reports for nuclear power industry events, conditions or trends that have high consequences and/ or high significance outcomes.

The student will learn about and engage the essential investigation skills necessary to enable that the direct and underlying event and organizational factors have been sufficiently and effectively investigated; and that specific, measurable, attainable, relevant, and timely corrective actions have been developed, with the intent of significantly reducing the probability of recurrence of the same or similar event.

**WHO SHOULD ATTEND** | This course is intended for Causal Analysts, Project Managers in nuclear supplier organizations, Operations, Maintenance and Radiation Protection Management, Safety Officers, Labour Management, General Managers, Project Oversight Assessors, Contractors who rely on the licensee to do their root causes; and notably nuclear organizations and supplier groups who are experiencing frequent consequential events and/ or close calls while supporting a nuclear facility's major project.

**COURSE CURRICULUM** | Participants will engage in:

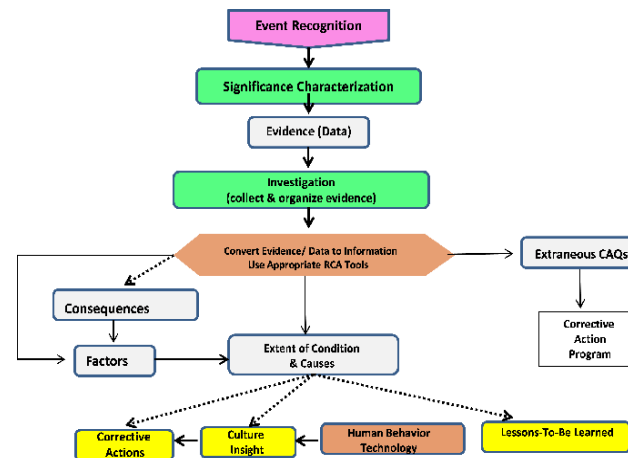
1. Planning, organizing, and controlling a root cause assessment
2. Selecting appropriate systematic methodologies
3. Determining the depth of the root cause evaluation needed
4. Determining the role of prior occurrences and related factors
5. Developing extent of condition and extent of cause analyses
6. Assessing safety culture
7. Drawing and demonstrating linkage among the factors
8. Developing SMART corrective actions
9. Learning to prioritize corrective actions with consideration of risk significance and regulatory compliance

**THE PHOENIX METHOD** | The Phoenix Method is a business-oriented, consequence-focused, significance-driven investigation process successfully applied for over 25 years in organizations and industries with a strong desire to avoid repeating mistakes and to prevent serious accidents or events from recurring. The Phoenix Method may be utilized to evaluate any event for which the adverse consequences can be defined . . . .

"If the pain is describable, the Phoenix Method is applicable."

### ENVIRONMENTS IN WHICH THE PHOENIX ROOT CAUSE METHOD HAS BEEN APPLIED |

- Nuclear Power Stations
- Nuclear Suppliers
- Commissioning
- Radiation Protection
- Work Protection
- Transportation
- Natural Gas/ Offshore Oil Platforms
- Government Agencies
- Electrical Distribution
- Fossil Power Generation
- Chemical Processing
- Manufacturing/ Mining/ Drilling
- Commissioning/ Decommissioning
- Finance and Accounting
- Contamination (internal/ environmental)
- Radiological/ Licensed Materials



Adapted from Drs. William Carcoran and Richard Hartley 8-21-07