



## **Live-Training Webinar on Evaluation of RCA reports and Precursor Analysis**

**From 22<sup>nd</sup> to 26<sup>th</sup> March 2021**

### **BACKGROUND**

The European Network on Operational Experience Feedback (OEF) for Nuclear Power Plants, called “the EU Clearinghouse”, is organized as a network operated by a central office located at Petten (The Netherlands) that is part of the Joint Research Centre (JRC) of the European Commission. It gathers European safety authorities, technical support organisations and international organizations. Since its founding in 2008 the EU Clearinghouse provided products and services to its members and to wider nuclear community. Products and services include technical and scientific work to disseminate the lessons learned from past operating experience, background research in OEF, topical operational experience reports, training, etc.

### **COURSE OBJECTIVE**

This training is aimed to provide attendees with the following abilities:

- To be able to evaluate and use a Root Cause Analysis (RCA) report prepared by a licensee.
- To understand the objectives of Precursor Analysis, as well as their pre-requisites, potentials and limitations.
- To understand the synergies between deterministic and probabilistic approaches in the analysis of operational events.



## **SCOPE OF THE COURSE**

The following topics will be covered by the course:

### **A) Evaluation of root cause analysis reports (22<sup>nd</sup> and 23<sup>rd</sup> March)**

- Evaluating the extent of condition. A full examination of what belongs in a complete extent of condition and extent of cause evaluation.
- Safety culture. What to look for in the evaluation of safety culture in a licensee root cause report.
- Corrective actions. Criteria for evaluating licensee corrective actions, evaluating appropriateness of corrective actions.
- Effectiveness of corrective actions. The key differences between action completion and action effectiveness. How to measure effectiveness of corrective actions.

### **B) Precursor analysis (24<sup>th</sup> and 25<sup>th</sup> March)**

- PSA-based event analysis. Overall concept and objectives. This introduction should be suitable for participants who have professional experience in operating experience, and who need to use PSA model for different purposes, but who have no deep knowledge of PSA, and no need to carry out precursor analysis by themselves.
- Event screening. Pre-requisites to use the precursor analysis (on the PSA model and on the event information). PSA models may differ significantly, and even the level of detail in the model may vary widely among different systems within the same PSA model. This part of the course should cover these issues, and discussions on the relevance of the PSA model at hand.
- Event Mapping. How to model the event into the PSA model
- What-if scenarios. Evaluation of what could have happened in alternative scenarios: variations in plant operational state, equipment availability, operator performance, event location, etc.
- Interpretation of results. How to draw lessons and insights from the precursor analysis, interpretation of the conditional core damage probability.

### **C) Synergies (26<sup>th</sup> March)**

How to use the RCA findings and event reports to create inputs and scenarios for precursor analysis. How to use the precursor analysis to determine the safety significance of the event. Relation with INES rating.

The training course will be delivered by five recognized senior experts in the field: Mr. Milorad Dusic, Mr. Dorian Conger, Mr. Ivan Vrbanic, Mr. Enrique Melendez and Mr. Bruno Glaser.



## **TARGET PROFILE OF PARTICIPANTS**

- Staff from regulatory body or TSO
- Professional experience in OPEX (as regulator or utility)
- Familiar with overall PSA models and scope, but not a PSA practitioner
- No previous knowledge on precursor analysis
- Participants will be nuclear safety professionals with skills in operating experience, who need to use/review Root Cause Analyses and PSA models and tools developed by others from the regulatory body point of view.

## **VENUE AND DATES**

The training will be delivered as a live-training webinar, using the MS TEAMS platform, organized by the Joint Research Centre of the European Commission in Petten, The Netherlands, from 22<sup>nd</sup> to 26<sup>th</sup> March, 2021. The webinar will be conducted from 11 AM to 3 PM with one hour break for lunch.

The registration to the course will be open from January 18<sup>th</sup> until February 28<sup>th</sup> 2021. The participation in this training course is free of charge. The number of places for the course is 25.

## **LANGUAGE**

The training course language will be English.