

## Glossary

### Probabilistic Risk Assessment (PRA)

This is a method subject to the equipment and systems making up the facility, which allows comprehensive and systematic analysis / evaluation of events that can occur (accidents, failures), comprehensive extraction of the accident's sequence, as well as the quantitative evaluation of the frequency of occurrence for each accident and the size of the damage if it occurs. By conducting PRA for the nuclear power station, knowledge related to the advantages and disadvantages of operation and design of nuclear power stations is obtained. This enables to understand expected results, sensitivities, significant scopes, as well as the scopes of system interaction and uncertainty, thereby making it possible to identify scenarios important for risks.

(Note) There is PRA of the following three levels.

Level 1PRA : PRA for conducting up to evaluation of reactor core damage frequency

Level 2PRA : PRA that includes containment vessel response evaluations, and applies results from the Level 1 PRA for conducting up to evaluation of emissions and frequency of occurrence of accident sequences in which a large amount of radioactive materials are released into the environment.

Level 3PRA : PRA for conducting up to evaluations of risks posed to the public, based on the amount of radioactive material released into the environment and the frequency of occurrence obtained from the Level 2

(Nuclear and Industrial Safety Agency / Japan Nuclear Energy Safety Organization "Quality Guidelines for Probabilistic Safety Assessment (PSA) in Nuclear Power Stations (Trial Ver.)" April 2006, U.S. Nuclear Regulatory Commission Glossary, "IAEA Safety Glossary: Terminology Used in Nuclear Safety and Radiation Protection" 2007 Edition)

### Cliff edge

Situations in which a simultaneous loss of a wide range of safety functions occur due to common causes, resulting in a fatal situation. This takes place when a load over a certain size is exerted, as

in the tsunami at the TEPCO Fukushima Daiichi Nuclear Power Station accident which that greatly exceeded design expectations.

(Atomic Energy Society of Japan Accident Investigation Commission Final Report Appendix 1. Glossary)

## **Risk**

Risk is the composite answer to the following three questions:

- “What kind of adverse situation is possible?”
- “How prone is that situation to occur?”
- “What is the impact if it occurred?”

These three questions allows to understand expected results, sensitivities, significant scopes, as well as the scopes of system interaction and uncertainty, thus making it possible to identify scenarios important for risks. (Nuclear Regulatory Commission Glossary)

## **Risk communication**

Bidirectional information exchange regarding risks, conducted between risk evaluators, risk managers, news media, stakeholders and the general public (health and environment).

(“World Health Organization (WHO) International Programme on Chemical Safety (IPCS) Risk Assessment Terminology” 2004)

## **Risk management**

Activities for the proper management of various internal and external risks related to business conducted for managing companies, in order to maintain and increase company value.

(Partial revision of the Ministry of Economy, Trade and Industry “INTERNAL CONTROL IN THE NEW ERA OF RISKS ~ Guidelines for Internal Control That Functions Together with Risk Management ~” Study Group on Risk Management and Internal Control, June, 2003)