

DESIGN AND LICENSING BASIS

Computer Based Training Module



ABSTRACT

This CBT is a detailed, comprehensive, generic overview of both the technical background and current regulatory requirements for the design and licensing basis applicable to nuclear power stations. The primary learning objective of this CBT is for the trainee to become familiar with the requirements that defined the design of various reactor types, the general requirements and related documentation of each plant's specific licensing basis, and the relationship between the two. Information provided in the CBT is applicable to both Pressurized Water Reactors (PWR) and Boiling Water Reactors (BWR) designs. The controls needed for updating the design and licensing basis for each nuclear site is also presented. There are no prerequisite CBTs that need to be completed prior to taking this CBT



INTENDED AUDIENCE

1. Experienced nuclear plant engineers who are responsible for updating or evaluating their sites design and licensing basis documentation or whose projects or programs could impact their sites design or licensing basis.
2. Site engineering Managers or Supervisors, who require a high-level understanding of the Design or Licensing Basis at their sites, including documentation requirements and change controls.



DURATION

- 4.25 hours
- An additional 8-10 hours for Reading materials provided within the CBT

TERMINAL LEARNING OBJECTIVES

1. Demonstrate a working knowledge of the constituent parts of a nuclear power plant's licensing and design bases as described by 10 CFR 54.3 and 10 CFR 50.2.
2. Explain the requirements for complying with the plant licensing and design bases.
3. Identify conditions that require a revision to the nuclear plant's licensing and design bases.
4. Evaluate non-compliance examples from the industry for regulatory consequences.

KEY INDUSTRY DOCUMENTS

1. NEI 97-04, Revision 1
2. IEEE 379-2000
3. Regulatory Guide 1.53, Revision 2
4. COMSECY-14-0037: Enclosure 1
5. Regulatory Guide 1.206
6. ANS Glossary of Definitions and Terminology
7. Regulatory Guide 1.26
8. Regulatory Guide 1.29
9. Regulatory Guide 1.143
10. 10 CFR 50.69
11. 10 CFR 50.55 a, Codes and Standards
12. 10 CFR Part 50 Appendix A
13. 10 CFR 2.202
14. 10 CFR 50.12
15. 10 CFR 50.34
16. 10 CFR 50.36
17. 10 CFR 50.9
18. NUREG 0800, Standard Review Plan
19. NUREG-1930
20. NEI 99-04, Revision 0
21. Regulatory Guide 1.147
22. NRC Inspection Manual
23. RIS 2005-20, Revision 2
24. NUMARC 93-01
25. NEI 96-07, Revision 1
26. NEI 06-02, Revision 2
27. LR-N18-0038
28. NEI Whitepaper: Second License Renewal
29. NEI 12-06, Revision 1
30. NUREG 1913, Design Control
31. ANSI/ANS-58.14-201
32. Regulatory Guide 1.28
33. Regulatory Guide 1.33
34. Regulatory Guide 1.186
35. Regulatory Guide 1.100
36. INPO Event Report 13-10