ADDITIONAL STANDARDS FOR LICENSES, CERTIFICATIONS, AND REGULATORY APPROVALS

§ 50.120 Training and qualification of nuclear power plant personnel.

(a) *Applicability.* The requirements of this section apply to each applicant for and each holder of an operating license issued under this part and each holder of a combined license issued under part 52 of this chapter for a nuclear power plant of the type specified in § 50.21(b) or § 50.22.

(b) *Requirements.* (1)(i) Each nuclear power plant operating license applicant, by 18 months prior to fuel load, and each holder of an operating license shall establish, implement, and maintain a training program that meets the requirements of paragraphs (b)(2) and (b)(3) of this section.

(ii) Each holder of a combined license shall establish, implement, and maintain the training program that meets the requirements of paragraphs (b)(2) and (b)(3) of this section, as described in the final safety analysis report no later than 18 months before the scheduled date for initial loading of fuel.

(2) The training program must be derived from a systems approach to training as defined in 10 CFR 55.4, and must provide for the training and qualification of the following categories of nuclear power plant personnel:

(i) Non-licensed operator.

(ii) Shift supervisor.

(iii) Shift technical advisor.

(iv) Instrument and control technician.

(v) Electrical maintenance personnel.

(vi) Mechanical maintenance personnel.

(vii) Radiological protection technician.

(viii) Chemistry technician.

(ix) Engineering support personnel.

(3) The training program must incorporate the instructional requirements necessary to provide qualified personnel to operate and maintain the facility in a safe manner in all modes of operation. The training program must be developed to be in compliance with the facility license, including all technical specifications and applicable regulations. The training program must be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements. The training program must be periodically reviewed by licensee management for effectiveness. Sufficient records must be maintained by the licensee to maintain program integrity and kept available for NRC inspection to verify the adequacy of the program.

[72 FR 49505, Aug. 28, 2007]

§ 50.150 Aircraft impact assessment.

(a) *Assessment requirements.* (1) *Assessment.* Each applicant listed in paragraph (a)(3) shall perform a design-specific assessment of the effects on the facility of the impact of a large, commercial aircraft. Using realistic analyses, the applicant shall identify and incorporate into the design those design features and functional capabilities to show that, with reduced use of operator actions:

(i) The reactor core remains cooled, or the containment remains intact; and

(ii) spent fuel cooling or spent fuel pool integrity is maintained.

(2) *Aircraft impact characteristics.*[1] The assessment must be based on the beyond-design-basis impact of a large, commercial aircraft used for long distance flights in the United States, with aviation fuel loading typically used in such flights, and an impact speed and angle of impact considering the ability of both experienced and inexperienced pilots to control large, commercial aircraft at the low altitude representative of a nuclear power plant's low profile.

(3) *Applicability.* The requirements of paragraphs (a)(1) and (a)(2) of this section apply to applicants for:

(i) Construction permits for nuclear power reactors issued under this part after July 13, 2009;

(ii) Operating licenses for nuclear power reactors issued under this part for which a construction permit was issued after July 13, 2009;

(iii)(A) Standard design certifications issued under part 52 of this chapter after July 13, 2009;

[1] Changes to the detailed parameters on aircraft impact characteristics set forth in guidance shall be approved by the Commission.

(B) Renewal of standard design certifications in effect on July 13, 2009 which have not been amended to comply with the requirements of this section by the time of application for renewal;

(iv) Standard design approvals issued under part 52 of this chapter after July 13, 2009;

(v) Combined licenses issued under part 52 of this chapter that:

(A) Do not reference a standard design certification, standard design approval, or manufactured reactor; or

(B) Reference a standard design certification issued before July 13, 2009 which has not been amended to address the requirements of this section; and

(vi) Manufacturing licenses issued under part 52 of this chapter that:

(A) Do not reference a standard design certification or standard design approval; or

(B) Reference a standard design certification issued before July 13, 2009 which has not been amended to address the requirements of this section.

(b) *Content of application.* For applicants identified in paragraph (a)(3) of this section, the preliminary or final safety analysis report, as applicable, must include a description of:

(1) The design features and functional capabilities identified in paragraph (a)(1) of this section; and

(2) How the design features and functional capabilities identified in paragraph (a)(1) of this section meet the assessment requirements in paragraph (a)(1) of this section.

(c) *Control of changes.* (1) For construction permits which are subject to paragraph (a) of this section, if the permit holder changes the information required by 10 CFR 50.34(a)(13) to be included in the preliminary safety analysis report, then the permit holder shall consider the effect of the changed feature or capability on the original assessment required by 10 CFR 50.150(a) and amend the information required by 10 CFR 50.34(a)(13) to be included in the preliminary safety analysis report to describe how the modified design features and functional capabilities continue to meet the assessment requirements in paragraph (a)(1) of this section.

(2) For operating licenses which are subject to paragraph (a) of this section, if the licensee changes the information required by 10 CFR 50.34(b)(12) to be included in the final safety analysis report, then the licensee shall consider the effect of the changed feature or capability on the original assessment required by 10 CFR 50.150(a) and amend the information required by 10 CFR 50.34(b)(12) to be included in the final safety analysis report to describe how the modified design features and functional capabilities continue to meet the assessment requirements in paragraph (a)(1) of this section.

(3) For standard design certifications which are subject to paragraph (a) of this section, generic changes to the information required by 10 CFR 52.47(a)(28) to be included in the final safety analysis report are governed by the applicable requirements of 10 CFR 52.63.

(4)(i) For combined licenses which are subject to paragraph (a) of this section, if the licensee changes the information required by 10 CFR 52.79(a)(47) to be included in the final safety analysis report, then the licensee shall consider the effect of the changed feature or capability on the original assessment required by 10 CFR 50.150(a) and amend the information required by 10 CFR 52.79(a)(47) to be included in the final safety analysis report to describe how the modified design features and functional capabilities continue to meet the assessment requirements in paragraph (a)(1) of this section.

(ii) For combined licenses which are not subject to paragraph (a) of this section but reference a standard design certification which is subject to paragraph (a) of this section, proposed departures from the information required by 10 CFR 52.47(a)(28) to be included in the final safety analysis report for the referenced standard design certification are governed by the change control requirements in the applicable design certification rule.

(iii) For combined licenses which are not subject to paragraph (a) of this section but reference a manufactured reactor which is subject to paragraph (a) of this section, proposed departures from the information required by 10 CFR 52.157(f)(32) to be included in the final safety analysis report for the manufacturing license are governed by the applicable requirements in 10 CFR 52.171(b)(2).

(5)(i) For manufacturing licenses which are subject to paragraph (a) of this section, generic changes to the information required by 10 CFR 52.157(f)(32) to be included in the final safety analysis report are governed by the applicable requirements of 10 CFR 52.171.

(ii) For manufacturing licenses which are not subject to paragraph (a) of this section but reference a standard design certification which is subject to paragraph (a) of this section, proposed departures from the information required by 10 CFR 52.47(a)(28) to be included in the final safety analysis report for the referenced standard design certification are governed by the change control requirements in the applicable design certification rule.

[74 FR 28146, June 12, 2009]

APPENDIX A TO PART 50—GENERAL DESIGN CRITERIA FOR NUCLEAR POWER PLANTS

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