

**§§ 1724.33–1724.39**

provided the following conditions are met:

(1) The inspection by the subordinate is satisfactory to the borrower;

(2) This practice is acceptable under applicable requirements of the States in which the facilities are located;

(3) The subordinate is experienced in making such inspections;

(4) The name of the person making the inspection is included in the certification; and

(5) The licensed engineer signs such certification which appears on the inventory of work orders.

(b) The inspection shall include a representative and sufficient amount of construction listed on each RUS Form 219, Inventory of Work Orders (or comparable form), being inspected to assure the engineer that the construction is acceptable. Each work order that was field inspected shall be indicated on RUS Form 219 (or comparable form.) The inspection services shall include, but not be limited to, the following:

(1) Determination that construction conforms to RUS specifications and standards and to the requirements of the National Electrical Safety Code (NESC), State codes, and local codes;

(2) Determination that the staking sheets or as-built drawings represent the construction completed and inspected;

(3) Preparation of a list of construction clean-up notes and staking sheet discrepancies to be furnished to the owner to permit correction of construction, staking sheets, other records, and work order inventories;

(4) Reinspection of construction corrected as a result of the engineer's report;

(5) Noting, initialing, and dating the staking or structure sheets or as-built drawings and noting the corresponding work order entry for line construction; and

(6) Noting, initialing, and dating the as-built drawings or sketches for generating plants, substations, and other major facilities.

(c) *Certification.* (1) The following certification must appear on all inventories of work orders:

I hereby certify that sufficient inspection has been made of the construction reported by this inventory to give me reasonable as-

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urance that the construction complies with applicable specifications and standards and meets appropriate code requirements as to strength and safety. This certification is in accordance with acceptable engineering practice.

(2) A certification must also include the name of the inspector, name of the firm, signature of the licensed engineer, the engineer's State license number, and the date of signature.

**§§ 1724.33–1724.39 [Reserved]**

**Subpart D—Electric System Planning**

**§ 1724.40 General.**

Borrowers shall have ongoing, integrated planning to determine their short-term and long-term needs for plant additions, improvements, replacements, and retirements for their electric systems. The primary components of the planning system consist of long-range engineering plans and construction work plans. Long-range engineering plans identify plant investments required over a long-range period, 10 years or more. Construction work plans specify and document plant requirements for a shorter term, 2 to 4 years. Long-range engineering plans and construction work plans shall be in accordance with part 1710, subpart F, of this chapter. See also RUS Bulletins 1724D-101A, Electric System Long-Range Planning Guide, and 1724D-101B, System Planning Guide, Construction Work Plans, for additional guidance. These bulletins are available from Program Development and Regulatory Analysis, Rural Utilities Service, U.S. Department of Agriculture, Stop 1522, 1400 Independence Ave., SW., Washington, DC 20250-1522.

**§§ 1724.41–1724.49 [Reserved]**

**Subpart E—Electric System Design**

**§ 1724.50 Compliance with National Electrical Safety Code (NESC).**

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) A borrower shall ensure that its electric system, including all electric

distribution, transmission, and generating facilities, is designed, constructed, operated, and maintained in accordance with all applicable provisions of the most current and accepted criteria of the National Electrical Safety Code (NESC) and all applicable and current electrical and safety requirements of any State or local governmental entity. Copies of the NESC may be obtained from the Institute of Electrical and Electronic Engineers, Inc., 445 Hoes Lane, Piscataway, NJ 08855. This requirement applies to the borrower's electric system regardless of the source of financing.

(b) Any electrical standard requirements established by RUS are in addition to, and not in substitution for or a modification of, the most current and accepted criteria of the NESC and any applicable electrical or safety requirements of any State or local governmental entity.

(c) Overhead distribution circuits shall be constructed with not less than the Grade C strength requirements as described in Section 26, Strength Requirements, of the NESC when subjected to the loads specified in NESC Section 25, Loadings for Grades B and C. Overhead transmission circuits shall be constructed with not less than the Grade B strength requirements as described in NESC Section 26.

#### § 1724.51 Design requirements.

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) *Distribution.* All distribution facilities must conform to the applicable RUS construction standards and utilize RUS accepted materials.

(b) *Transmission lines.* (1) All transmission line design data must be approved by RUS.

(2) Design data consists of all significant design features, including, but not limited to, transmission line design data summary, general description of terrain, right-of-way calculations, discussion concerning conductor and structure selection, conductor sag and tension information, design clearances, span limitations due to clearances, galloping or conductor separation, design loads, structure strength limitations,

insulator selection and design, guying requirements, and vibration considerations. For lines composed of steel or concrete poles, or steel towers, in which load information will be used to purchase the structures, the design data shall also include loading trees, structure configuration and selection, and a discussion concerning foundation selection.

(3) Line design data for uprating transmission lines to higher voltage levels or capacity must be approved by RUS.

(4) Transmission line design data which has received RUS approval in connection with a previous transmission line construction project for a particular borrower is considered approved by RUS for that borrower, provided that:

(i) The conditions on the project fall within the design data previously approved; and

(ii) No significant NESC revisions have occurred.

(c) *Substations.* (1) All substation design data must be approved by RUS.

(2) Design data consists of all significant design features, including, but not limited to, a discussion of site considerations, oil spill prevention measures, design considerations covering voltage, capacity, shielding, clearances, number of low and high voltage phases, major equipment, foundation design parameters, design loads for line support structures and the control house, seismic considerations, corrosion, grounding, protective relaying, and AC and DC auxiliary systems. Reference to applicable safety codes and construction standards are also to be included.

(3) Substation design data which has received RUS approval in connection with a previous substation construction project for a particular borrower is considered approved by RUS for that borrower, provided that:

(i) The conditions on the project fall within the design data previously approved; and

(ii) No significant NESC revisions have occurred.

(d) *Generating facilities.* (1) This section covers all portions of a generating plant including plant buildings, the generator step-up transformer, and the