§ 222.3 Clearances for power and communication lines over reservoirs.

(a) Purpose. This regulation prescribes the minimum vertical clearances to be provided when relocating existing or constructing new power and communication lines over waters of reservoir projects.

(b) Applicability. This regulation applies to all field operating agencies having Civil Works responsibilities.

(c) References. (1) ER 1180–1–1 (Section 73).

(d) Definitions—(1) Design high water level. The design high water level above which clearances are to be provided shall be either: (i) The elevation of the envelope profile of the 50 year flood, or flood series, routed through the reservoir with a full conservation pool after 50 years of sedimentation, or (ii) the elevation of the top of the flood control pool, whichever is higher.

(2) Low point of line. The low point of the line shall be the elevation of the lowest point of the line taking into consideration all factors including temperature, loading and length of spans as outlined in the National Electrical Safety Code.

(3) Minimum vertical clearance. The minimum vertical clearance shall be the distance from the design high
water level (paragraph (d)(1) of this section) to the low point of the line (paragraph (d)(2) of this section).

(e) Required clearances. Minimum vertical clearances for power and communication lines over reservoirs shall not be less than required by section 23, rule 232 of the latest revision of the National Electrical Safety Code (ANSI C2).

(1) In general, minimum vertical clearances shall not be less than shown in Table 232–1, Item 7, of ANSI C2, even for reservoirs or areas not suitable for sailboating or where sailboating is prohibited.

(2) If clearances not in accordance with Table 232–1 of ANSI C2 are proposed, justification for the clearances should be provided.

(f) Navigable waters. For parts of reservoirs that are designated as navigable waters of the United States, greater clearances will be provided if so required. The clearances required over navigable waters are covered by 33 CFR 322.5(i)(2) and are not affected by this regulation.

§ 222.4 Reporting earthquake effects.

(a) Purpose. This regulation states policy, defines objectives, assigns functions, and establishes procedures for assuring the structural integrity and operational adequacy of major Civil Works structures following the occurrence of significant earthquakes. It primarily concerns damage surveys following the occurrences of earthquakes.

(b) Applicability. This regulation is applicable to all field operating agencies having Civil Works responsibilities.

(c) References. (1) ER 1110–2–100 (§ 222.2).

(2) ER 1110–2–1806.

(3) ER 1110–2–8150.

(4) ER 1130–2–419.

(5) State-of-the-Art for Assessing Earthquake Hazards in the United States—WES Miscellaneous Papers S–73–1—Reports 1 thru 14. Available from U.S. Army Engineer Waterways Experiment Station, P.O. Box 631, Vicksburg, Mississippi 39180.

(6) Policy. Civil Works structures which could be caused to fail or partially fail by an earthquake and whose failure or partial failure would endanger the lives of the public and/or cause substantial property damage, will be evaluated following potentially damaging earthquakes to insure their continued structural stability, safety and operational adequacy. These structures include dams, navigation locks, powerhouse, and appurtenant structures, (intakes, outlet works, buildings, tunnels, paved spillways) which are operated by the Corps of Engineers and for which the Corps is fully responsible. Also included are major levees, floodwalls, and similar facilities designed and constructed by the Corps of Engineers and for whose structural safety and stability the Corps has a public obligation to be aware of although not responsible for their maintenance and operation. The evaluation of these structures will be based upon post-earthquake inspections which will be conducted to detect conditions of significant structural distress and to provide a basis for timely initiation of restorative and remedial measures.

(e) Post-earthquake inspections and evaluation surveys—(1) Limitations of present knowledge. The design of structures for earthquake loading is limited by the infrequent opportunity to compare actual performance with the design. Damage which would affect the function of the project is unlikely if peak accelerations are below 0.1g.; but it cannot be assumed that a structure will not be damaged from earthquake loadings below that for which it was designed. Furthermore, earthquakes have occurred in several parts of the country where significant seismic activity had not been predicted by some seismic zoning maps. This indicates the possibility that earthquake induced loads may not have been adequately considered in the design of older structures.

(2) Types of reportable damage. Many types of structural damage can be induced by ground motion from earthquakes or from large nuclear blasts (which also tend to induce ground vibrations in the more damaging lower frequency ranges). Any post-earthquake change in appearance or functional capability of a major Civil Works structure should be evaluated