

REGULATORY ANALYSIS

DRAFT REGULATORY GUIDE DG-1245 DESIGN AND INSPECTION CRITERIA FOR WATER-CONTROL STRUCTURES ASSOCIATED WITH NUCLEAR POWER PLANTS”

(Proposed revision 2 of Regulatory Guide 1.127 dated March 1978)
(Rewrite and reissue of Draft Regulatory Guide DG-1245 dated January 2011)

Statement of Problem:

Since the release of revision 1 of RG 1.127 in March 1978 the Federal guidelines for safety and inspection of dams and other water control structures have undergone significant revision with no change in the RG. Consequently, the current RG does not provide applicants or licensees with the most up-to-date guidance on the inspection of water-control structures (e.g., dams, slopes, canals, reservoirs, and associated conveyance facilities) whose failure could trigger the failure of the plant’s emergency cooling systems or flood protection and endanger the plant.

Objective:

The NRC staff wants to provide applicants and licensees with the most current, up-to-date guidance for designing and inspecting water-control structures associated with nuclear power plants. Additionally, the NRC staff wants to provide applicants and licensees the opportunity to use the most modern testing equipment when developing an inservice inspection (ISI) and surveillance program for dams, slopes, canals, and other water-control structures associated with emergency cooling water systems or flood protection of nuclear power plants.

Alternative Approaches:

The NRC staff considered the following alternative approaches:

1. Do not revise RG 1.127
2. Withdraw RG 1.127
3. Revise RG 1.127

Alternative 1, Do Not Revise RG 1.127,

This alternative is considered the “no action alternative.” Under this alternative the NRC staff would take no action and would allow the current version of RG 1.127 to remain unchanged. This action allows an outdated document to remain in the NRC public library and does not address identified concerns with the current version of the RG.

Alternative 2, Withdraw RG 1.127,

Under this alternative the NRC would withdraw RG 1.127. This would eliminate the problems identified above and would remove the RG from the list of active guidance documents. This alternative would make it more difficult for applicants and licensees to develop an inservice inspection or surveillance program that complies with current Federal guidelines.

Alternate 3, Revise RG 1.127.

Under this alternative, the NRC would revise RG 1.127, taking into consideration the increased knowledge of dam inspection programs, advances in the technology available, and revisions to dam safety laws that have occurred since the previous revision.

This action would enhance public safety by providing a greater degree of assurance of dam integrity.

The impact to the NRC would be the costs associated with preparing and issuing the revision. The impact to the public would be the voluntary costs associated with reviewing and providing comments to the NRC during the public comment period. The value to NRC staff and its applicants would be the benefits associated with enhanced efficiency and effectiveness in using a common guidance document as the technical basis for license applications and other interactions between the NRC and its regulated entities.

Conclusion:

Based on this regulatory analysis, the NRC staff concludes that revision of RG 1.127 is warranted. The staff concludes that the proposed action will enhance dam safety for those reactor units that depend on a dam for backup power or cooling. It could also lead to cost savings for the industry, especially with regard to the increased efficiency of inspections and to the reduced cost for compliance derived from standard inspection plans.