

SUPPLEMENT TO SAFETY GUIDE 11

**INSTRUMENT LINES PENETRATING PRIMARY REACTOR CONTAINMENT
BACKFITTING CONSIDERATIONS**

D. Introduction

Safety Guide 11 describes the regulatory position concerning instrument lines penetrating primary reactor containment for present and future reactors. The purpose of this supplement is to provide guidance to applicants and licensees concerning possible backfitting with regard to these instrument lines. This supplement does not represent a requirement for backfitting; such requirements will be formulated on an individual case basis pursuant to § 50.109, "Backfitting," of CFR Part 50.

E. Regulatory Position

1. Plants for which a notice of hearing on application for construction permit was published on or after January 5, 1970, should conform to the regulatory position in the safety guide.
2. Plants for which a notice of hearing on application for construction permit was published between January 5, 1967, and December 30, 1969, should meet the following criteria as soon as practicable:
 - a. Each instrument line connected to the reactor coolant pressure boundary and penetrating containment should be sized or include an orifice such that if a postulated failure of the piping or of any component (including the postulated rupture of any valve body) in the line outside primary reactor containment occurs during normal reactor operation:
 - (1) the leakage is reduced to the maximum extent practical consistent with other safety requirements,
 - (2) the rate and extent of coolant

loss are within the capability of the reactor coolant makeup system,

- (3) the integrity and functional performance of secondary containment, if provided, and associated safety systems (e.g., filters, standby gas treatment system) will be maintained, and
 - (4) the potential offsite exposure will be substantially below the guidelines of 10 CFR Part 100.
- b. For each instrument line penetrating containment, including those connected to the containment atmosphere, some method of verifying during operation the status (open or closed) of each isolation valve should be provided.
3. Licensees of plants for which a notice of hearing on application for construction permit was published on or before December 30, 1966, should furnish to the regulatory staff a suitable analysis of the effects on the secondary containment, if provided, and associated safety systems of a postulated failure of the piping or of any component in an instrument line outside primary reactor containment. With respect to plants for which the integrity and functional performance of the secondary containment building and associated safety systems cannot be maintained under these postulated conditions, the licensee should provide protection equivalent to that described in regulatory position 2.a.(3) above as soon as practicable consistent with the reactor shutdown schedule.