

## SEISMICITY

The Savannah River Plant is located in an area where moderate damage might occur from earthquakes, based on earthquake risk predictions by the U. S. Coast and Geodetic Survey (Figure II-48).<sup>21</sup> The spatial distribution of South Carolina earthquakes, with respect to southern Appalachian seismicity, is shown in Figure II-49.<sup>22</sup> On the basis of three centuries of recorded history of earthquakes, an earthquake above an intensity of VII on the Modified Mercalli (MM) scale would not be expected at the Savannah River Plant. Average acceleration from Reference 23 for intensity VII corresponds to 0.13 g. During the past 100 years, the area within a 100-mile radius of the Savannah River Plant has experienced one shock of intensity X, one shock of intensity VIII, two shocks of intensity VII, and 12 shocks of intensity V MM. Seismic monitors, which were installed in SRP reactor buildings between 1952 and 1955, are set to alarm at 0.002 g (intensity II) and have never indicated an earthquake shock of this intensity since their installation. The design basis earthquake (DBE) for SRP incorporates an acceleration of 0.2 g.

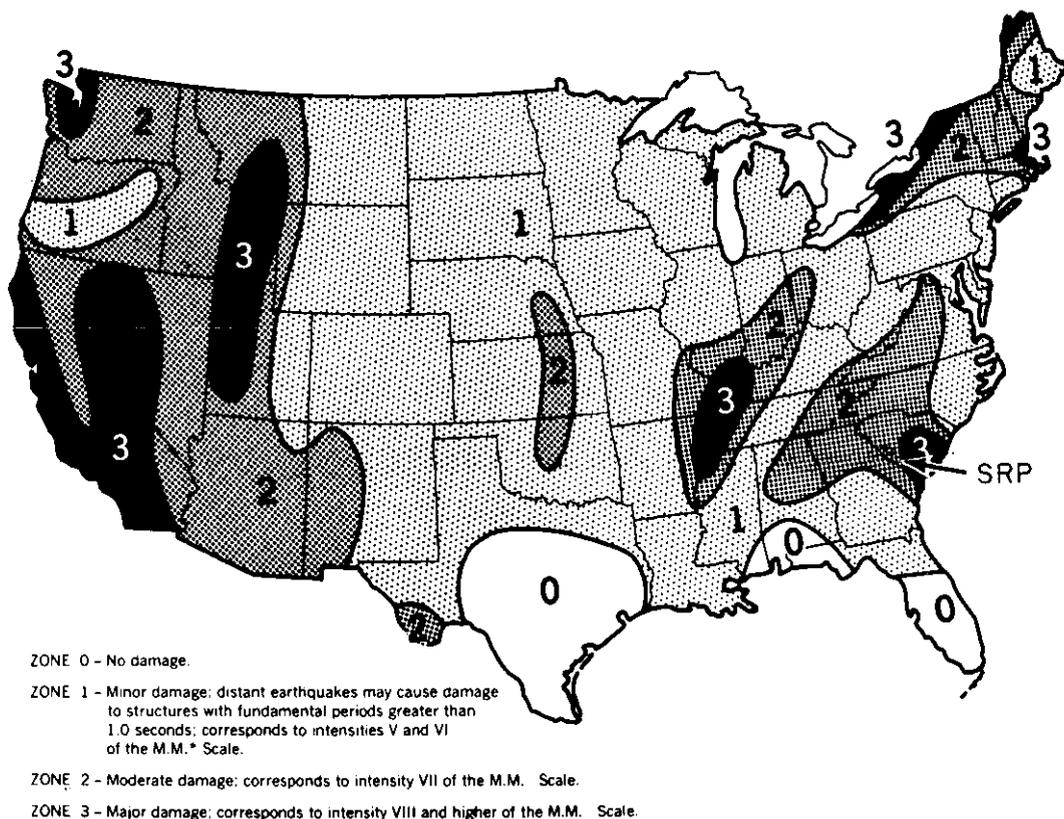


FIGURE II-48. Seismic Risk Map for United States