

Reclamation Building Seismic Safety Program

Guideline No. 2

Handbook for the Seismic Evaluation of Buildings: A Prestandard (FEMA-310) Procedures for Nonstructural Components—Supplemental Evaluation Checklists Fluid and Gas Piping (SP-58)

Date: July 20, 2000 (Editorially Revised March 15, 2007)

Background: Within FEMA-310, chapter 4, *Evaluation Phase (Tier 2)*, section 4.8, *Procedures for Nonstructural Components*, subsection 4.8.13, *Piping*, the component statement titled *Fluid and Gas Piping* reads as follows: "Fluid and gas piping shall be anchored and braced to the building structure in accordance with SP-58 (MSS, 1993)."

The Manufacturers Standardization Society of the Valve and Fitting Industry, Inc. (MSS) SP-58, 1993, has four companion standards—SP-69 and SP-89 (relating to hanger selection, application, fabrication, and installation) and SP-77 and SP-90 (pipe support contractual relationships and hanger terminology). The anchoring and bracing criteria for piping can be found in SP-69 (MSS, 1996).

Currently, per FEMA-310, table 3-2, page 3-6, this checklist item would need to be determined for buildings located in seismic zones: Moderate for IO and High for IO. Per the American Society of Civil Engineers (ASCE) (4th Ballot Version), this checklist item would need to be determined for buildings located in seismic zones: Moderate for IO and High for LS and IO.

Policy: If the inspector elects not to evaluate this component due to piping complexity, hidden piping, no accessibility, or any other reason, the evaluator should answer "non-compliant (N/C)" to the nonstructural checklist item. This should be reflected in FEMA-310, Report Sections 6.2 and 9.2, and should include the following statement:

► *Piping - Fluid and Gas Piping (FEMA-310, Subsection 4.8.13.3)*

This nonstructural checklist item was not verified because it was outside of the level of expertise of the assigned evaluator and should be thoroughly investigated by a qualified fluid and gas piping design professional.

Approved: July 2000

Note: IO = Immediate Occupancy Performance Level
LS = Life Safety Performance Level