

ATTACHMENT

LER 80-11/3L-2
Millstone Unit ?
Docket No. 50-336

EVENT DESCRIPTION

During power ascension on 3/13/80 following a full power plant trip, two broken pipe saddle clamp bolts were found on hydraulic snubber hanger 490008. This hanger is located on a main steam lead prior to the HP turbine. The plant was at 30% power and the power ascension was halted until the broken bolts (1-1/2" UNF capscrews) were replaced. All other hangers on the HP turbine steam leads were inspected satisfactorily.

Following another full power trip, with the plant at 99% power on 3/22/80, a broken saddle clamp bolt was found on hydraulic snubber hanger 490002. The bolt (1-3/4" UNC machine bolt) was replaced and inspection revealed no other broken bolts on similar hangers. Both bolts were carbon steel.

Following a plant shutdown, including a turbine trip, on 5/08/80 the second saddle clamp bolt on hydraulic snubber hanger 490002 was found broken. At this time the carbon steel bolts on all similar saddle clamps were replaced with "low alloy steel bolting material for high temperature service" (ASME A-193, Grade B7).

These events resulted in declaring hangers 490008 and 490002 inoperable and the plant was operated in accordance with Technical Specification Action Statement 3.7.8.1 in each case.

CAUSE DESCRIPTION

The bolt failures were caused by fatigue of the low carbon steel material. In each case, the final failure was a result of the impact loading of the turbine stop and control valves tripping. All saddle clamp bolts on similar hangers restraining the steam leads downstream of the turbine stop valves were replaced. The replacement bolting is low alloy steel bolting for high temperature service. (ASME A-193, Grade B7). The improved fatigue characteristics of this material should prevent recurrence.

There are no safety implications from these events in that these pipe supports are provided for a non-safety related purpose. The original hydraulic snubber Technical Specification submittal included all snubbers in the plant. A change is pending to include only safety-related snubbers.