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D. J. Skovholt, Assistant Director for Operating Reactors, L

MILLSTONE POINT COMPANY (MILLSTONE 1) - DOCKET NO. 50-245

As you know Regulatory Operations' inspectors are at the Millstone site and at General Electric Vallecitos following the investigations being conducted by the Licensee and the GE Company relating to the recent chloride contamination problem and the cracked feedwater spargers. Because of the potential importance of the issues involved, we intend to provide you with information periodically on our current findings.

This memorandum updates, as of November 1, 1972, the information provided in our "Notification of an Incident or Occurrence, Blue Sheet No. 70". Significant new information is as follows:

- A. RO inspectors were at the site on October 17, 20-21 and 27 and at Vallecitos on October 30 through November 1 to review the chloride incident and the resulting investigation being conducted by the licensee.
- B. Cracks were visually detected in all 4 feedwater spargers. The feedwater spargers are Type 304 stainless steel. The T-box portion of each sparger assembly and the attached thermal sleeve appear to be at least partially sensitized. The sparger with the largest cracks was removed from the reactor vessel on October 20 and has been shipped to Vallecitos (received on October 25, 1972) for metallurgical examination.
- C. On October 27, 1972, cracking through the full wall was also visually detected in the thermal sleeve area of one of the three feedwater spargers remaining at the site. Following this observation, it was decided to ship all feedwater sparger assemblies to Vallecitos for metallurgical examination.
- D. Fabrication and installation records failed to disclose whether the dished locations in the feedwater sparger end brackets (which hold the sparger in place) were machined during installation or worn by service conditions. If machined during installation, the

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design preload forces would have been reduced or eliminated which, in turn, could have contributed to premature fatigue failure of the spargers. This subject is under study by GE.

- E. Five other GE facilities have been identified as having feedwater spargers of the Millstone design. These are Dresden 2 and 3, Quad Cities 1 and 2, and Pilgrim. We do not plan any action regarding these facilities until the metallurgical analysis of the Millstone spargers has been completed.
- F. Visual and dye penetrant inspections of the structural parts of one fuel bundle shipped to Vallecitos for examination have disclosed a crack in one of the eight hold-down nuts. Metallurgical examinations of the other fuel bundle parts are in progress.
- G. GE's metallurgical studies of the LPRM chambers has disclosed mixed modes of cracking - both transgranular and intergranular.
- H. The licensee has decided to retube the main condensers (40,000 tubes) using Cu-Ni tubes instead of aluminum brass tubes. The licensee estimates that this work will require 55 days to complete.
- I. The licensee's program of inspection of reactor components is expected to be finalized by November 1, 1972.

We expect to receive preliminary information on the metallurgical studies from GE on November 3, 1972. Copies of photographs of the Millstone spargers showing the extent of cracking will be available on November 6 and will be forwarded to you.

Original signed by
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