

**From:** Edmund Sullivan *WRS*  
**To:** April Smith, Cheryl Khan, David Lew, Emmett Murphy, Jeff Shackelford, Jerome Blake, John Jacobson, John Tsao, Lee Ellershaw(...)  
**Date:** Thu, Feb 22, 2001 9:59 AM  
**Subject:** Fwd: HIGH FREQUENCY PLUS POINT

Thoughts on use of high frequency plus point from Ian Barnes are attached.

*Ian 5/5*

*(2)*  
*M* | *WRS*

**From:** "Ian Barnes" <tees@airmail.net>  
**To:** "Edmund J. Sullivan" <ejs@nrc.gov>  
**Date:** Thu, Feb 22, 2001 9:45 AM  
**Subject:** HIGH FREQUENCY PLUS POINT

Ted,

FYI, I followed up on use of high frequency plus point in recent outages with a private source. The information received was as follows:

Palo Verde, Unit 2 - No improvement noted  
Surry, Unit 2 - Only one tube tested  
Beaver Valley, Unit 2 - No documented assessment  
San Onofre, Unit 2 - No documented assessment

I don't know how to interpret "no documented assessment" for sure, but would (absent further information) infer the results were less than an unequivocal success and could be followed up at the workshop. If any of your staff believe that use of high frequency plus point is the panacea for noise problems in low radius u-bends, I believe they need some remedial education regarding the realities of tube manufacture and bending. We are in a scenario where many old units have been replaced and existing units have had relatively excellent secondary chemistry throughout their operating history. Use of the pilgering process for tube manufacture, which I believe is probably applicable to the majority of tubes in current steam generators, inherently creates an I.D. noise condition. Accordingly, use of a high frequency technique will not do anything to improve that state of affairs. I would suspect that controlled use of filtering techniques is ultimately the way for industry to proceed, but that is getting beyond my area of knowledge.

Thought for the day,

Ian