



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 1, 2006

Mr. Tom Gurdziel  
9 Twin Orchard Drive  
Oswego, NY 13126

Dear Mr. Gurdziel:

This letter is in response to your phone call to the U.S. Nuclear Regulatory Commission (NRC) on May 8, 2006, in which you stated to me that you were concerned about the steam dryer cracking at Quad Cities Nuclear Power Station. You believe that the main steam line flow restrictor location is a contributing factor to the cracking, and that dynamic energy reflecting back from the "T" in the main steam line increases the severity of cracking. You stated that if the flow restrictor is upstream of the "T," the reflected energy from the "T" is attenuated by the flow restrictor and cracking is reduced. You also stated that if the flow restrictor is downstream of the "T," the dynamic energy is transmitted back to the steam dryer, increasing the severity of cracking. You cited your experience at NMP-1, where you identified the restrictor was between the reactor and the "T" and there was very little cracking of the steam dryer.

I discussed your comments with the Engineering Mechanics Branch staff in the Office of Nuclear Reactor Regulation (NRR) Division of Engineering (DE). The NRR/DE staff agrees with your comment that the presence of flow restrictor in the main steam line may affect the acoustic pressure loading. The input to the Continuum Dynamics, Inc. (CDI) acoustic circuit analysis documented in the enclosed CDI Report #04-09P is the pressure fluctuation history which was measured in two locations at each of the main steam lines (MSL) between the reactor nozzle and the branch pipe connecting to the safety relief valve. The acoustic impact of the restrictor is captured in the MSL upper and lower acoustic pressure measurements at these two locations. If more energy is propagating upstream into the reactor pressure vessel and onto the dryer, you will see it in the amplitude and phasing relationships between those MSL acoustic signals. Very little cracking in the steam dryer was identified in NMP-1 because NMP-1 steam flow rate is not sufficiently high to cause an acoustic resonance that may damage the dryer.

Thank you for informing us of your concern. NRR/DE staff is aware of the potential contribution of flow restrictor location to steam dryer cracking. Therefore, we will not enter your concern into our formal allegation process. If we can be of any further assistance, please contact me at 1-800-368-5642.

Sincerely,

***/RA by G. C. Cwalina/***

Gregory C. Cwalina, Senior Allegation Coordinator  
Office of Nuclear Reactor Regulation

Enclosure: As stated

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