Memorandum

To: The Honorable Chairman Shirley Ann Jackson

From: Rosemary Bassilakis

Date: September 10, 1996

Subject: Carbon copy of letter to Mr. LaPlatney enclosed

We are enclosing a copy of a letter that Citizens Awareness Network recently sent to Mr. LaPlatney at the Haddam Neck (HN) nuclear reactor as we want to keep you informed on the very important issue of steam generator integrity. We believe that without extensive testing of HN's steam generators, any economic analysis for the reactor would be a gross misrepresentation to the Board of Directors and the public.

In addition to the financial aspects of steam generator integrity, extensive testing should be done for safety reasons. The Nuclear Regulatory Commission (NRC) reports cracking of steam generator tubes is surging in U.S. reactors. Cracking has been identified by the NRC as having serious safety implications because steam generator tubes constitute 50% of the reactor coolant pressure boundary. In simple terms, a multiple tube rupture in this system could result in a rapid loss of coolant accident in the reactor beyond the control of the Emergency Core Cooling System with the significant risk of catastrophic failure. And, because the steam generators are equipped with relief valves, a rupture of the primary coolant loop results in a release of radioactivity that bypasses the reactor's containment structure.

We would like for you to what you can to make sure extensive steam generator testing at the Haddam Neck reactor is done using the state-of-the-art plus point probe which can detect degradation in tubes where older probes could not.

Citizens Awareness Network Connecticut Chapter
54 Old Turnpike road, Haddam, CT 06438 (860) 345-8431

September 9, 1996

Mr. Jere LaPlatney
Haddam Neck Reactor
362 Injun Hollow Road
East Hampton, CT 06424-3099

Dear Mr. LaPlatney:

Citizens Awareness Network is aware that you are currently preceding with an economic analysis of the Haddam Neck (HN) Reactor to justify its continued operation. We believe that an analysis of its steam generator (SG) integrity must be part of any economic analysis. To adequately evaluate the SG's integrity, it is imperative to do comprehensive testing during **this** refueling outage (RFO 19). Comprehensive testing of the SGs must include extensive usage of the state-of-the-art Plus-Point Gimbaled Rotating probe which can detect degradation of tubes that is not readily apparent with the older probes as was evidenced at Maine Yankee.

The HN reactor has Westinghouse Model 27 SGs, with Inconel 600 tubes. Westinghouse SGs are known for premature aging: corroding, cracking and leaking. Thirteen utilities have filed law suit against this vendor.

Steam Generator testing during RFO 18 placed SG #2 in Category C-3 status as was required since more than 10 percent of the total tubes tested were degraded (14.7% of tested tubes degraded). Additionally, as of RFO 18, SG #2 and #4 had 64% and 70% respectively of the allowable number of tubes plugged.

As noted in the report titled "Haddam Neck Steam Generator Examination Category C-3 Special Report" which was enclosed with a letter from F. R. Dacimo to the NRC on March 22, 1995, "since first being detected at Haddam Neck in January 1986, Primary Water Stress Corrosion Cracking (PWSCC), continues to be the dominant reason for tubes requiring repair". Mr. Jack Strosnider, the Chief of Materials and Chemical Engineering Branch at NRR stated at the "Briefing by Staff On Steam Generator Issues" February 27, 1996, that "...stress corrosion cracking is a time-dependent phenomenon". He went on to say that PWSCC is catching up with plants and that it is not too dependent upon secondary water chemistry control and therefore it could affect plants regardless of how well their chemistry is controlled. At the same meeting, Mr. Brian Sheron, the Director of the Division of Engineering of NRR said when speaking about time-dependant degradation, that "What we are seeing is that when a plant now may go in and find a few indications on one outage, they'll go in the next outage and maybe find tens or maybe a couple hundred and

then the next outage or two they are going to see thousands".

Steam Generator status is relevant when considering the reactor's economic viability. Their replacement cost could be as high as 200 million dollars as was the case in the replacement of the SGs at Millstone Unit 2. In an April 1st, **1993** memo, John Opeka advised the NRC that "current preliminary economic evaluations of the HN plant preclude SG replacement". In addition SG status is relevant because extensive degradation of tubes would require 1) An increased reactor outage and all the associated costs with the purchase of replacement energy; 2) Should the tubes need to be re-sleeved as at Maine Yankee, the cost of re-sleeving; 3) Should the reactor's SGs reach the point where the allowable number of tube plugging has reached the technical specification maximum, the reactor will have to down power to accommodate the loss in heat transfer and will have less revenue from energy production.

Without an extensive investigation with plus-point probe testing of HN's SG, any economic analysis for the reactor would be a gross misrepresentation to the Board of Directors and the public.

Sincerely,

Rosemary Bassilakis
Research Director
Citizens Awareness Network

CC:

Chairwomen Shirley Jackson
HN Board of Directors
Haddam Selectpeople
CT Representative Terry Concannon
CT Senator Eileen Daily
US Representative Sam Gedjenson
US Senator Joe Lieberman
US Senator Christopher Dodd
Mark Guthrie, Reporter Middletown Press