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Mr. George Lear	Niagara Mohawk Power Corp. Syracuse, New York Donald P. Dise	12/16/77
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DESCRIPTION

Consists of info. concerning licensee's review of 304 & 316 austenitic stainless steel piping, fitting material & weld metal in the reactor coolant pressure boundary at Nine Mile Point.....w/att table listing the systems which are in non-compliance.....

ENCLOSURE

PLANT NAME: Nine Mile Point Unit No. 1
RJL 12/20/77 (2-P)+(1-P)

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NIAGARA MOHAWK

Donald P. Dise
Vice President
Engineering

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

December 16, 1977

Director of Nuclear Reactor Regulation
Attn: Mr. George Lear, Chief
Operating Reactors Branch #3
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Nine Mile Point Unit 1
Docket No. 50-220
DPR-63

Gentlemen:

Your letter of September 16, 1977 requested that all 304 and 316 austenitic stainless steel piping, fitting material and weld metal in the reactor coolant pressure boundary at Nine Mile Point Unit 1 be reviewed with respect to the requirements of NUREG-0313.

The results of this review indicate that piping and material used at Nine Mile Point Unit 1 do not comply fully with the requirements of NUREG-0313 for minimizing the susceptibility to stress corrosion cracking. Table 1 lists the systems which are in non-compliance.

With regard to intergranular stress corrosion cracking, "as-welded" Type 316 stainless steel should not be classified with Type 304 stainless steel. This conclusion is based on full-scale laboratory pipe tests and the fact that Niagara Mohawk is not aware of any instances where intergranular stress corrosion cracking has occurred in Type 316 stainless steel pressure boundary lines. Since our recirculation system is built of this Type 316 stainless steel, it is not planned to increase the inservice inspection associated with this system.

It is not practical to replace piping in the service sensitive systems listed in Table 1 because of the excessive occupational exposures that would be incurred and extensive work involved with primary containment penetrations. However, Niagara Mohawk plans to implement increased levels of inservice inspection as outlined in NUREG-0313 for systems built of Type 304 stainless steel and to adopt the model Technical Specification on leakage detection.

Since austenitic stainless steel piping has an inherent high material toughness, stress corrosion cracking will not cause a rapidly propagating failure. Therefore, implementation of increased inservice inspection and coolant boundary leakage detection will enhance the detection of cracks before they would propagate to create a significant safety hazard. Should any indications be found as a result of the above inspections, appropriate replacement schedules will be developed.

A license amendment dated December 16, 1977 covering both inservice inspection and leakage detection is being transmitted under separate cover.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

Donald P. Dise

DONALD P. DISE
Vice President-Engineering

PEF/szd

Attachment

TS 6 TABLE 11

REACTOR COOLANT PRESSURE BOUNDARY PIPING
CONTAINING 304 AND 316 STAINLESS STEEL

NON-SERVICE SENSITIVE

1. Reactor Recirculation
2. Clean-Up
3. Reactor Drain

SERVICE SENSITIVE

1. Core Spray
2. Shutdown Cooling
3. Emergency Condensers
4. Liquid Poison
5. Reactor Head Spray
6. Recirculation Bypass
7. Control Rod Drive Return
8. Reactor Instruments