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AUTH.NAME AUTHOR AFFILIATION
DISE,D.P. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation

SUBJECT: Forwards util assessment re potential breaks in response to NRC 790917 request,No instances which would increase consequences of any safety analysis rept events identified,

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NIAGARA MOHAWK

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

October 9, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

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

Your letter of September 17, 1979 requested information regarding potential breaks at Nine Mile Point Unit 1. The attached assessment provides our response. It also contains the more specific information requested by members of your staff, during a briefing on September 29, 1979.

The assessment has not identified any instances which would increase the consequences of any Safety Analysis Report events. In particular, the assessment concludes that:

(1) No previously identified safety actions would be negated by the failure of non-safety equipment due to environmental effects of high energy pipe breaks; and

(2) No previously identified safety limits would be violated by these effects.

In summary, this analysis is a re-evaluation of the potential impact on safety functions of high energy pipe breaks. It confirms our earlier findings of the consequences of postulated pipe breaks inside and outside the containment. The previously approved safety evaluations upon which our license was issued remain valid.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

Donald P. Dise

Donald P. Dise
Vice President, Engineering

DPD:bd

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STATE OF NEW YORK)
ss:
COUNTY OF ONONDAGA)

Donald P. Dise, being duly sworn says:

I am Vice President - Engineering, of Niagara Mohawk Power Corporation. I have read the foregoing letter. The facts contained in the letter and in the attachments are true to the best of my knowledge, information and belief.

Donald P. Dise

Donald P. Dise

Sworn to before me on
October 9 , 1979

Cynthia A. Petta

CYNTHIA A. PETTA
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4682225
My Commission Expires March 30, 1980

ASSESSMENT OF A POTENTIAL UNREVIEWED SAFETY QUESTION RELATED TO ADVERSE EFFECTS OF NON-SAFETY SYSTEMS ON SAFETY SYSTEMS DURING A HIGH ENERGY PIPE BREAK

Table 1 lists all non-safety related equipment/systems which were analyzed. As a first step, certain systems were eliminated from further evaluation. This applied if it was obvious that the system was located where it would not be environmentally affected by a high energy pipe break, or if its function was such that it could not affect safety related systems. The systems which were not excluded in this manner were considered in Table 2. The table classifies those remaining non-safety related systems as follows:

1 - Environmental induced malfunction may provide adverse impact (i.e. increase in previously reported peak drywell pressure, suppression pool pressure, suppression pool temperature, fuel clad temperature, or radiological release).

2 - Environmental induced malfunction will not provide an adverse effect on any safety related system.

3 - System is qualified for adverse environment of a high energy pipe break.

4 - System will not experience adverse environment of a high energy pipe break.

Our analysis has found no non-safety related system which could adversely affect a safety related system as a result of a high energy pipe break. The non-safety related systems which can be environmentally affected either will not provide an adverse effect on any safety related systems or are qualified for this adverse environment.

Table 1

Non-Safety Related Systems Investigated

System	Systems Whose Malfunction Cannot Affect Plant Safety Response
Reactor Building Closed Loop Cooling (inside drywell)	
Breathing Air	X
Service Air	X
Lighting System	X
Communication Systems	X
Drywell Floor Drain and Equipment Drain Sumps	
Equipment Drain Piping	X
Drywell Temperature Monitoring	X
Reactor Recirculation Pump & Valve Controls	
Reactor Recirculation Flow Control	
Control Rod Drive Hydraulic System (non-scram)	
TIP System	
Rod Position Information System	
Drywell Air Coolers (and drains)	
Leak Detection Drains (valve stems, etc.)	
Under Vessel Maintenance Equipment	X
Feedwater Control System	
Condensate and Feedwater System	
Steam Pressure Control	
Fuel Handling Equipment	X
Reactor Water Cleanup System	
Off-gas	X
Reactor Protection System Power Supply	
Reactor Manual Control System	
Radwaste System	X
Turbine Building Crane	X
Process Computer	X
Area Radiation Monitors	X
Process Radiation Monitor	X
Turbine Control System	
Circulating Water System	
Condensate Transfer and Storage (portions non-safety related)	
Sampling Systems	X
AC Auxilliary Elect. System	
Non-IE Battery System	N/A
HVAC General	
Extraction Steam	X
Maintenance Monorails	X
Fire Protection System	
Suppression Pool Temperature Monitors	
Suppression Pool Water Level	
Environs Monitoring	X

Currently unqualified instrument but have committed to installing qualified safety related instruments during spring 1981 refueling outage.

Table 1 (Continued)

System	Systems Whose Malfunction Cannot Affect Plant Safety Response
Demineralized Water	X
Potable Water	X
Screen Wash	X
Hydrogen Cooling	X
Condenser Priming System	X
Turbine Building Closed Loop Cooling Water	X
Stator Cooling	X
Reactor Vessel Head Vent (safety related on Nine Mile Point Unit 1)	
Condenser and Controls	
Turbine Building Sumps and Drain	X
Seal Water	X
City Water	X
Laboratory Drains	X
Turbine Oil Storage	X

TABLE 2

CLASSIFICATION OF ENVIRONMENTAL EFFECTS*

NON SAFETY RELATED SYSTEMS	Location	LINE BREAK AND LOCATION									
		MAIN STEAM			FEEDWATER			Loss of Coolant Accident Drywell		Clean Up	Emergency Condenser
		Drywell	Reactor Building	Turbine Building	Drywell	Reactor Building	Turbine Building	Small	Large	Drywell	Drywell
RECIRCULATION SYSTEM											
Pumps	DW	2	2	4	4	2	4	2	2	4	4
Valves & Operators	DW	2	4	4	2	4	4	2	2	4	4
MG Sets	TB	4	4	4	4	4	4	4	4	4	4
Motor Control Center	TB	4	4	4	4	4	4	4	4	4	4
Flow Control System	CR	4	4	4	4	4	4	4	4	4	4
Control Instrument Transmitters	RB	4	4	4	4	4	4	4	4	4	4
FEEDWATER DELIVERY SYSTEM											
Flow Elements	TB	4	4	2	4	4	2	4	4	4	4
Level Instrumentation	DW	2	4	4	2	4	4	2	2	4	4
Pumps	TB	4	4	2	4	4	2	4	4	4	4
Valves & Operators	TB	4	4	2	4	4	4	2	4	4	4
Motor Control Center	TB	4	4	4	4	4	4	4	4	4	4
Flow Control System	CR	4	4	2	4	4	2	4	4	4	4
Feedwater Heating	TB	4	4	2	4	4	2	4	4	4	4
Instrument Air	TB	4	4	2	4	4	2	4	4	4	4
Control Instrumentation Transmitter	TB	4	2	2	4	2	2	4	4	4	4

TABLE 2

CLASSIFICATION OF ENVIRONMENTAL EFFECTS*

		LINE BREAK AND LOCATION									
		MAIN STEAM			FEEDWATER			Loss of Coolant Accident			
								Drywell			
	Location	Drywell	Reactor Building	Turbine Building	Drywell	Reactor Building	Turbine Building	Small	Large	Clean Up Drywell	Emergency Condenser Drywell
TURBINE PRESSURE CONTROL											
Bypass Valves	TB	4	4	4	2	4	2	4	4	4	4
Pressure Sensors	TB	4	4	2	4	4	2	4	4	4	4
Control System	CR	4	4	4	4	4	4	4	4	4	4
NEUTRON MONITORING SYSTEM											
Rod Position Indication System	DW/RB	2	2	4	2	2	4	2	2	4	4
TIP	DW/RB	2	2	4	2	2	4	2	2	4	4
REACTOR MANUAL CONTROL SYSTEM	RB/CR	4	4	4	4	4	4	4	4	4	4
REACTOR BUILDING CLOSED LOOP COOLING SYSTEM	RB	2	2	4	2	2	4	2	2	2	3
REACTOR WATER CLEANUP	DW/RB	2	2	4	2	2	4	2	2	2	2
SUPPRESSION POOL											
Temperature Monitoring	RB/TORUS	2	4	4	2	4	4	2	2	4	4
Level Monitoring	RB/TORUS	2	4	4	2	4	4	2	2	4	4
CIRCULATING WATER SYSTEM	INTAKE/TB	4	4	2	4	4	2	4	4	4	4

TABLE 2

CLASSIFICATION OF ENVIRONMENTAL EFFECTS*

		LINE BREAK AND LOCATION									
		MAIN STEAM			FEEDWATER			Loss of Coolant Accident Drywell			
	Location	Drywell	Reactor Building	Turbine Building	Drywell	Reactor Building	Turbine Building	Small	Large	Clean Up Drywell	Emergency Condenser Drywell
HVAC SYSTEM	ALL	2	2	2	2	2	2	2	2	2	2
AC AUXILIARY ELECTRIC	RB/TB	4	4	4	4	4	4	4	4	4	4
CONDENSATE TRANSFER & STORAGE	TB	4	2	2	4	2	2	4	4	2	4
MAIN TURBINE & CONTROLS	TB	4	4	2	4	4	2	4	4	4	4
MAIN CONDENSER & CONTROL	TB	4	4	2	4	4	2	4	4	4	4
FIRE PROTECTION SYSTEM	TB/RB/CR	4	2	2	4	2	2	4	4	2	2
CONTROL ROD DRIVE HYDRAULIC SYSTEM (NON SCRAM)	RB	4	2	4	4	2	4	4	4	4	4
REACTOR VESSEL HEAD VENT (SAFETY RELATED)	DW	2	4	4	2	4	4	2	2	4	4
DRYWELL AIR COOLERS	DW	2	4	4	2	4	4	2	2	4	4
DRYWELL SUMPS AND DRAINS	DW	2	4	4	2	4	4	2	2	4	4

*SEE PAGE 1 FOR EXPLANATION OF CLASSIFICATIONS

TB = Turbine Building RB = Reactor Building DW = Drywell CR = Control Room