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FACIL:50-220 Nine Mile Point Nuclear Station, Unit 1, Niagara Powe 05000~~2~~ 50-220
AUTH.NAME AUTHOR AFFILIATION
DISE,D.P. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
IPPOLITO,T.A. Operating Reactors Branch 3

SUBJECT: Forwards info re containment isolation bariers in response to NRC 790713 ltr.Fourteen oversize drawings,available in Central Files only,encl. See Reports

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	15 CORE PERF BR	1	1	17 ENGR BR	1	1
	18 REAC SFTY BR	1	1	19 PLANT SYS BR	1	1
	20 EEB	1	1	21 EFCT TRT SYS	1	1
	22 BRINKMAN	1	1	EPB-DOR	1	1
	OELD	1	0			
EXTERNAL:	03 LPDR	1	1	04 NSIC	1	1
	23 ACRS	16	16			

Report Jacket, "Information Re Containment Isolation Barriers." (DRWGS ENCLOSED)

DEC 6 1979
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MRJ cop

NIAGARA MOHAWK

Donald P. Dise
Vice President
Engineering

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

November 28, 1979

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

Dear Mr. Ippolito:

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

Your letter dated July 13, 1979 requested information regarding the containment isolation barriers. The attached responds to your request.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

Donald P. Dise
Vice President Engineering

PEF:jk

PLANT Nine Mile Point Unit 1

BYPASS CAPACITY

Plant Steam Bypass Capacity 40% rated steam flow

50-220
Ltr 11-28-79
7912040469

PLANT Nine Mile Point Unit 1

SYSTEMS AND COMPONENTS SHARED BETWEEN UNITS

Single-unit plant check here [X] and do not complete

System or Component	Shared Between Units Numbers
N/A	N/A

PLANT Nine Mile Point Unit 1

PLANT-SPECIFIC SYSTEM INFORMATION

System	General		Water Sources		Instrumentation and Control		Frequency of System and Component Tests
	Safety Classification	Seismic Category	Safety Classification	Seismic Category	Safety Classif.	Seismic Category	
Emergency Condenser	Safety Related	I	Safety Related	I	Safety Rel.	I	Once each operating cycle
High Pressure Coolant Injection	Safety Related	I	Safety Related	I	Safety Rel.	I	Pump operability is demonstrated once per quarter. Automatic startup of system is demonstrated once per operating cycle
Low Pressure Core Spray	Safety Related	I	Safety Related	I	Safety Rel.	I	Pumps and power operated valves are checked once per quarter. Automatic startup of one set of pumps is demonstrated once each operating cycle
Auto Depressurization System	Safety Related	I	N/A	N/A	Safety Rel.	I	Automatic initiation is demonstrated once per operating cycle
Pressure Relief Valves	Safety Related	I	N/A	N/A	N/A	N/A	Automatic initiation is demonstrated once per operating cycle.

PLANT Nine Mile Point Unit 1

PLANT-SPECIFIC SYSTEM INFORMATION

System	General		Water Sources		Instrumentation and Control		Frequency of System and Component Tests
	Safety Classification	Seismic Category	Safety Classification	Seismic Category	Safety Classif.	Seismic Category	
Safety Valves	Safety Related	I	N/A	N/A	N/A	N/A	Eight of the 16 safety valves are removed, tested for setpoint and partial lift once per operating cycle
Shutdown Cooling System	Safety Related	I	Safety Related	I	Safety Rel.	I	Pump operability is checked once per quarter
Containment Spray and Suppression Pool Cooling System	Safety Related	I	Safety Related	I	Safety Rel.	I	Pump operability is checked once per quarter. Automatic startu of containment spray pumps is demonstrated onc per operating cycle
Emergency Service Water	Safety Related	I	Safety Related	I	Safety Rel.	I	Pumps operability is checked once per quarter.

PLANT Nine Mile Point Unit 1

PLANT-SPECIFIC SYSTEM INFORMATION

System	General		Water Sources		Instrumentation and Control		Frequency of System and Component Tests
	Safety Classification	Seismic Category	Safety Classification	Seismic Category	Safety Classif.	Seismic Category	
Reactor Building Closed Loop Cooling Water System	Safety Related	I	Safety Related	I	Safety Rel.	I	Normally in service
Control Rod Drive	Safety Related	I	Safety Related	I	Safety Rel.	I	Automatic startup of each pump is demonstrated once per operating cycle
Condensate Storage Tank	Safety Related	I	Non Safety Related	Non Seismic I	Non Safety Related	Non Seismic	N/A
Main Feedwater (pressure boundary)	Safety Related	I	Safety Related		Non Safety Related	Non Seismic	Normally in service
Cooling Water to Recirculation Pump/Motor	Safety Related	I	Safety Related	I	Safety Rel.	I	Normally in service

PLANT Nine Mile Point Unit 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-2A	24	Main Steam	N	1	S	01-01	A	I	GB	MO	A	RMC	10	AC	D	0	C	C	AI	
X-2A	24	Main Steam	N	1	S	01-03	A	O	A	AO	A	RMC	10	A	D	0	C	C	C	
X-2B	24	Main Steam	N	1	S	01-02	A	I	GT	MO	A	RMC	10	AC	D	0	C	C	AI	
X-2B	24	Main Steam	N	1	S	01-04	A	O	A	AO	A	RMC	10	A	D	0	C	C	C	
X-3A	10	Emergency Condenser	Y	1	S	39-09	B	O	GT	MO	A	RMC	38	AC	D	0	0	O(1)	AI	
X-3A	10	Emergency Condenser	Y	1	S	39-07	B	O	GT	MO	A	RMC	38	DC	D	0	0	O(1)	AI	
X-3B	10	Emergency Condenser	Y	1	S	39-10	B	O	GT	MO	A	RMC	38	AC	D	0	0	O(1)	AI	
X-3B	10	Emergency Condenser	Y	1	S	39-08	B	O	GT	MO	A	RMC	38	DC	D	0	0	O(1)	AI	
X-4A	18	Feedwater	N	1	W	31-04	C	O	GB	MO	RMC	N/A	60	AC	D	0	0	0	AI	
X-4A	18	Feedwater	N	1	W	31-02	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-4B	18	Feedwater	N	1	W	31-03	C	O	GB	MO	RMC	N/A	60	AC	D	0	0	0	AI	
X-4B	18	Feedwater	N	1	W	31-01	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-5A	10	Emergency Condenser	Y	1	W	39-04	N/A	I	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-5A	10	Emergency Condenser	Y	1	W	39-06	B	O	DCV	AO	A	RMC	60	A	D	C	C	C(2)	O	
X-5B	10	Emergency Condenser	Y	1	W	39-03	N/A	I	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-5B	10	Emergency Condenser	Y	1	W	39-05	B	O	DCV	AO	A	RMC	60	A	D	C	C	C(2)	O	
X-7	14	Shutdown Cool. Rtn.	N	1	W	38-13	D	I	GT	MO	A	RMC	40	AC	D	C	O	C	AI	
X-7	14	Shutdown Cool. Rtn.	N	1	W	38-12	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-8	14	Shutdown Cool. Sup.	N	1	W	38-01	D	I	GT	MO	A	RMC	40	AC	D	C	O	C	AI	
X-8	14	Shutdown Cool. Sup.	N	1	W	38-02	D	O	GT	MO	A	RMC	40	DC	D	C	O	C	AI	
X-9	6	React.Cleanup Supl.	N	1	W	33-02	D	I	GT	MO	A	RMC	18	AC	D	O	O	C	AI	
X-9	6	React.Cleanup Supl.	N	1	W	33-04	D	O	GT	MO	A	RMC	18	DC	D	O	O	C	AI	
X-154	6	React.Cleanup Supl.	N	1	W	33-01	D	I	GT	MO	A	RMC	18	AC	D	O	O	C	AI	
X-154	6	React.Cleanup Supl.	N	1	W	33-03	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

PLANT Nine Mile Point Unit 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-12B	8	RBCLC to Drywell Coolers	N	1	W	70-95	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-13B	8	RBCLC from Dry. Clrs	N	1	W	70-94	Manual	O	GT	MO	RMC	N/A	30	DC	D	O	O	O	AI	
X-13A	12	Core Spray Inlet	Y	1	W	40-01	Manual	I	GT	MO	A	RMC	90	AC	D	C	C	O(3)	AI	
X-13A	12	Core Spray Inlet	Y	1	W	40-09	Manual	I	GT	MO	A	RMC	90	AC	D	C	C	O(3)	AI	
X-13A	12	Core Spray Inlet	Y	1	W	40-02	Manual	O	GT	MO	A	RMC	N/A	AC	D	LO	O	O(3)	AI	
X-14	12	Core Spray Inlet	Y	1	W	40-10	Manual	I	GT	MO	A	RMC	90	AC	D	C	C	O(3)	AI	
X-14	12	Core Spray Inlet	Y	1	W	40-11	Manual	I	GT	MO	A	RMC	90	AC	D	C	C	O(3)	AI	
X-14	12	Core Spray Inlet	Y	1	W	40-12	Manual	O	GT	MO	A	RMC	N/A	AC	D	LO	O	O(3)	AI	
X-18	24	Drywell Vent & Purge	N	2	A	201-09	E	O	B	MO	A	RMC	60	AC	D	C	O	C	AI	
X-18	24	Air Supply	N	2	A	201-10	E	O	B	AO	A	RMC	60	A	D	C	O	C	C	
X-19	20	Drywell N_2 Vent&Fill	N	2	N_2	201-31	E	O	B	MO	A	RMC	60	AC	D	C	O	C	AI	
X-19	20	Drywell N_2 Vent&Fill	N	2	N_2	201-32	E	O	B	AO	A	RMC	60	A	D	C	O	C	C	
X-19	4	Drywell N_2 Vent&Fill	N	2	N_2	201.2-03	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-19	4	Drywell N_2 Vent&Fill	N	2	N_2	201.2-32	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-20	1	Cont. Atmos. Dil. Sample Ret.	N	2	A	201.7-10	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-20	1	Cont. Atmos. Dil Sample Ret.	N	2	A	201.7-11	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-25	4	Drywell Floor Dr. Sump Outlet	N	1	W	83.1-11	E	I	GT	MO	A	RMC	60	AC	D	O	O	C	AI	
X-25	4	Drywell Floor Dr. Sump Outlet	N	1	W	83.1-12	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	

PLANT Nine Mile Point Unit 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves										Positions				Comments
						Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Normal	Shutdown	Post Accident	Power Failure	
X-26	3	Drywell Equip. Dr. Sump Outlet	N	1	W	83.1-09	E	I	GT	MO	A	RMC	60	AC	D	O	O	C	AI	
X-26	3	Drywell Equip. Dr. Sump Outlet	N	1	W	83.1-10	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-34(5)	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-34	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-34	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-34	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-35(5)	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-35	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-35	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-35	1	Reactor Recir. Sys. Inst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-36(5)	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-36	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-36	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-36	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

PLANT Nine Mile Point Unit 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions				Comments
																Normal	Shutdown	Post Accident	Power Failure	
							Isolation Valves													
X-37(5)	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-37	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-37	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-37	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-43(5)	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-43	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-43	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-43	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-28(5)	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-28	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-28	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-28	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-32(5)	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-32	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-32	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-32	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-31(5)	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-31	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-31	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-31	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-30(5)	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-30	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-30	1	React.Recir.SysInst	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-30	1	React.Recir.SysInst	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

PLANT Nine Mile Point Unit 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-29(5)	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-29	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-29	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-29	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-41(5)	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-41	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-41	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-41	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-44(5)	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-44	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-44	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-44	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-42(5)	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-42	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-42	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-42	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-38(5)	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-38	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-38	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-38	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-47(5)	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-47	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-47	1	React.Recir.SysInst.	N	5	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-47	1	React.Recir.SysInst.	N	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

PLANT Nine Mile Point Unit 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-40	3/4	Drywell O_2 Samp.Ret.	N	2	A	201.2-66	N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-40	3/4	Drywell O_2 Samp.Ret.	N	2	A	201.2-67	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-40	3/4	Drywell O_2 Samp.Ret.	N	2	A	201.2-68	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-48	1/2	Drywell O_2 Sample Supply	N	2	A	201.2-25	E	O	GT	SO	A	RMC	60	DC	D	O	O	C	C	
X-48	1/2	Drywell O_2 Sample Supply	N	2	A	201.2-26	E	O	GT	SO	A	RMC	60	DC	D	O	O	C	C	
X-49	1/2	Drywell O_2 Sample Supply	N	2	A	201.2-29	E	O	GT	SO	A	RMC	60	DC	D	O	O	C	C	
X-49	1/2	Drywell O_2 Sample Supply	N	2	A	201.2-30	E	O	GT	SO	A	RMC	60	DC	D	O	O	C	C	
X-50	1/2	Drywell O_2 Sample Supply	N	2	A	201.2-27	E	O	GT	SO	A	RMC	60	DC	D	O	O	C	C	
X-50	1/2	Drywell O_2 Sample Supply	N	2	A	201.2-28	E	O	GT	SO	A	RMC	60	DC	D	O	O	C	C	
X-51	1	EC Elbow Flow Meter	Y	4	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-51	1	EC Elbow Flow Meter	Y	4	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-53	1	Reactor Vessel Inst.	N	3	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	O	
X-53	1	Reactor Vessel Inst.	N	3	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-54	1	EC Elbow Flow Meter	N	3	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-54	1	EC Elbow Flow Meter	N	3	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-64	1	CAD System Sample	N_2	2	A	201.7-01	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-64	1	CAD System Sample	N_2	2	A	201.7-02	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-71A	1	Reactor Vessel Inst.	Y	3	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-71A	1	Reactor Vessel Inst.	Y	3	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N	N/A	N/A	N/A	N/A	
X-71B	1	Reactor Vessel Inst.	Y	3	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-71B	1	Reactor Vessel Inst.	Y	3	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-71C	1	EC Elbow Flow Meter	Y	4	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-71C	1	EC Elbow Flow Meter	Y	4	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-71D	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-71D	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-71E	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-71E	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-71F	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-71F	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-72A	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-72A	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-72B	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-72B	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-72C	1	EC Elbow Flow Meter	Y	4	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-72C	1	EC Elbow Flow Meter	Y	4	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-72D	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-72D	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-72E	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-72E	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-72F	1	Reactor Vessel Inst.	Y	5	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-72F	1	Reactor Vessel Inst.	Y	5	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-74	3/4	ILRT Sample Pt.	N_2	2	A	201.2-41	N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
X-74	3/4	ILRT Sample Pt.	N	2	A	201.2-42	N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
X-80	1/2	ILRT Sample Pt.	N	2	A		N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
X-80	1/2	ILRT Sample Pt.	N	2	A		N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
X-80	1/2	ILRT Sample Pt.	N	2	A	201.6-14	N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
X-82(5)	1	Reactor Vessel Inst.	Y	3	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-82	1	Reactor Vessel Inst.	Y	3	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-82	1	Reactor Vessel Inst.	Y	3	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-82	1	Reactor Vessel Inst.	Y	3	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-98	1	CAD System Sample	N	2	A	201.7-03	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-98	1	CAD System Sample	N	2	A	201.7-04	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-75	1	Main Steam Flow Imp(5)	N	10	S		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-75	1	Main Steam Flow Imp	N	10	S		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-75	1	Main Steam Flow Imp	N	10	S		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-75	1	Main Steam Flow Imp	N	10	S		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-122	3/4	Service Water	N	8	W		N/A	I	GT	N/A	M	N/A	N/A	H	N	LC	O	LC	N/A	
X-122	3/4	for Drywell	N	8	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	C	O	C	N/A	
X-122	3/4	"	N	8	W		N/A	O	GT	N/A	M	N/A	N/A	H	N	C	O	C	N/A	
X-131	2	Liquid Poison	Y	1	B	42.1-01	N/A	I	GB	N/A	M	N/A	N/A	H	D	O	O	O	N/A	
X-131	2	Liquid Poison	Y	1	B	42.1-02	N/A	I	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-131	2	Liquid Poison	Y	1	B	42.1-03	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-129	2	Reactor Head Spray	N	1	W	34-02	N/A	I	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-129	2	Reactor Head Spray	N	1	W	34-01	E	O	GT	MO	A	RMC	30	AC	D	C	O	C	AI	
X-133	1	Reactor Vessel Inst.	Y	3	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-133	1	Reactor Vessel Inst.	Y	3	W		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-134	1	Drywell Airborne Monitor	N	2	A	201.7-08	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-134	1	Drywell Airborne Monitor	N	2	A	201.7-09	E	O	DCV	AO	A	RMC	60	A	D	O	O	C	C	
X-137	12	Cont. Spray Inlet	Y	1	W	80-18	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-137	12	Cont. Spray Inlet	Y	1	W	80-16	Manual(6)	O	GT	AO	RMC	N/A	60	A	D	C	C	O	O	
X-139	1	Reactor Water Sample	N	6	W		N/A	I	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-139	1	Recirculation Sys.	N	6	W		N/A	I	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-139	1	Recirculation Sys.	N	6	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
X-81	1	Main SteamFlowImp(5)	N	10	S		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-81	1	MainSteam FlowImp(5)	N	10	S		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-81	1	MainSteam FlowImp(5)	N	10	S		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-81	1	MainSteam FlowImp(5)	N	10	S		N/A	O	FCV	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
X-139	1	Reactor Water Sample	N	6	W		N/A	O	FF	N/A	HF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-139	1	Recirculation Sys.	N	6	W		N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
X-140	12	Cont. Spray Inlet	Y	1	W	80-17	N/A	O	CK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-140	12	Cont. Spray Inlet	Y	1	W	80-15	Manual(6)	O	GT	AO	RMC	-	60	A	D	O	O	O	O	
X-149	12	Cont. Spray Inlet	Y	1	W	80-38	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-149	12	Cont. Spray Inlet	Y	1	W	80-36	Manual(6)	O	GT	AO	RMC	-	60	A	D	O	O	O	O	
X-150	12	Cont. Spray Inlet	Y	1	W	80-37	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-150	12	Cont. Spray Inlet	Y	1	W	80-35	Manual(6)	O	GT	AO	RMC	-	60	A	D	O	O	O	O	
X-156	4	Recirc. Pump Cooling	N	1	W		N/A	I	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-156	4	Water Return	N	1	W	70-92	Manual	O	GB	MO	RMC	N/A	30	DC	D	O	O	C	AI	
X-157	4	Recirculation Pump	N	1	W		Manual	I	GT	SO	RM	N/A	N/A	DC	D	O	O	O	N/A	
X-157	4	Cooling Water Sup.	N	1	W	70-93	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-168	3/4	Dry Level Imp. Line	N	2	A		Manual	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
X-174	3	Control Rod Drive to Reactor	N	1	W	301-114	N/A	I	GT	N/A	M	N/A	N/A	H	LO	O	O	O	N/A	
X-174	3	Control Rod Drive to Reactor	N	1	W	301-113	N/A	I	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-174	3	Control Rod Drive to Reactor	N	1	W	301-112	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-230	3/4	N_2 Purge to TIP	N	1	N_2	201.2-65	N/A	O	GT	N/A	M	N/A	N/A	H	LO	O	O	O	N/A	
X-230	3/4	N_2 Purge to TIP	N	1	N_2	201.2-39	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-230	3/4	N_2 Purge to TIP	N	1	N_2	201.2-40	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
X-121	3/4	Breathing Air	N	8	A		N/A	I	GT	N/A	M	N/A	N/A	H	N	LC	O	LC	N/A	
X-121	3/4	For Drywell	N	8	A		N/A	O	GT	N/A	M	N/A	N/A	H	N	C	O	C	N/A	
X-121	3/4	" " "	N	8	A		N/A	O	GT	N/A	M	N/A	N/A	H	N	C	O	C	N/A	

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PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

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XS-316	3/4	D/P Points for ILRT	N	2	A		N/A	O	GT	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
XS-316	3/4	D/P Points for ILRT	N	2	A		N/A	O	GB	N/A	M	N/A	N/A	H	N	O	O	O	N/A	
XS-316	3/4	D/P Points for ILRT	N	2	A		N/A	O	GB	N/A	M	N/A	N/A	H	N	C	C	C	N/A	
XS-321	3/4	Supp. Atmos. Dil. Sample	N	2	A	201.2-23	E	O	GB	SO	A	RMC	60	DC	D	C	C	C	C	
XS-321	3/4	Supp. Atmos. Dil. Sample	N	2	A	201.2-24	E	O	GB	SO	A	RMC	60	DC	D	C	C	C	C	
XS-321	3/4	Supp. Atmos. Dil. Sample	N	2	A	201.2-436	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-321		Suppr. O_2 Samp. Ret.	N	2	A		N/A	O	GB	M	N/A	N/A	N/A	H	N	O	O	O	N/A	
XS-321		Suppr. O_2 Samp. Ret.	N	2	A	201.2-70	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-321		Suppr. O_2 Samp. Ret.	N	2	A	201.2-71	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-328	3/4	Suppr. Sample Ret.	N	2	A	201.2-109	E	O	GB	AO	A	RMC	60	A	D	O	O	C	C	
XS-328	3/4	Suppr. Sample Ret.	N	2	A	201.2-112	E	O	GB	AO	A	RMC	60	A	D	O	O	C	C	
XS-328	3/4	Suppr. Sample Supply	N	2	A	201.2-111	E	O	GB	AO	A	RMC	60	A	D	O	O	C	C	
XS-328	3/4	Suppr. Sample Supply	N	2	A	201.2-110	E	O	GB	AO	A	RMC	60	A	D	O	O	C	C	
XS-324	12	Cont. Spray Suction	Y	1	W	80-21	Manual	O	GT	MO	RMC	N/A	70	AC	D	O	O	O	AI	
XS-325	12	Cont. Spray Suction	Y	1	W	80-22	Manual	O	GT	MO	RMC	N/A	70	AC	D	O	O	O	AI	
XS-326	3	Torus Spray	Y	1	W	80-67	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-326	3	Torus Spray	Y	1	W	80-19	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-326	3	Torus Spray	Y	1	W	80-39	N/A	C	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
XS-327	20	Suppr. Vent&Purge	N	1	N_2	201-16	E	O	B	AO	A	RMC	60	A	D	C	C	C	C	
XS-327	20	Suppr. Vent&Purge	N	1	N_2	201-17	E	O	B	MO	A	RMC	60	AC	D	C	C	C	AI	
XS-327	3	N_2 Makeup & Bleed	N	1	N_2	201.2-33	E	O	DCV	AO	A	RMC	60	DC	D	C	C	C	C	
XS-327	3	N_2 Makeup & Bleed	N	1	N_2	201.2-06	E	O	DCV	AO	A	RMC	60	DC	D	C	C	C	C	
XS-330	4	Torus Makeup	N	1	W	58.1-01	Manual	O	DCV	AO	RMC	N/A	60	A	D	C	C	C	C	
XS-330	4	Torus Makeup	N	1	W	58.1-02	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-332	12	Core Spray Suction	Y	1	W	81-01	Manual	O	GT	MO	RMC	N/A	90	AC	D	O	O	O	AI	
XS-334	6	Core Spray Test Ret	Y	1	W	40-05	E	O	GT	MO	A	RMC	90	AC	D	C	C	C	AI	
XS-335	6	Core Spray Test Ret	Y	1	W	40-06	E	O	GT	MO	A	RMC	90	AC	D	C	C	C	AI	
XS-336	12	Core Spray Suction	Y	1	W	81-22	Manual	O	GT	MO	RMC	N/A	90	AC	D	O	O	O	AI	
XS-337	12	Core Spray Suction	Y	1	W	81-21	Manual	O	GT	MO	RMC	N/A	90	AC	D	O	O	O	AI	
XS-333	12	Core Spray Suction	Y	1	W	81-02	Manual	O	GT	MO	RMC	N/A	90	AC	D	O	O	O	AI	
XS-340	20	Torus Air Vent&Fill	N	1	A	201-08	E	O	B	AO	A	RMC	60	DC	D	C	C	C	C	
XS-340	20	Torus Air Vent&Fill	N	1	A	201-07	E	O	B	MO	A	RMC	60	AC	D	C	C	C	AI	
XS-341	12	Cont. Spray Suction	Y	1	W	80-02	Manual	O	GT	MO	RMC	N/A	70	AC	D	O	O	O	AI	
XS-342	12	Cont. Spray Suction	Y	1	W	80-01	Manual	O	GT	MO	RMC	N/A	70	AC	D	O	O	O	AI	
XS-352	6	Cont.Spray TestLine	Y	9	W	80-43	N/A	O	GT	N/A	M	N/A	N/A	H	I	LC	LC	LC	N/A	
XS-352	4	Cont.Spray Test Line to Waste Disposal	Y	9	W	80-42	N/A	O	GT	N/A	M	N/A	N/A	H	I	LC	LC	LC	N/A	

PLANT Nine Mile Point Unit 1

PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Prim. Cont. Penetration Number	Line Size, In.	System	Is System an Engineered safety function	Figure	Process Fluid	Isolation Valves: Valve Number	Isolation Signal Code(s)	Location	Type	Actuator	Primary Actuation Mode	Secondary Actuation Mode	Full Closure Time, sec.	Power Source	Position Indication in Control Rm.	Positions: Normal	Shutdown	Post Accident	Power Failure	Comments
XS-354	3	Torus Spray	Y	1	W	80-65	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-354	3	Torus Spray	Y	1	W	80-66	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-354	3	Torus Spray	Y	1	W	80-68	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-365	20	Reactor Water Cleanup	N	1	W	63.1-02	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
XS-365	20	Relief to Torus	N	1	W	63.1-01	N/A	O	CK	N/A	RF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Footnotes for Isolation Valve Table

1. The valves in the emergency condenser steam supply line remain open during an accident unless there is a break in the emergency condenser line, indicated by high steam flow in the emergency condenser line or high radiation in the emergency condenser vents. These signals automatically close the valves.

2. The air operated valve in the emergency condenser remains closed during accident conditions. They are opened by high reactor pressure or low-low water level signals. The air operated valves will then remain opened unless a break in an emergency condenser line is indicated as discussed in (1) above.

3. The Core Spray System is considered to be an extension of containment, therefore core spray valves 40-01, 40-09, 40-10 and 40-11 do not automatically isolate. These valves open on a low reactor pressure signal in conjunction with a high drywell pressure or low-low reactor water level. If the Core Spray System is not needed to maintain reactor vessel water level, these valves can be isolated manually.

4. The drywell vent and fill line consists of a 20-inch line which penetrates primary containment. Once outside primary containment, it branches into a 24-inch vent line and a 4-inch nitrogen supply line with each line containing two isolation valves.

5. There are two lines per penetration for the reactor recirculation system instrumentation. Each line has a manual gate valve and a flow check valve outside containment.

6. The Containment Spray System is considered to be an extension of containment, therefore, the containment spray valves do not automatically isolate. If the Containment Spray System is not required to mitigate the consequences of an accident, it can be manually isolated from the control room.

ABBREVIATIONS

Engineered Safety Function

N = NO
Y = YES

Position Indication in Control Room

D = Direct
I = Indirect
N = None
Others stated in Table

Fluid

A = Air
B = Sodium Pentaborate
S = Steam
W = Water
N_2 = Nitrogen

Isolation Valve Location

I = Inside Containment
O = Outside Containment
Others stated in Table

Isolation Valve Actuation Mode

A = Automatic
HF = High Flow
M = Manual
OP = Overpressure
RF = Reverse Flow
RMC = Remote Manual Control Room
RM = Remote Manual (Local)

Isolation Valve Positions

AI = As Is
C = Closed
O = Open

Isolation Valve Type

A = Angle
B = Butterfly
BCK = Ball Check
BL = Ball
CK = Check
DCV = Diaphragm Control Valve
FCV = Flow Check Valve
FF = Flow Fuse
GB = Globe
GT = Gate
RV = Relief
SCV = Stop Check
SV = Solenoid
VB = Vacuum Breaker

Isolation Valve Power Source

A = Air
AC = AC
DC = DC
H = Hand

Isolation Valve Actuator

AO = Air
MO = Motor
SO = Solenoid

Isolation Signal Codes

Code or Group	Parameter(s) Sensed for Isolation	Set Point (units)
A	High Steam Flow - Main Steam Line	≤ 105 psid
	High Radiation - Main Steam Line	≤ 5 times normal background
	Low Reactor Pressure	≥ 850 psig
	Low Low Low Condenser Vacuum	≥ 7 inches mercury vacuum
	High Temperature - Main Steam Line Tunnel	≤ 200F
	Low Low Reactor Water Level	≥ 5 inches Indicator Scale
B	High Steam Flow - Emergency Cooling System	≤ 19 psid
	High Radiation - Emergency Cooling System Vent	≤ 25 mr/hr

NINE MILE POINT UNIT 1
PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

ABBREVIATIONS (Continued)

Isolation Signal Codes
(Continued)

Code or Group	Parameter(s) Sensed for Isolation	Set Point (units)
C	Manual	N/A
D	Low-Low Reactor Water Level	≥ 5 inches (Indicator Scale)
	High Area Temperature	≤ 190F for Cleanup System ≤ 170F for Shutdown Cooling System
E	Low-Low Reactor Water Level	≥ 5 inches (Indicator Scale)
	High Drywell Pressure	≤ 3.5 psig

NINE MILE POINT UNIT 1
PRIMARY CONTAINMENT ISOLATION SYSTEM DATA

Figure Codes

1 = C-18006-C
2 = C-18014-C
3 = C-18015-C
4 = C-18017-C
5 = C-18020-C
6 = C-18041-C
7 = C-18022-C
8 = C-18578-C
9 = C-18012-C
10 = C-18002-C

PLANT Nine Mile Point Unit 1

DESIGN REQUIREMENTS FOR CONTAINMENT ISOLATION BARRIERS

Question: Discuss the extent to which the quality standards and seismic design classification of the containment isolation provisions follow the recommendations of Regulatory Guides 1.26, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Water-Containing Components of Nuclear Power Plants", and 1.29, "Seismic Design Classification".

Response: The codes used in the design of Nine Mile Point Unit 1 Class I systems at the time of construction were ASME Section I ANSI-B31.1-1955 and ANSI B16.5-1955 with requirements of ASME Section III for non-destructive testing. For subsequent modifications which involve the addition of a complete new system, Niagara Mohawk is committed to follow the recommendations of Regulatory Guide 1.26, Revision 3. For example, the Containment Atmospheric Dilution System, including portions of the Vent and Purge and Containment Radiation Monitoring Systems, was added subsequent to commercial operation and followed the quality standards recommended in Regulatory Guide 1.26.

The containment isolation valves are all part of Class I systems. The classifications used at the time of their design were equivalent to the seismic design classifications of Regulatory Guide 1.29.

PLANT Nine Mile Point Unit 1

PROVISIONS FOR TESTING

Question: Discuss the design provisions for testing the operability of the isolation valves.

Response: All power-operated reactor coolant system isolation valves and containment isolation valves which are normally opened can be tested for operability during power operating conditions. The Nine Mile Point Unit 1 Technical Specifications requires all normally open power-operated isolation valves (except the feedwater and main steam line power-operated isolation valves which are exercised by partial closure and subsequent re-opening at least twice a week) to be fully closed and re-opened at least once per quarter.

All power-operated isolation valves which are normally closed can be tested for operability once per operating cycle. This is considered sufficient for these valves since they are only opened during infrequent intervals.

PLANT Nine Mile Point Unit 1

CODES, STANDARDS, AND GUIDES

Question: Identify the codes, standards, and guides applied in the design of the containment isolation system and system components.

Response: The ASME Section I and ANSI-B16.5-1955 codes were applied to the design of isolation valves. In addition to these code requirements, ultrasonic and radiographic examinations of isolation valves were performed, as well as seismic and thermal analyses. An independent third party review of calculations was performed and found acceptable.

The Containment Isolation System electrical equipment was designed to withstand the accident environmental conditions appropriate to its location. For the drywell, these conditions were short term accident conditions of saturated steam at 62 psig and 310°F. The Reactor Building environmental accident conditions for which the Containment Isolation System electrical equipment was designed are 100 percent humidity, 150°F and a 3125 psig.

All electrical specifications for Class I electrical equipment called for seismic design analyses of either of the following:

1. The maximum ground motion acceleration is 11 percent of gravity and the maximum resulting response acceleration is 45 percent of gravity for oscillators in the period range of 0.2 to 0.3 seconds.

or

2. A minimum factor of 0.20g horizontal and 0.10g vertical should be used unless a specific dynamic analysis is made in which case it should be referred to the Purchaser for his approval.

PLANT Nine Mile Point Unit 1

NORMAL OPERATING MODES AND ISOLATION MODES

Question: Discuss the normal operating modes and containment isolation provision and procedures for lines that transfer potentially radioactive fluids out of the containment.

Response: All systems which could transfer potentially radioactive fluids out of primary containment would automatically isolate on a primary containment and/or reactor vessel isolation signals. The only isolation systems which do not automatically isolate on these signals are the Emergency Condenser, Containment Spray and Core Spray Systems. These systems are considered essential systems to mitigate an accident and, therefore, are not isolated. The Emergency Condenser System will isolate on system high flow or high radiation of the Emergency Condenser vents.

There are six potential pathways for radioactive gases or liquids to be transferred out of the primary containment.

a. N_2 vent and purge system.
b. CAD System.
c. Drywell floor and equipment drains.
d. Recirculation sample line to reactor building sample sink.
e. Suppression chamber transfer to waste disposal system.

All of the above except items d and e would isolate on a containment isolation signal. Overrides are provided for items a and b such that they can be manually re-opened for controlled venting and monitoring purposes. Venting would take place through the Reactor Building Emergency Ventilation System. This system would not isolate on high radiation. By procedure, venting is allowed only after containment atmosphere has been sampled and analyzed.

The drywell floor and equipment drains transfer liquid under normal operation. These lines isolate on high drywell pressure or reactor low-low water level. Since water level below the top of the fuel is required to produce significant fuel failures, highly radioactive liquid would not be automaticaly transferred to the waste building. Activity in these lines is not normally monitored, however, positive valve position indication is provided in the control room.

The drywell high pressure signal which initiates containment isolation has a seal-in feature so that both Reactor Protection System channels must be cleared and manual resetting accomplished before any isolation valves not provided with overrides can be re-opened. The isolation valves may then be manually opened from the control room. Thus, the pumping of drywell drains cannot be performed inadvertently.

Normal Operating Modes and Isolation Modes (Continued)

Response: The recirculation sample line contains three (3) one (1) inch manual valves in a line connected to a reactor recirculation line. These valves are normally closed except during a sampling procedure. The discharge of these 1 inch valves reduces to 1/4 inch tubing which runs around 50 feet to a sample sink. A flow fuse is installed outside of primary containment to limit flow through the line. Niagara Mohawk will install two automatic isolation valves during the next scheduled refueling outage scheduled for early 1981. These valves will close on high drywell pressure or low-low reactor water level. The isolation valves will be provided with manual overrides to permit sampling during an isolated condition.

In the interim, operating procedures will be modified to ensure that positive administrative control assure that the sample line is not inadvertently left open after use. During sampling, a member of the Operating Staff will continously monitor sampling activities and verify that at least two valves are closed when sampling is complete.

The suppression chamber transfer to waste disposal system line requires a locked closed valve to be open to pump water out of the suppression chamber. The valve is normally locked closed except when pumping water out of the suppression chamber to maintain level.

Valves capable of automatic isolation on either low-low water level or high drywell pressure will be installed by the next refueling outage. In the interim, whenever the suppression chamber is being pumped down, a member of the operating staff will be stationed to close the valve should an isolation signal be received.