PRIMARY COOLANT SYSTEM PARAMETERS

	Initial	Present
Design Thermal Power	2,650 MWt	-
Licensed Core Power	2,200 MWt	2,565.4 MWt
Design Pump Power	16 MWt	-
Operating Pump Power (Nominal)	12 MWt	15 MWt
Operating Thermal Power (NSSS)	2,212 MWt	2,545 MWt
Heat Input	7.55×10^9 Btu/h	8.63×10^9 Btu/h
Design Pressure	2,500 psia	2,500 psia
Design Temperature (Except Pressurizer)	650°F	650°F
Coolant Flow Rate(a)	125×10^6 lb/h	143.1×10^6 lb/h(b)
Cold Leg Temperature	545°F	537.0°F
Average Temperature	568.05°F	560.0°F
Hot Leg Temperature	591.1°F	583.0°F
Normal Operating Pressure	2,100 psia	2,060 psia(c)
Primary System Initial Volume	10,900 ft^3	-

(a) Changes as S/G tubes are plugged or sleeved

(b) Corrected to zero power 532°F operation

(c) Nominal pressurizer pressure

PRIMARY COOLANT SYSTEM CODE REQUIREMENTS

Component	Code
Reactor Vessel	ASME III, Class A[(a)]
Steam Generator	
Primary Side	ASME III, Class A[(b)]
Secondary Side	ASME III, Class A[(b)]
Pressurizer	ASME III, Class A[(c)]
Coolant Pumps	ASME III, Class A[(a)(d)]
Quench Tank	ASME III, Class C[(a)]
Pressurizer Safety Valves	ASME III[(a)]
Piping	ASA B31.1, 1955

(a) 1965 edition, includes addenda through Winter 1965

(b) 1977 edition

(c) 1965 edition, includes addenda through Winter 1966

(d) Original Type SU mechanical seals manufactured to ASME III, Class A, 1965 Edition, includes addenda through Winter 1965. Replacement Type N-9000 seals manufactured to ASME III, Class 1, 1989, no addenda.

REACTOR VESSEL PARAMETERS

	Quantity	Size
Design Pressure		2,500 psia
Design Temperature		650°F
Nozzles		
Inlet	4	30" ID
Outlet	2	42" ID
Control Rod Drive	45	2.76" ID
Instrumentation	8	4" Nominal
Head Vent	1	3/4" ID
Dimensions		
Inside Diameter		172"
Overall Height, Including Control Rod Drive Nozzles		41'-1-13/16"
Height, Vessel Without Head		33'-2-1/8"
Outside Diameter		189"
Wall Thickness		8-1/2"
Upper Head Thickness		7-3/8"
Lower Head Thickness		4-3/8"
Cladding Thickness		1/4" Nominal 3/16" Minimal
Materials		
Vessel and Heads		SA-302 Grade B
Cladding		308/309 SS
Control Rod Drive Nozzles		Ni-Cr-Fe Alloy 600 Nozzles 25, 29, 30, 33, and 36 Alloy 690
Instrumentation Nozzles		Ni-Cr-Fe Alloy 600
Dry Weights		
Head		156,700 lb
Vessel		657,100 lb
Studs, Nuts, Washers		38,400 lb
Total		852,200 lb

STEAM GENERATOR PARAMETERS

Number	2
Type	Vertical U-Tube
Number of Active Tubes	
Original Design	8219
SG E-50A	7682
SG E-50B	7773
Tube Outside Diameter	0.750"

	Quantity	Size
Nozzles and Manways		
Primary Inlet Nozzle	1	42" ID
Primary Outlet Nozzle	2	30" ID
Steam Nozzle	1	34" ID
Feedwater Nozzle	1	18" Nominal
Instrument Taps	9	1" Nominal
Primary Manways	2	18" ID
Secondary Manways	2	18" ID
Secondary Handhole	4	6" ID
Secondary Drain and Blowdown	1	6" Nominal
Recirculation Inlet	1	6" Nominal
Auxiliary Feedwater	1	4" Nominal
Inspection Ports	2	2" Nominal

.

STEAM GENERATOR PARAMETERS

Primary Side Parameters	Design	Nominal Operating
Pressure, Maximum	2,500 psia[a]	2,100 psia[b]
Temperature	650°F[a]	560.0°F[d]
Thermal Power	2,650 MWt[a]	2565.4 MWt[d]
Thermal Power (NSSS)	2,650 MWt[a]	2580.4 MWt
Cold Leg Temperature	547.8°F[a]	537.0°F[d]
Hot Leg Temperature	598.5°F[a]	583.0°F[d]
Coolant Flow Rate(Each)	$70.00 \times 10^6 lb_m/h$[a]	$62.5 \times 10^6 lb_m/h$[b]
Normal Operating Pressure	2,250 psia[a]	2,060 psia

Secondary Side Parameters	Design	Nominal Operating
Pressure	1,000 psia[a]	765.8 psia[d]
Temperature	550°F[a]	-
Steam Moisture Content, Maximum	0.25%[a]	0.25%
Blowdown Flow(Normal)	10,000 lbm/h	variable[c]
Drying Capacity at 770 psia, Maximum (Each)	$5.86 \times 10^6 lb_m/h$	
Steam Flow (Each)	$5.786 \times 10^6 lb_m/h$[a]	$5.649 \times 10^6 lb_m/h$[d]
Feedwater Temperature	438°F[a]	440.7°F[d]

Dimensions

Overall Height, Including Support Skirt	61'-10"
Upper Shell Outside Diameter	19'-11"
Lower Shell Outside Diameter	13'-8"
Dry Weight	921,946 lb
Flooded Weight	1,500,391 lb
Operating Weight	1,131,583 lb

(a) Values can be found in Reference 41. The actual operating values may vary slightly.
(b) Values can be found in Reference 42. The actual operating values may vary slightly.
(c) Blowdown flow normal maximum is 30,000 lbm/hr. Higher flows are allowed during low power operation following multi-day shutdowns per EAR-2001-0233.
(d) Values can be found in Reference 53. The actual operating values may vary slightly.

SECONDARY SAFETY VALVE PARAMETERS

Design Pressure	1,000 psia
Design Temperature	550°F
Fluid - Saturated Steam	
Capacity, Minimum per Valve	486,600 lb/h*
Total Capacity	11,678,400 lb/h
Set Pressure	
Eight Valves, Four per Unit	1,040 psia
Eight Valves, Four per Unit	1,020 psia
Eight Valves, Four per Unit	1,000 psia
Body Material	ASTM A 216, Gr WCB
Trim Material	Stainless Steel
Set Point Tolerance (As-Found Testing)	±3% of Set Pressure
Set Point Tolerance (As-Left Testing)	±1% of Set Pressure

*Small break LOCA analysis uses the nominal capacity of 511,563 lb/hr.

PRIMARY COOLANT PUMP PARAMETERS

Number	4
Type	Vertical, Limited Leakage, Centrifugal
Shaft Seals	Mechanical (4)
Type SU Seals	
Stationary Face	Carbon CNFJ or Graphitar 114
Rotating Face Body	ASTM A 351, Gr CF8
Rotating Face Ring	Titanium Carbide KZ 162 B
Type N-9000 Seals	
Stationary Face	Morganite CMFJ or Graphite 114
Rotating Face Body	ASTM A 351, Gr CF8 or CF8M
Rotating Face Ring	KENNAMETAL K E162B
Design Pressure	2,500 psia
Design Temperature	650°F
Normal Operating Pressure	2,060 psia(a)
Design Flow	83,000 gpm
Design Head	260 ft
Maximum Flow (One Pump Operation)	110,000 gpm
Design/Operating Power	4/3 MWt
Dry Weight 156,800 lb	
Flooded Weight	163,800 lb
Primary Coolant Volume	112 ft^3
Impeller	ASTM A 351, Gr CF8 or Gr CF3 (P-50C only)
Shaft	ASTM A 182, Type 304
Casing Material	ASTM A 351, Gr CF8M
Casing Wear Ring	ASTM A 362, Gr CF8

(a) This represents the Primary Coolant Pump Discharge Pressure. The Pressurizer pressure is a nominal 2,010 psia.

PRIMARY COOLANT PUMP PARAMETERS

	Quantity	Size
Piping Connections		
Cooling Water	2	1-1/2" Nominal
Controlled Bleedoff	1	3/4" Nominal
Seal Leakage	1	3/4" Nominal
Primary Pressure Taps	5	3/4" Nominal
Hydrostatic Bearing		
Bearing		ASTM A 362, Gr CF8 or A 182, Gr F304 Col #6 Overlay or ASTM A-351 Gr CF3 (P-50C and P-50D)
Journal		ASTM A 362, Gr CF8 Col #5 Overlay or ASTM A-351 Gr CF3 (P-50C and P-50D)
Motor		
Voltage		4,160 Volts
Frequency		60 Hz
Phases		3
Horsepower/Speed		5,500 hp/888 r/min

	Quantity	
Instrumentation		
Seal Temperature Detectors	2	
Pump Casing Pressure Taps	2	
Seal Pressure Detectors	3	
Controlled Bleedoff Flow Rate Detectors	1	
Motor Oil Level Detectors	2	
Motor Bearing Temperature Detectors	4	
Motor Stator Temperature Detectors	6	
Vibration Detectors	2	Note: P-50C has four Vibration Detectors and one Key Phasor
Oil Lift Pressure Detector	1	

Total Seal Assembly Leakage (Normal and Standby Operation)	
Three Seals Operating	1.2 gpm
Two Seals Operating	1.47 gpm
One Seal Operating	2.08 gpm

PIPING LIST

Line No	Description	Material	Schedule	Nominal Size, Inches	Design Pressure, Psia	Design Temp, °F
1	Primary Line, Reactor Vessel to Steam Generator	Carbon Steel With Stainless Steel Clad ID	Special 4" Wall (3-3/4" Carbon W/1/4" SS)	42 ID	2,500	650
2	Primary Line, Steam Generator to Reactor Vessel	Carbon Steel With Stainless Steel Clad ID	Special 3" Wall (2-3/4" Carbon W/1/4" SS)	30 ID	2,500	650
3	Surge Line, Hot Leg to Pressurizer	Type 316 Stainless Steel	140	12	2,500	700
4	Pressurizer Spray	Type 316 Stainless Steel	160	3	2,500	650
5	Pressurizer Power Relief Valve Inlet	Type 316 Stainless Steel	120	4	2,500	700
6	Primary System Drain Lines	Type 316 Stainless Steel	160	2	2,500	650
7	Pressurizer Power Relief Valve Discharge to Quench Tank	Type 304 Stainless Steel	40	4	500	500
8	Pressurizer Safety Valve Discharge to Quench Tank	Type 304 Stainless Steel	40	6	500	500

PRESSURIZER PARAMETERS

Design Pressure	2,500 psia
Design Temperature	700°F
Normal Operating Pressure	2,060 psia
Normal Operating Temperature	636.5°F
Internal Free Volume	1507 ft^3
Normal Water Volume, Full Power	800 ft^3
Normal Steam Volume, Full Power	700 ft^3
Installed Heater Capacity	1487.5 kW
Spray Flow, Original Calculated Maximum*	375 gpm
Spray Flow, Continuous	1.5 gpm

	Quantity	Size
Nozzles		
Surge Line	1	12" Nominal
Safety Valve	3	3" ID
Relief Valve	1	3" ID
Spray	1	4" Nominal
Heaters	120	0.902 ID
Instrument	10	1" Nominal
Manway	1	16" ID
Materials		
Vessel		ASTM A 533, B, Class 1
Cladding		AISI-304 SS and Ni-Cr-Fe Alloy
Dimensions		
Overall Length		336-11/32"
Outside Diameter		121-1/2"
Inside Diameter		110-1/16"
Cladding Thickness		7/32"
Dry Weight		201,967 lbs
Flooded Weight		295,716 lbs (60°F Water)

* Reference 44 and 48.

PRESSURIZER NORMAL LEVEL CONTROL PROGRAM

Controller Output	Action
88.5%	Open ↑ CV-2005
69.3%	Close ↓ CV-2005 Open ↑ CV-2004
56.5%	Close ↓ CV-2004
50.0%	P-55A at required capacity CV-2003 Open
43.5%	Trip ↑ P-55B
37.3%	Trip ↑ P-55C
30.8%	Start ↓ P-55B
24.3%	Start ↓ P-55C

PRESSURIZER BACKUP LEVEL CONTROL PROGRAM

Deviation of Process and Setpoint	Action
5.8%	Hi-Lo Level Alarm Off (EK-0761)
4.6%	Backup Heaters On Open CV-2004 and CV-2005 Trip P-55B and P-55C
3.8%	Hi-Lo Level Alarm On (EK-0761)
2.3%	Backup Heaters Off Permit P-55B and P-55C Start Permit CV-2004 & CV-2005 Closure
-3.8%	Hi-Lo Level Alarm Off (EK-0761) Permit P-55B and P-55C Trip Permit CV-2004 and CV-2005 Open
-5.8%	Hi-Lo Level Alarm On (EK-0761) Start P-55B and P-55C Close CV-2004 and CV-2005

PRESSURIZER SAFETY VALVE PARAMETERS

Design Pressure	2,500 psia
Design Temperature	700°F
Fluid	Sat Stm - 0.1 Wt -Percent Boric Acid
Capacity, Each	230,000 lb/h
Number and Set Pressure	3
RV-1039	2,580 psia
RV-1040	2,540 psia
RV-1041	2,500 psia
Type	Totally Enclosed, Bellows
Accumulation	3%
Back Pressure Compensation	Yes
Gagging Device	Yes
Setpoint Tolerance (As-Found Testing)	±3% of Set Pressure
Setpoint Tolerance (As-Left Testing)	±1% of Set Pressure

QUENCH TANK PARAMETERS

Design Pressure		100 psig
Design Temperature		340°F
Normal Operating Pressure		3 psig
Internal Volume		1,147 ft^3
Normal Water Volume		800 ft^3
Normal Gas Volume		347 ft^3
Blanket Gas		Nitrogen
	Quantity	Size
Nozzles		
Pressurizer Relief	1	10" Nominal
Relief Valve	1	3"
Demineralized Water	1	2"
Rupture Disc	1	18"
Drain	1	2"
Instrument	1	1"
Instrument	2	1/2"
Materials		
Vessel		SA-515, Gr 70
Coating		Interior Epoxy (Phenolic 372)
Dimensions		
Overall Length		18'
Outside Diameter		9'-6"
Dry Weight		21,000 lb
Flooded Weight		92,500 lb

ACTUATOR-OPERATED THROTTLING VALVE PARAMETERS

Service - Pressurizer Spray Valves	
Design Temperature	650°F
Design Pressure	2,500 psia
Flow, Minimum	40 gpm
Maximum	280 gpm*
Stem Leak Off	Yes

* In accordance with Reference 44, under the condition of “One Flow Branch Operating."

ACTUATOR-OPERATED BLOCK VALVE PARAMETERS

Service - Pressurizer Power-Operated Relief Isolation	
Design Temperature	700°F
Design Pressure	2,500 psia
Actuator	Electric Motor
Failure Position	As Is
ASA Class	1,500 lb

PRESSURIZER POWER-OPERATED RELIEF VALVE PARAMETERS

Design Pressure	2,500 psia
Design Temperature	700°F
Fluid	Sat Stm - 0.1 Wt - Percent Boric Acid
Number	2
Flowrate (each, saturated steam)	514,800 lbm/hr@2450 psia[(a)]
Flowrate (each, saturated water)	893,520 lbm/hr@1127 psia[(a)]
Type	Solenoid Operated
Set Pressure (LTOP)	See Figure 4-15
Alarm Pressure (LTOP)	See Figure 4-15

(a) See Reference 40

MATERIALS EXPOSED TO COOLANT

Reactor	
Vessel Cladding	Weld Deposited Type 308/309 SS
Vessel Internals	304 SS and Ni-Cr-Fe Alloy
Fuel Cladding	Zircaloy-4 or M5®
Control Rod Drives	
Housings	316 SS / 304 SS / 347 SS / Alloy 600
Gears	17-4 pH (H1100)
Bearings	Carbon-Graphite
Nozzles	Ni-Cr-Fe Alloy 600 Nozzles 25, 29, 30, 33, and 36 Alloy 690
Piping	
Cladding	Roll-Bonded Type 304L SS
Nozzles	
Large (>3")	Weld Deposited SS with Ni-Fe-Cr Alloy 600 Safe Ends
Small (≤3")	Ni-Fe-Cr Alloy 600
Surge Line	Type 316 SS
Steam Generator	
Bottom Head Cladding	Weld Deposited Type 304 SS
Tube Sheet Cladding	Weld Deposited Ni-Cr-Fe Alloy
Tubes	Ni-Cr-Fe Alloy
Pumps	
Casing	ASTM A-351, Grade CF8M Annealed
Impeller	ASTM A-351, Grade CF3 or CF8 Annealed
Pump Cover	ASTM A-351, Grade CF8M Annealed
Pump Cover Gasket	Spiral Wound Type 304SS with Asbestos Filler Inner and Outer Gaskets Or Spiral Wound Inconel with Grafoil Filler Inner Gasket and Spiral Wound Type 304SS with Grafoil Filler Outer Gasket
Stud – Cover to Case	ASTM A-193, Grade B7 (Flash Chrome Plate Threads and Phosphate Coated Body)

MATERIALS EXPOSED TO COOLANT

Hex Nut – Cover to Case	ASTM A-194 Class 2H (Phosphate Coated)
Internals	ASTM A-182, Type 304, Cond. A; A-182, Gr. XM-19; A-193, Grade B8, Cond. A; A-276, Type 304, Cond. A & Type 316; A-351, Grade CF8 Annealed; A-362, Grade CF8 Annealed; A-461, Grade 660, Age Hardened; A-479, Type 304; A-479, Type 316; ASTM A-479, Gr. XM-19; A-351 Grade CF3 Annealed; Type 302 SS
Pressurizer	
Cladding	
Lower Head	Ni-Cr-Fe Alloy
Shell and Top Head	Weld Deposited Type 304 SS
Nozzles	
All but temperature elements, PORV and Safety Valve RV-1041	Weld Deposited SS with Ni-Fe-Cr Alloy 600 safe ends
Temperature elements PORV and Safety Valve RV-1041	Ni-Fe-Cr Alloy 600 Type 316 SS with Ni-Fe-Cr Alloy 690 attachment weld

PRIMARY COOLANT CHEMISTRY

Suspended Solids	< 0.35 ppm
pH (Normal Operation and Cold Shutdown)	4.5 to 10.2
Hydrogen (Normal Operation)	25-50 cm^3 (STP) per kg
Hydrogen (24 hours prior to Shutdown)	15-50 cm^3 (STP) per kg
Lithium (Normal Operation)	0.1-5.25 ppm
Chloride (Normal Operation)	$\leq$ 0.05 ppm
Fluoride (Normal Operation)	< 0.05 ppm
Dissolved Oxygen (Normal Operation)	< 0.005 ppm
Boron	<3000ppm
Zinc (depleted in Zn-64, Normal Operation)	≤ 20 ppb
Silica	<3.0 ppm

SUMMARY OF SPECIMENS PROVIDED FOR EACH EXPOSURE LOCATION

Capsule Designation	Capsule Location	Type and Quantity of Samples: Base Metal Impact (L)	Base Metal Impact (T)	Base Metal Tensile	Heat Affected Zone Impact	Heat Affected Zone Tensile	Weld Impact	Weld Tensile	Standard Impact	Total Impact (L)	Total Impact (T)	Total Tensile
T-330	Thermal(a)	12	12	3	12	3	12	3	-	36	12	9
T-150	Thermal	12	12	3	12	3	12	3	-	36	12	9
A-60	Accelerated(b)(d)	12	-	3	12	3	12	3	12	48	-	9
A-240	Accelerated	12	12	3	12	3	12	3	-	36	12	9
W-290	Vessel(c)	12	12	3	12	3	12	3	-	36	12	9
W-110	Vessel	12	-	3	12	3	12	3	12	48	-	9
W-100	Vessel	12	12	3	12	3	12	3	-	36	12	9
W-280	Vessel	12	12	3	12	3	12	3	-	36	12	9
W-260	Vessel	12	-	3	12	3	12	3	12	48	-	9
W-80	Vessel	12	-	3	12	3	12	3	12	48	-	9
		120	72	30	120	30	120	30	48	408	72	90

(L) = Longitudinal
(T) = Transverse

(a) Thermal Capsules – Located Above the Core
(b) Accelerated Capsules – Located on Outside of Core Support Barrel
(c) Vessel Capsules – Located on Inside Wall of Reactor Vessel
(d) Capsule A-60 has been deleted from the Reactor Vessel Surveillance Capsule Program (see Reference 19)

SUMMARY OF SPECIMENS PROVIDED FOR EACH SUPPLEMENTAL SURVEILLANCE CAPSULE

	SA-60-01			SA-240-1		
MATERIAL	Modified Impact (T)	Standard Impact (L)	Tensile	Modified Impact (T)	Standard Impact (L)	Tensile
W5124	39			42		
34B009	39			36		
27204	36	12	3	36	12	3
HSST 02		12			12	

PRIMARY COOLANT SYSTEM
PRESERVICE QUALITY ASSURANCE PROGRAM

1. Reactor Vessel

Forgings	
Flanges	UT, MT
Studs	UT, MT
Cladding	UT(a), PT(a)
Nozzles	UT, MT
Plates	UT(b), MT
Cladding	UT(a), PT(a)
Welds	
Main Seams	RT, MT
CRD Head Nozzle Connection	PT(a)
Instrumentation Nozzles	PT(a)
Main Nozzles	RT, MT
Cladding	UT(a), PT
Nozzle Safe Ends	RT, MT
Vessel Support Buildup	UT(a), MT
All Welds - After Hydrostatic Test	MT

2. Steam Generator

Tube Sheet	
Forging	UT, MT
Cladding	UT(a), PT(a)
Primary Head	
Plate	UT(b), MT
Cladding	UT(a), PT(a)
Secondary Shell and Head	
Plates	UT(b), MT
Tubes	UT, ET
Nozzles (Forgings)	UT, MT
Studs	UT, MT

PRIMARY COOLANT SYSTEM
PRESERVICE QUALITY ASSURANCE PROGRAM

Welds	
Shell, Longitudinal	RT, MT
Shell, Circumferential	RT, MT, UT
Cladding	UT(a), PT
Nozzles to Shell	RT, MT, UT, PT
Tube-to-Tube Sheet	PT, GT(a)
Instrument Connections	MT, RT
Temporary Attachments After Removal	MT
All Welds - After Hydrostatic Test	MT
Nozzle Safe Ends	RT, MT

3. Pressurizer

Heads	
Plates	UT(b), MT
Cladding	UT(a), PT(a)
Shell	
Plates	UT(b), MT
Cladding	UT(a), PT(a)
Heaters	
Tubing	UT, PT
Centering of Elements	RT(a)
Nozzle	UT, PT, MT
Studs	UT, MT
Welds	
Shell, Longitudinal	RT, MT
Shell, Circumferential	RT, MT
Cladding	UT(a), PT
Nozzles	RT, MT
Nozzle Safe Ends	RT, MT, PT
Instrument Connections	PT
Support Skirt	RT, MT
Temporary Attachments After Removal	MT
All Welds After Hydrostatic Test	MT

PRIMARY COOLANT SYSTEM
PRESERVICE QUALITY ASSURANCE PROGRAM

4. Pumps	
Castings	RT, PT
Forgings	UT, PT
Welds	
Circumferential	RT, PT
Instrument Connections	PT
All Welds After Hydrostatic Test	PT
5. Piping	
Fittings (Mill Clad Plate)	UT, PT(a)
Pipe (Mill Clad Plate)	UT, PT(a)
Welds	
Longitudinal	RT, MT
Circumferential	RT, MT
Nozzle to Run Pipe	RT, MT (or PT)
Instrument Connections	PT
Cladding	PT

RT - Radiographic MT- Magnetic Particle

UT - Ultrasonic ET - Eddy Current

PT - Dye Penetrant GT - Gas Leak Test

(a) Above code (ASME B&PV Code, Section III, 1965, W65a).
(b) A 100% volumetric ultrasonic test of plate for both two-directional shear wave and longitudinal wave is performed. The ASME Code requires that Section III, Class A plate receive only a longitudinal wave ultrasonic test on a 9-inch by 9-inch grid. The 100% volumetric ultrasonic test assures that plate used in the primary system is of the highest quality.

PRIMARY COOLANT SYSTEM INSPECTION CE REQUIREMENTS

	CE Requirement	ASME III Code Requirement
Reactor Vessel		
Ultrasonic Testing (UT)	1. 100% Volumetric Longitudinal and Shear Wave UT of Plate Material	1. Longitudinal UT on a 9" x 9" Grid Pattern
	2. UT of Clad Bond to a 3" Diameter Unbonded Area Repair Standard	2. None
Dye Penetrant Testing (PT)	1. PT Test Root and Final Layer of Welds for Partial Penetration Welds to Control Rod Drive Mechanism Head Adapters and Instrument Tube Connections	1. PT Test of Finished Weld
	2. PT Test Finished Surface of Cladding	2. None
Steam Generator		
Ultrasonic Testing (UT)	1. 100% Volumetric Longitudinal and Shear Wave UT of Plate Material	1. Longitudinal UT on a 9" x 9" Grid Pattern
Dye Penetrant Testing (PT)	1. PT Test Finished Surface of Primary Head Cladding	1. None
Pressurizer		
Ultrasonic Testing (UT)	1. 100% Volumetric Longitudinal and Shear Wave UT of Plate Material	1. Longitudinal UT on a 9" x 9" Grid Pattern
Dye Penetrant Testing (PT)	1. PT Test on Finished Surface of Cladding	1. None
Radiography (RT)	1. Radiograph Heaters To Check Heater Wire Positioning	1. None

REACTOR VESSEL SURVEILLANCE COUPON REMOVAL SCHEDULE

Withdrawal Sequence	Capsule	Removal Time (EFPY)	Capsule Fluence X 10^{19} (n/cm^2)	Refuel Number
First	A-240	2.26	4.01	2
Second	W-290	5.21	0.926	5
	T-330	5.21		5
Third	W-110	9.95	1.66	10
Fourth	W-100	16.93	2.1	16
Fifth	W-80	~ 31.96	~ 3.06	~ 27
	W-280	Reserved for future use		
	W-260	Reserved for future use		
	T-150	Reserved for future use		

Revision of the removal schedule requires NRC approval prior to implementation per 10CFR50, Appendix H. Schedule approved by NRC August 14, 2007 (TAC No. MD3461).