UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 164
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated June 19, 1998, as supplemented by letter dated November 6, 1998, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter 1;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-69 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 164 are hereby incorporated into this license. Niagara Mohawk Power Corporation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance to be implemented before core operation exceeds 18 effective full-power years.

FOR THE NUCLEAR REGULATORY COMMISSION

S. Singh Bajwa, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 25, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 164

TO FACILITY OPERATING LICENSE NO. DPR-63

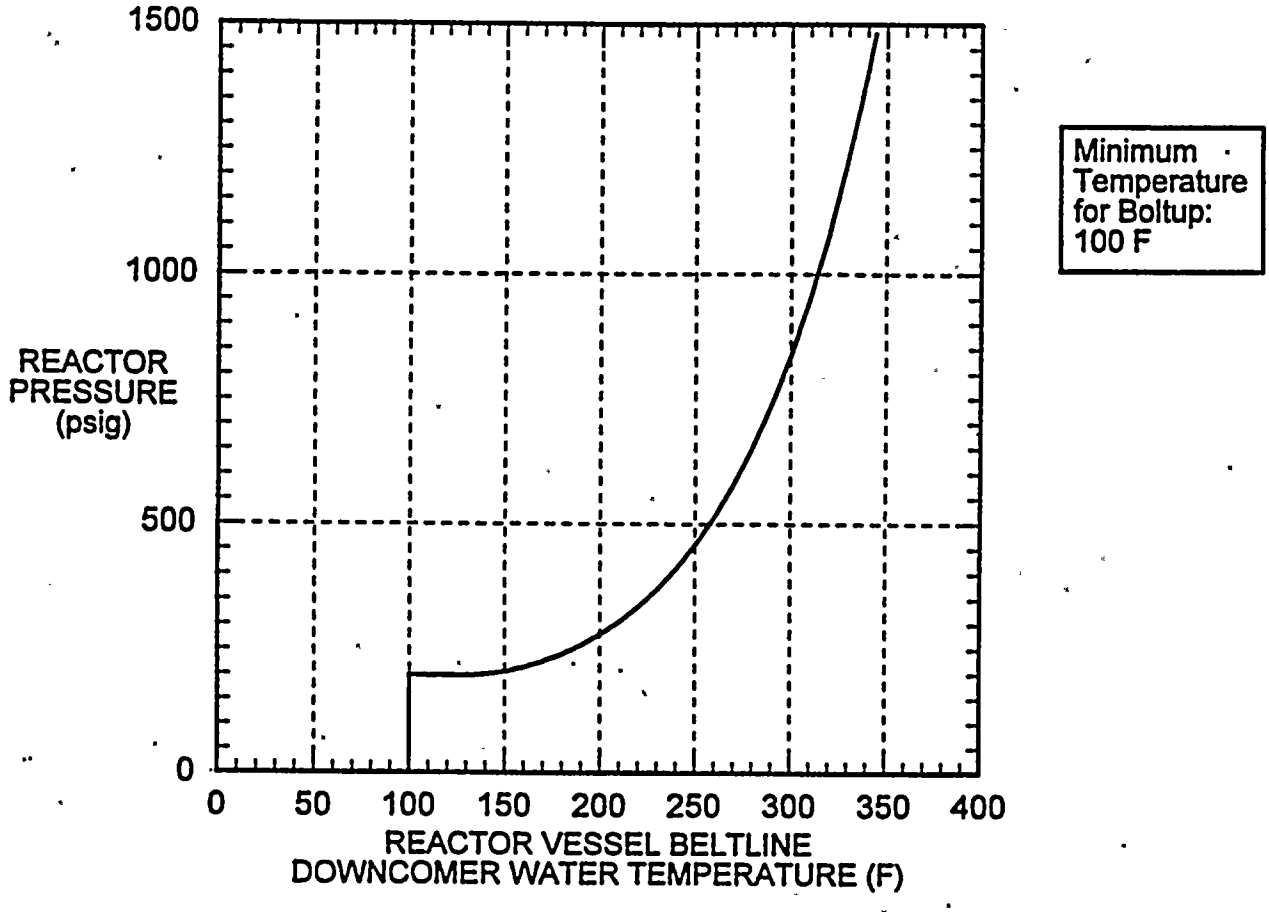
DOCKET NO. 50-220

Replace the following page of the Appendix A Technical Specifications with the attached page.

Remove	Insert
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
---	94a (new)
---	94b (new)
---	94c (new)
---	94d (new)
95	95

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
c. During leakage and hydrostatic testing, the reactor vessel temperature and pressure shall satisfy the requirements of Figures 3.2.2.e, 3.2.2.f, or 3.2.2.g, as appropriate, if the core is not critical. During reactor vessel heatup and cooldown for the purpose of leakage and hydrostatic testing, the reactor vessel temperature and pressure shall satisfy the requirements of Figures 3.2.2.a and 3.2.2.b for non-critical heatup and cooldown, respectively.	In order to generate additional plant-specific data, a capsule containing irradiated and unirradiated material will be re-inserted at the B capsule location. Re-insertion capsules have already been installed at the A and C locations. A prime (') is used to indicate a re-insertion capsule. The withdrawal schedule for the re-insertion capsules is as follows: Fourth capsule (A') - 24 EFPY Fifth capsule (C') - 32 EFPY Sixth capsule (B') - 40 EFPY
d. The reactor vessel head bolting studs shall not be under tension unless the temperature of the vessel head flange and the head are equal to or greater than 100°F.	

HEATUP - CORE NOT CRITICAL



(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this figure)

FIGURE 3.2.2.a

MINIMUM BELTLINE DOWNCOMER WATER TEMPERATURE FOR PRESSURIZATION DURING HEATUP AND LOW-POWER PHYSICS TESTS (CORE NOT CRITICAL) (HEATING RATE ≤ 100°F/HR) FOR UP TO 28 EFFECTIVE FULL POWER YEARS OF OPERATION

LIMIT FOR NON-CRITICAL OPERATION
HEATUP AT UP TO 100°F/HR

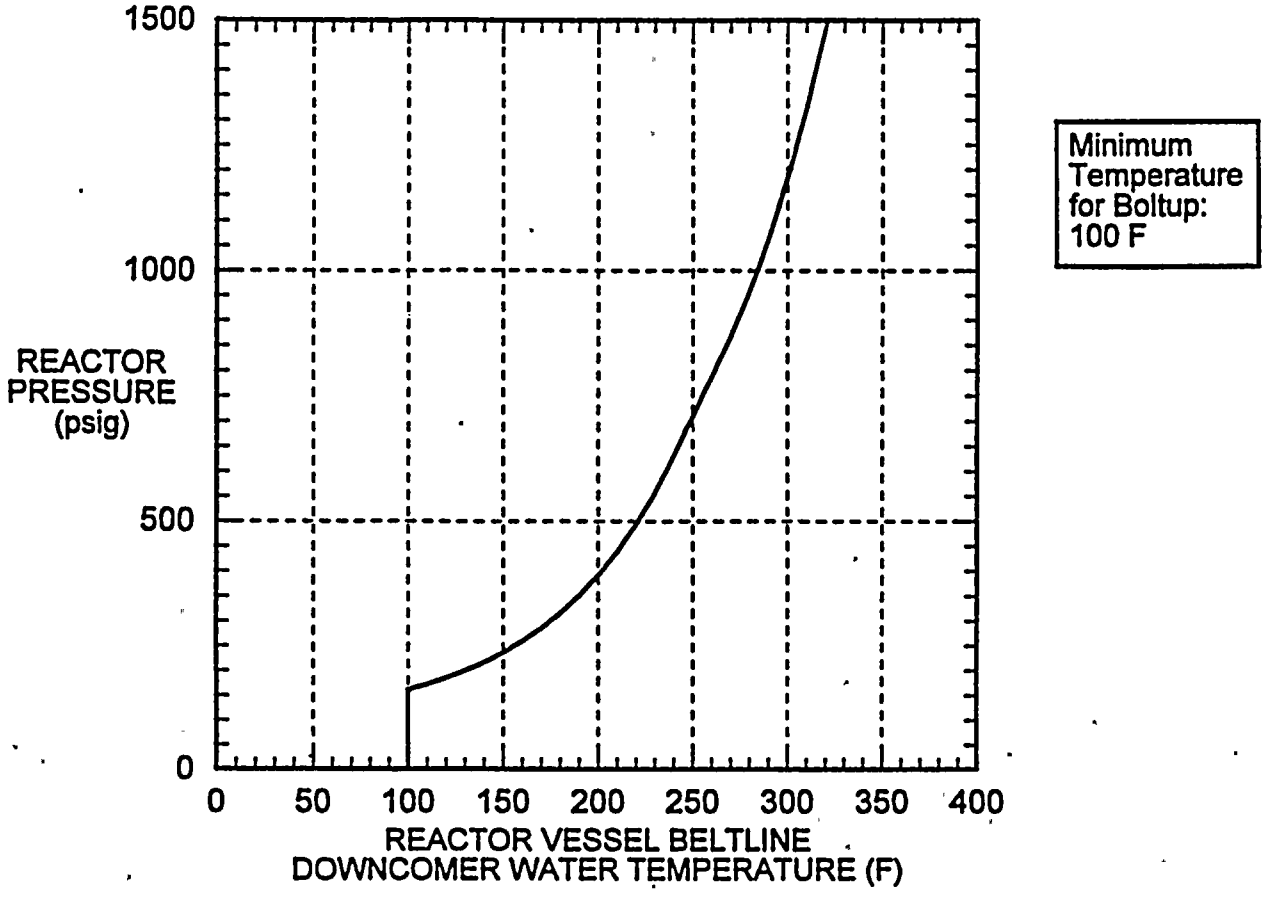
REACTOR PRESSURE (psig) IN TOP DOME	REACTOR VESSEL BELTLINE DOWNCOMER WATER TEMPERATURE (F)
197	100
197	110
197	120
197	130
199	140
205	150
213	160
225	170
239	180
257	190
279	200
304	210
334	220
369	230
410	240
458	250
513	260
577	270
651	280
737	290
835	300
949	310
1079	320

(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this table)

TABLE 3.2.2.a

MINIMUM TEMPERATURE FOR PRESSURIZATION DURING HEAT-UP (CORE NOT CRITICAL) (HEATING RATE ≤ 100°F/HR) FOR UP TO TWENTY EIGHT EFFECTIVE FULL POWER YEARS OF CORE OPERATION

COOLDOWN - CORE NOT CRITICAL



(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this figure)

FIGURE 3.2.2.b

MINIMUM BELTLINE DOWNCOMER WATER TEMPERATURE FOR PRESSURIZATION DURING COOLDOWN AND LOW-POWER PHYSICS TESTS (CORE NOT CRITICAL) (COOLING RATE ≤ 100°F/HR) FOR UP TO 28 EFFECTIVE FULL POWER YEARS OF OPERATION

LIMIT FOR NON-CRITICAL OPERATION
COOLDOWN AT UP TO 100°F/HR

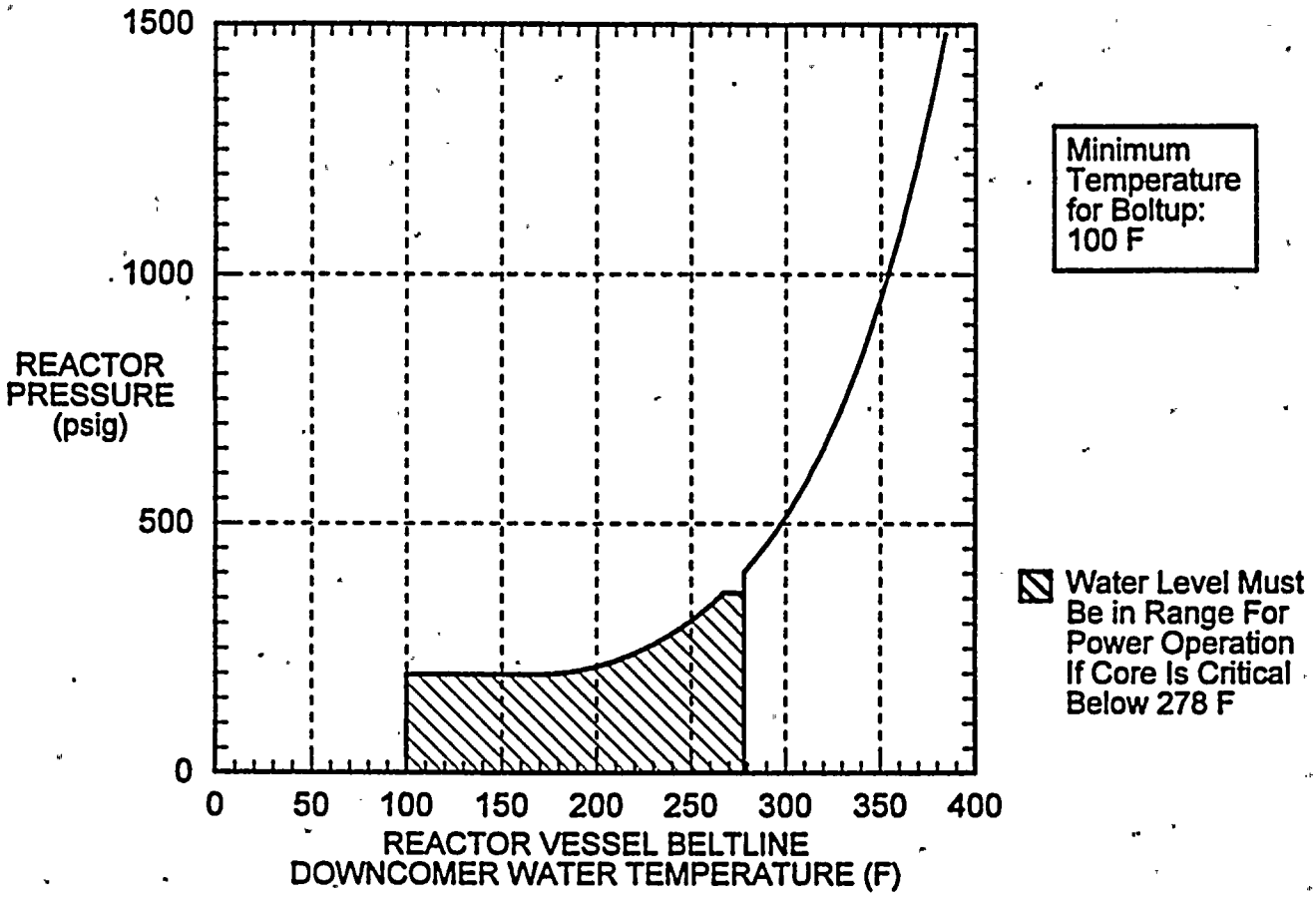
REACTOR PRESSURE (psig) IN TOP DOME	REACTOR VESSEL BELTLINE DOWNCOMER WATER TEMPERATURE (F)
160	100
171	110
184	120
199	130
216	140
235	150
258	160
284	170
315	180
350	190
391	200
438	210
493	220
556	230
630	240
708	250
786	260
866	270
957	280
1062	290

(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this table)

TABLE 3.2.2.b

MINIMUM TEMPERATURE FOR PRESSURIZATION DURING COOLDOWN (CORE NOT CRITICAL) (COOLING RATE ≤ 100°F/HR) FOR UP TO TWENTY EIGHT EFFECTIVE FULL POWER YEARS OF CORE OPERATION

HEATUP - CORE CRITICAL



(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this figure)

FIGURE 3.2.2.c

MINIMUM BELTLINE DOWNCOMER WATER TEMPERATURE FOR PRESSURIZATION DURING CORE OPERATION (CORE CRITICAL) (HEATING RATE ≤ 100°F/HR) FOR UP TO 28 EFFECTIVE FULL POWER YEARS OF OPERATION

LIMIT FOR POWER OPERATION (CORE CRITICAL) HEATUP AT UP TO 100°F/HR

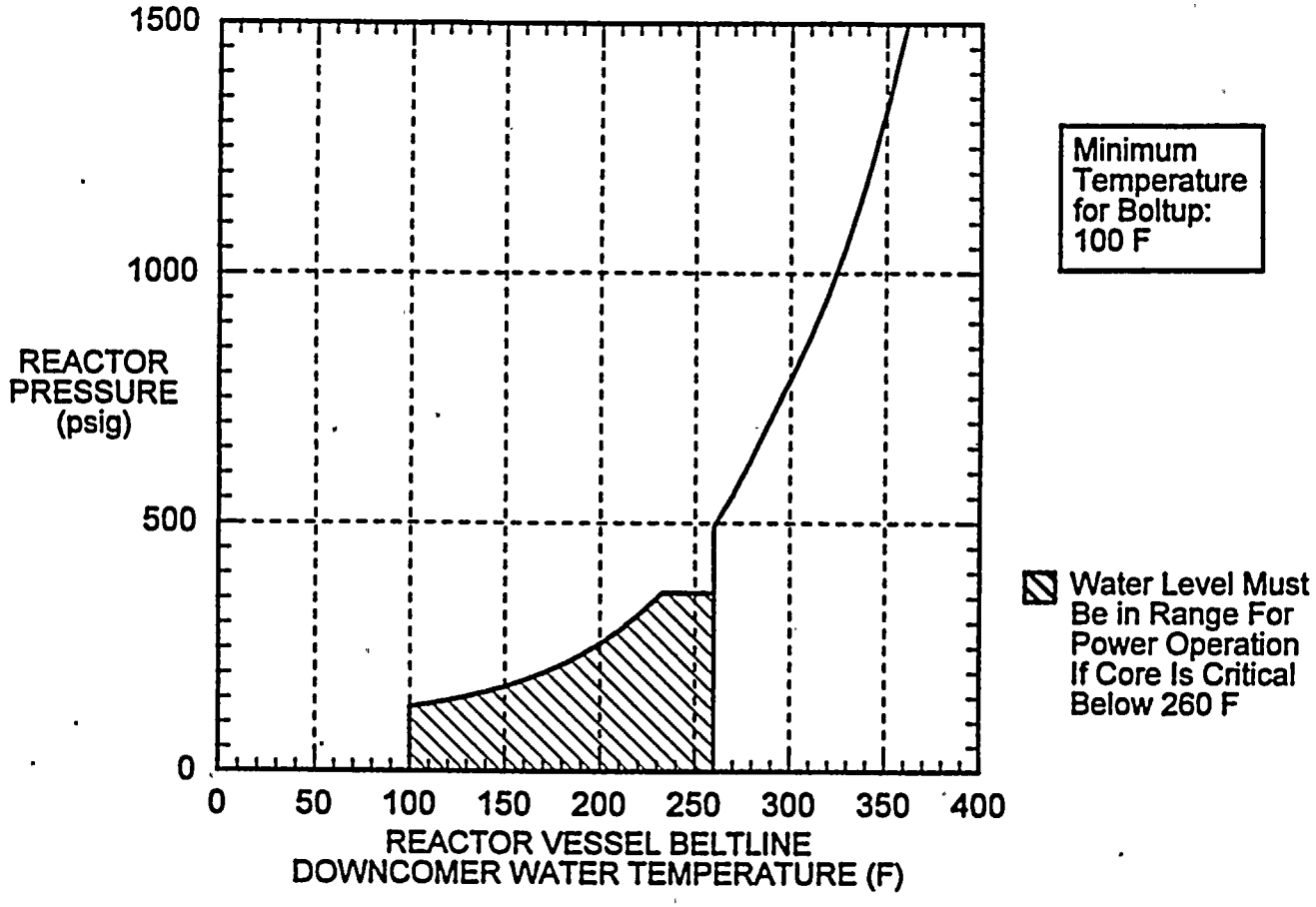
REACTOR PRESSURE (psig) IN TOP DOME	REACTOR VESSEL BELTLINE DOWNCOMER WATER TEMPERATURE (F)
197	100
197	110
197	120
197	130
197	140
197	150
197	160
197	170
199	180
205	190
213	200
225	210
239	220
257	230
279	240
304	250
334	260
360	268
360	270
360	277
402	278*
410	280
458	290
513	300
577	310
651	320
737	330
835	340
949	350
1079	360

(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(*water level must be in range for power operation if core is critical below 278 F)
(instrument uncertainties have been included in this table)

TABLE 3.2.2.c

MINIMUM TEMPERATURE FOR PRESSURIZATION DURING HEATUP (CORE CRITICAL) (HEATING RATE ≤ 100°F/HR) FOR UP TO TWENTY EIGHT EFFECTIVE FULL POWER YEARS OF CORE OPERATION

COOLDOWN - CORE CRITICAL



(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this figure)

FIGURE 3.2.2.d

MINIMUM BELTLINE DOWNCOMER WATER TEMPERATURE FOR PRESSURIZATION DURING CORE OPERATION (CORE CRITICAL) (COOLING RATE ≤100°F/HR) FOR UP TO 28 EFFECTIVE FULL POWER YEARS OF OPERATION

LIMIT FOR POWER OPERATION (CORE CRITICAL) COOLDOWN AT UP TO 100°F/HR

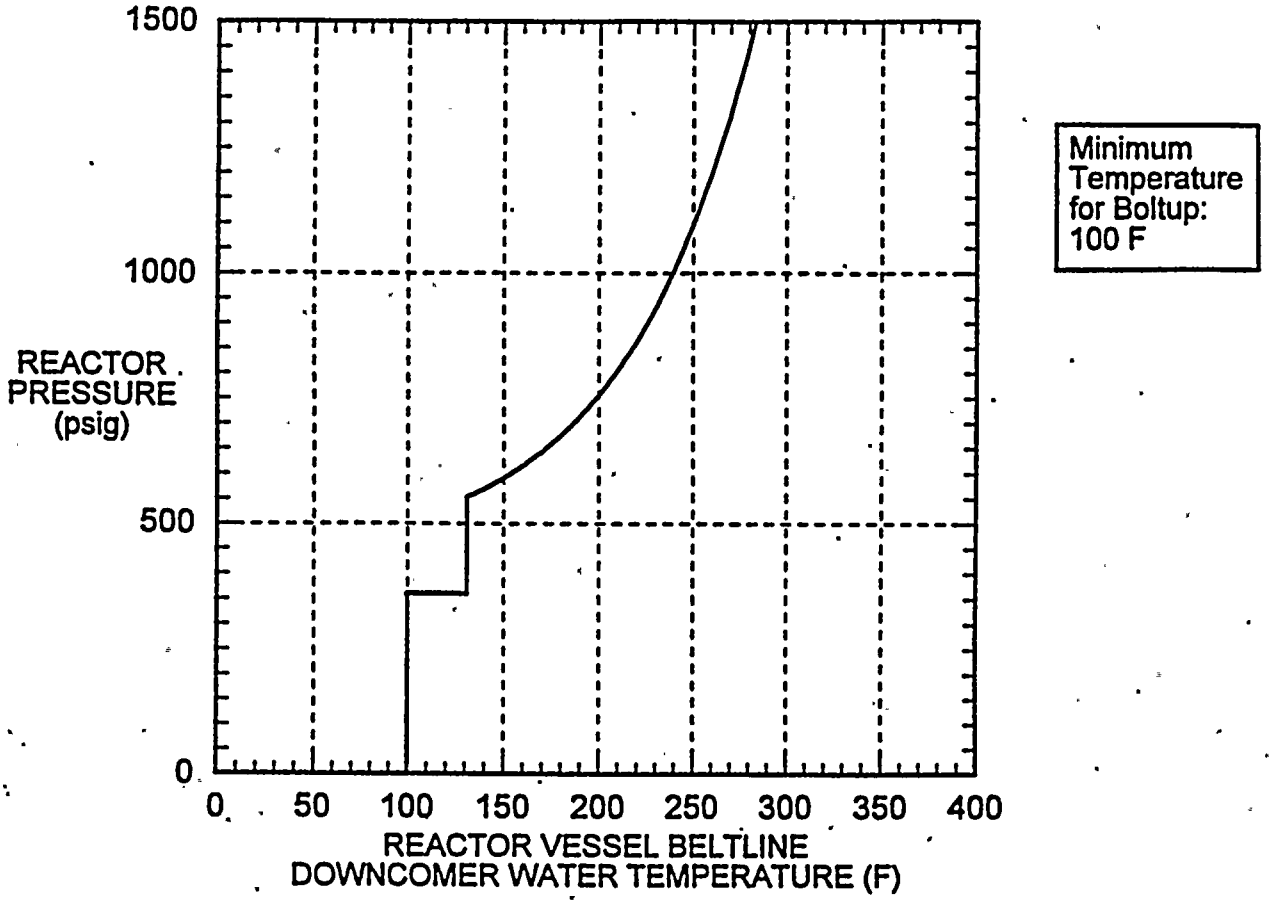
REACTOR PRESSURE (psig) IN TOP DOME	REACTOR VESSEL BELTLINE DOWNCOMER WATER TEMPERATURE (F)
130	100
136	110
143	120
151	130
160	140
171	150
184	160
199	170
216	180
235	190
258	200
284	210
315	220
350	230
360	233
360	240
360	250
360	259
493	260[a]
556	270
630	280
708	290
786	300
866	310
957	320
1062	330

(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
([a]water level must be in range for power operation if core is critical below 260 F)
(instrument uncertainties have been included in this table)

TABLE 3.2.2.d

MINIMUM TEMPERATURE FOR PRESSURIZATION DURING COOLDOWN (CORE CRITICAL) (COOLING RATE ≤ 100°F/HR) FOR UP TO TWENTY EIGHT EFFECTIVE FULL POWER YEARS OF CORE OPERATION

LEAK/HYDRO TEST - CORE NOT CRITICAL



(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this figure)

FIGURE 3.2.2.e

MINIMUM BELTLINE DOWNCOMER WATER TEMPERATURE FOR PRESSURIZATION DURING IN-SERVICE HYDROSTATIC TESTING AND LEAK TESTING (CORE NOT CRITICAL) FOR UP TO 28 EFFECTIVE FULL POWER YEARS OF OPERATION

LIMIT FOR IN-SERVICE TEST
(CORE NOT CRITICAL, FUEL IN VESSEL)

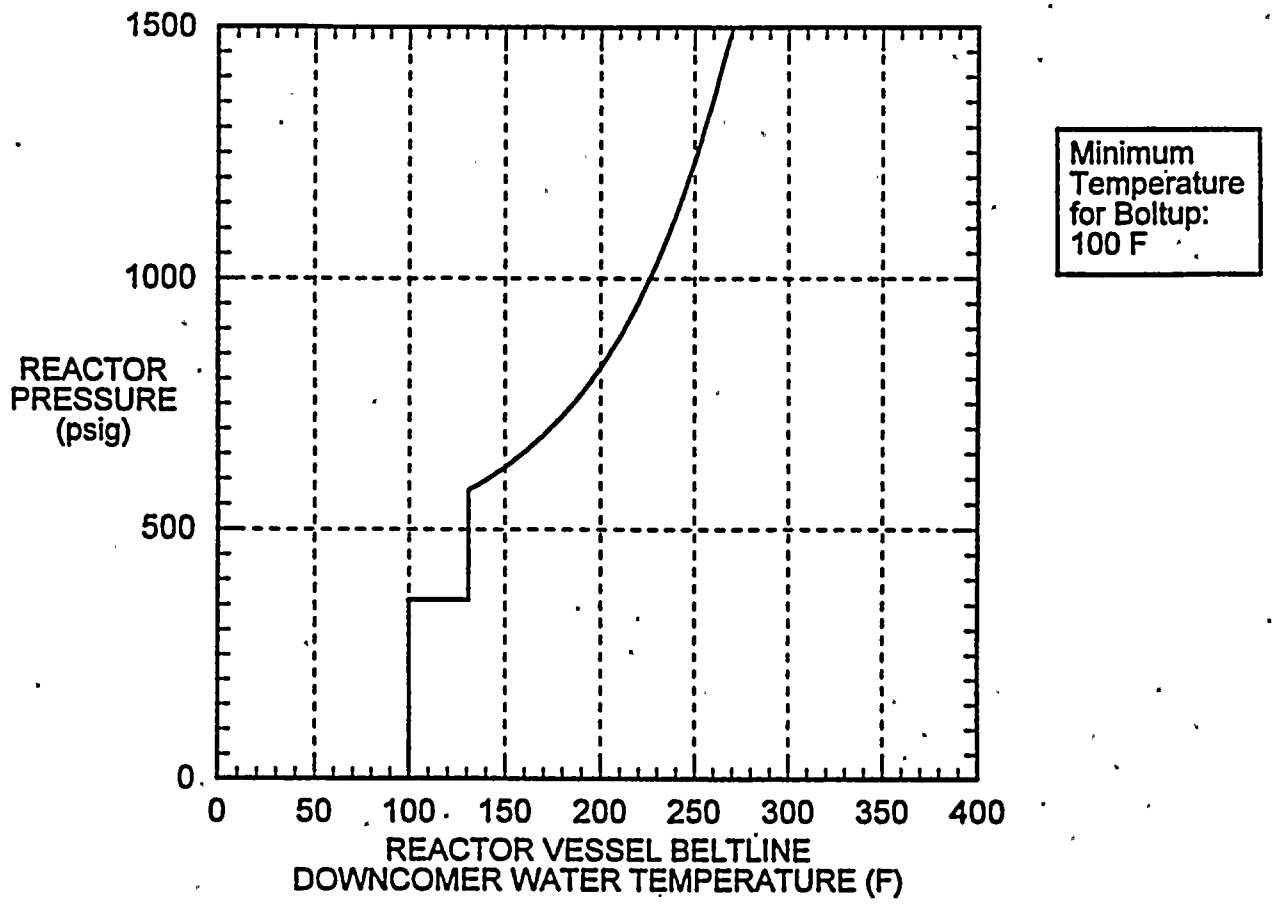
REACTOR PRESSURE (psig) IN TOP DOME	REACTOR VESSEL BELTLINE DOWNCOMER WATER TEMPERATURE (F)
360	100
360	110
360	120
360	130
569	140
590	150
614	160
642	170
675	180
712	190
755	200
805	210
862	220
929	230
1005	240
1032	243
1093	250
1195	260

(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this table)

TABLE 3.2.2.e

MINIMUM TEMPERATURE FOR PRESSURIZATION DURING LEAK/HYDROSTATIC TESTING (CORE NOT CRITICAL) FOR UP TO TWENTY EIGHT EFFECTIVE FULL POWER YEARS OF CORE OPERATION

LEAK/HYDRO TEST - CORE NOT CRITICAL



(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this figure)

FIGURE 3.2.2.f

MINIMUM BELTLINE DOWNCOMER WATER TEMPERATURE FOR PRESSURIZATION DURING IN-SERVICE HYDROSTATIC TESTING AND LEAK TESTING (CORE NOT CRITICAL) FOR UP TO 20 EFFECTIVE FULL POWER YEARS OF OPERATION

LIMIT FOR IN-SERVICE TEST
(CORE NOT CRITICAL, FUEL IN VESSEL)

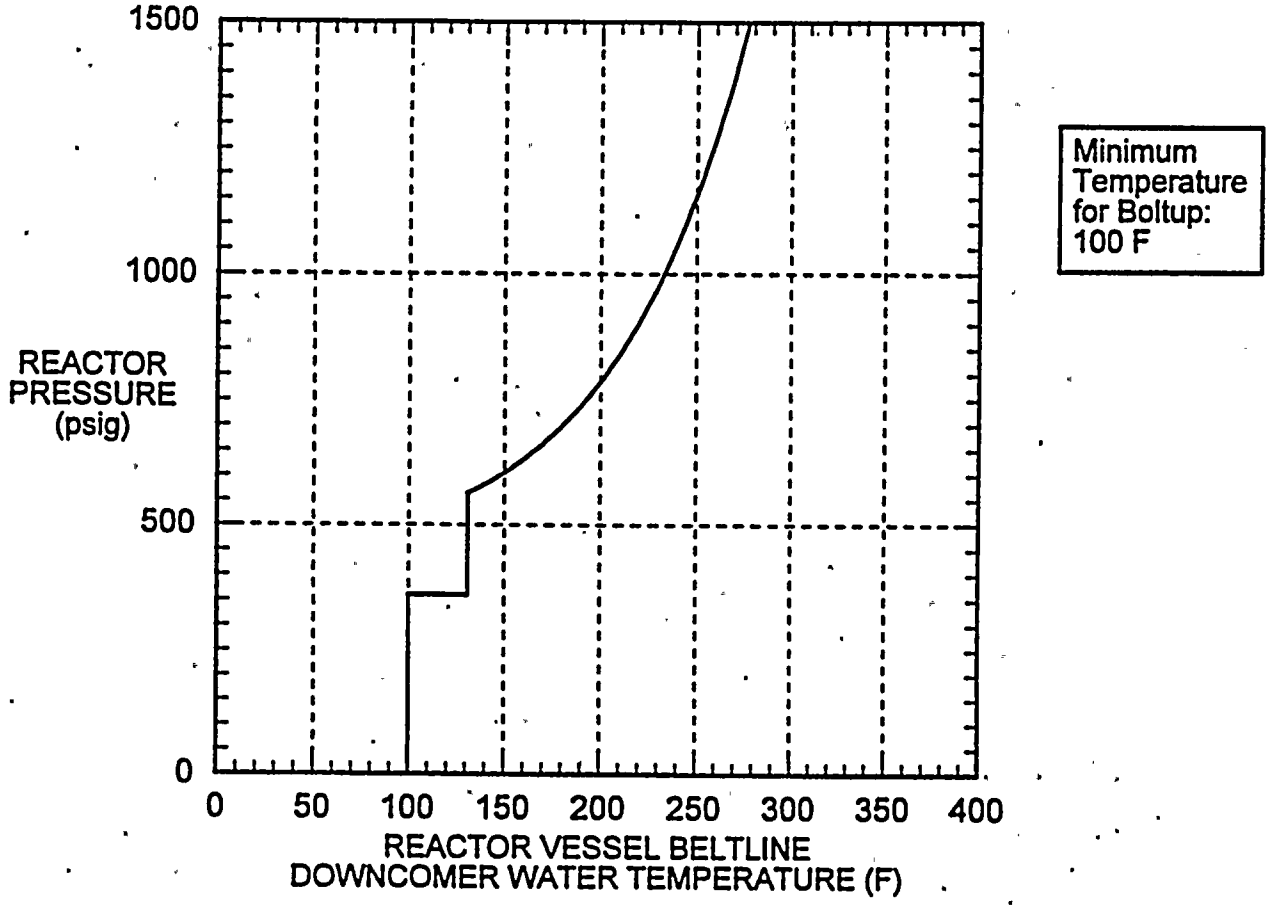
REACTOR PRESSURE (psig) IN TOP DOME	REACTOR VESSEL BELTLINE DOWNCOMER WATER TEMPERATURE (F)
360	100
360	110
360	120
360	130
597	140
622	150
652	160
685	170
724	180
769	190
821	200
881	210
951	220
1031	230
1123	240
1229	250

(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this table)

TABLE 3.2.2.f

MINIMUM TEMPERATURE FOR PRESSURIZATION DURING LEAK/HYDROSTATIC TESTING (CORE NOT CRITICAL) FOR UP TO TWENTY EFFECTIVE FULL POWER YEARS OF CORE OPERATION

LEAK/HYDRO TEST - CORE NOT CRITICAL



(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this figure)

FIGURE 3.2.2.g

MINIMUM BELTLINE DOWNCOMER WATER TEMPERATURE FOR PRESSURIZATION DURING IN-SERVICE HYDROSTATIC TESTING AND LEAK TESTING (CORE NOT CRITICAL) FOR UP TO 24 EFFECTIVE FULL POWER YEARS OF OPERATION

LIMIT FOR IN-SERVICE TEST
(CORE NOT CRITICAL, FUEL IN VESSEL)

REACTOR PRESSURE (psig) IN TOP DOME	REACTOR VESSEL BELTLINE DOWNCOMER WATER TEMPERATURE (F)
360	100
360	110
360	120
360	130
582	140
604	150
631	160
661	170
697	180
737	190
785	200
839	210
902	220
974	230
1033	237
1058	240
1154.	250

(reactor vessel beltline downcomer water temperature is measured at recirculation loop suction)
(instrument uncertainties have been included in this table)

TABLE 3.2.2.g

MINIMUM TEMPERATURE FOR PRESSURIZATION DURING LEAK/HYDROSTATIC TESTING (CORE NOT CRITICAL) FOR UP TO TWENTY FOUR EFFECTIVE FULL POWER YEARS OF CORE OPERATION

BASES FOR 3.2.2 AND 4.2.2 MINIMUM REACTOR VESSEL TEMPERATURE FOR PRESSURIZATION

Figures 3.2.2.a, 3.2.2.b, 3.2.2.c, and 3.2.2.d are plots of pressure versus temperature for heatup and cooldown rates of up to 100°F/hr. maximum (Specification 3.2.1). Figures 3.2.2.e, 3.2.2.f, and 3.2.2.g are plots of pressure versus temperature for leakage and hydrostatic testing. When the minimum temperature for leakage and hydrostatic testing is reached, a thermal soak shall be performed to ensure that the thermal gradient across the vessel wall is negligible. These curves are based on calculations of stress intensity factors according to Appendix G of Section III of the ASME Boiler and Pressure Vessel Code 1980 Edition with Winter 1982 Addenda. In addition, temperature shifts due to fast neutron fluence at twenty-eight effective full power years of operation were incorporated into the figures. These shifts were calculated using the procedure presented in Regulatory Guide 1.99, Revision 2. Reactor vessel flange/reactor head flange boltup is governed by other criteria as stated in Specification 3.2.2.d. The pressure readings on the figures have been adjusted to account for instrument uncertainties and to reflect the calculated elevation head difference between the pressure sensing instrument locations and the pressure sensitive area of the core beltline region. The temperature readings on the figures have been adjusted to account for instrument uncertainties.

The reactor vessel head flange and vessel flange in combination with the double "O" ring type seal are designed to provide a leak-tight seal when bolted together. When the vessel head is placed on the reactor vessel, only that portion of the head flange near the inside of the vessel rests on the vessel flange. As the head bolts are replaced and tensioned, the vessel head is flexed slightly to bring together the entire contact surfaces adjacent to the "O" rings of the head and vessel flanges. Both the head and vessel flanges have an NDT temperature of 40°F and they are not subject to any appreciable neutron radiation exposure. Therefore, the minimum vessel flange and head flange temperature for bolting is established at 40°F + 60°F or 100°F.

Figures 3.2.2.a, 3.2.2.b, 3.2.2.c, 3.2.2.d, 3.2.2.e, 3.2.2.f and 3.2.2.g have incorporated a temperature shift due to the calculated fast neutron fluence. The neutron flux at the vessel wall is calculated from core physics data and has been determined using flux monitors installed inside the vessel. The curves, except for 3.2.2.f and 3.2.2.g, are applicable for up to twenty-eight effective full power years of operation. Curves 3.2.2.f and 3.2.2.g are applicable for up to twenty and twenty-four effective full power years, respectively.

Vessel material surveillance samples are located within the core region to permit periodic monitoring of exposure and changes in material properties. The material sample program conforms with ASTM E185-66 except for the material withdrawal schedule which is specified in Specification 4.2.2.b.