ATTACHMENT 2

PEACH BOTTOM ATOMIC POWER STATION
UNIT 2

Docket No. 50-277

License No. DPR-44

TECHNICAL SPECIFICATION CHANGES

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LIMITED CONDITIONS FOR OPERATION

H. Minimum Critical Power Ratio (MCPR) Recirculation Pump Trip (RPT) Instrumentation

1. When Thermal Power is > 30% of Rated Thermal Power,

   a. two channels per trip system for each MCPR-RPT instrumentation function listed below shall be operable:

      1) Turbine Stop Valve (TSV) Closure with trip level setting ≤ 10% closed; and

      2) Turbine Control Valve (TCV) Fast Closure trip level setting 500<P<850 psig.

   b. or, if one or more required MCPR-RPT channels are inoperable, restore the channel to operable status within 72 hours or place the channel in trip.*

   c. or, if one or more functions are inoperable with MCPR-RPT trip capability not maintained, then restore the MCPR-RPT trip capability within 2 hours.

   d. or, apply the MCPR limit for inoperable MCPR-RPT as specified in the COLR within 2 hours.

2. If the requirements of Specification 3.2.H.1 cannot be met, then remove the associated recirculation pump from service within 4 hours, or reduce Thermal Power to < 30% of Rated Thermal Power within 4 hours.

* The action of placing the channel in trip is not applicable if the inoperable channel is the result of an inoperable breaker or Adjustable Speed Drive (ASD).

SURVEILLANCE REQUIREMENTS

H. Minimum Critical Power Ratio (MCPR) Recirculation Pump Trip (RPT) Instrumentation

1. When a MCPR-RPT channel is placed in an incperable status solely for performance of required Surveillances, entry into Specification 3.2.H.2 may be delayed for up to 6 hours provided the associated function maintains MCPR-RPT trip capability.

2. Each MCPR-RPT Instrumentation Channel shall be demonstrated operable by:

   a. Performing a Channel Functional Test once per 92 days;

   b. Performing a Channel Calibration once per 24 months;

   c. Performing a Logic System Functional test including breaker and Adjustable Speed Drive (ASD) stop circuit actuation once per 24 months;

   d. Verifying TSV Closure and TCV Fast Closure functions are not bypassed when Thermal Power is > 30% Rated Thermal Power once per 24 months;

3.2 BASES (Cont.)

The MCPR-RPT instrumentation initiates a recirculation pump trip (RPT) to reduce the peak reactor pressure and power resulting from turbine trip or generator load rejection transients to provide additional margin to the core thermal MCPR safety limit. The MCPR-RPT instrumentation consists of two functions. These two functions are the Turbine Stop Valve (TSV) Closure and Turbine Control Valve (TCV) Fast Closure valve functions. The TSV Closure and the TCV Fast Closure functions are designed to trip the recirculation pumps in the event of a turbine trip or generator load rejection to mitigate the neutron flux, heat flux, and pressure transients, and to increase the margin to the MCPR safety limit.

Each MCPR-RPT trip system is a two-out-of-two logic for each function; thus, either two TSV-Closure or two TCV Fast Closure signals are required for a trip system to actuate. If either trip system actuates, both recirculation pumps will trip. There is one ASD and RPT breaker in series per recirculation pump. One trip system trips the ASD of each recirculation pump, and the second trip system trips the RPT breaker for each recirculation pump.

A function is considered to be maintaining MCPR-RPT trip capability when sufficient channels are Operable or in trip, such that the MCPR-RPT System (consisting of two trip systems) will generate a trip signal from the given function on a valid signal so that both recirculation pumps can be tripped. This requires two channels of the function in the same trip system to be Operable or in trip, and the associated MCPR-RPT breakers or Adjustable Speed Drives (ASDs) to be Operable or in trip. Trip Systems Operability includes the associated MCPR-RPT breakers or ASDs. A channel is considered to be an arrangement of a sensor and associated components which provide an input to the associated function. The function provides an input to the trip system to trip either the ASDs or the RPT breakers. In summary, the intent of 3.2.H.1.c is to ensure that sufficient channels exist in either trip system such that a TSV Closure will result in a trip of both recirculation pumps, and a TCV Fast Closure will result in a trip of both recirculation pumps.

Limiting Condition for Operation 3.2.H.1.d is intended to ensure that appropriate actions are taken if multiple, inoperable, untripped channels within the same function result in the function not maintaining MCPR-RPT trip capability.

To mitigate pressurization transient effects, the MCPR-RPT must trip the recirculation pumps after initiation of closure movement of either the TSVs or the TCVs. The combined effects of this trip and a scram reduce fuel bundle power more rapidly than a scram alone, resulting in an increased margin to the MCPR safety limit. The MCPR-RPT function is automatically disabled when turbine first stage pressure is < 30% Rated Thermal Power.

The MCPR-RPT protection is required whenever Thermal Power is > 30% Rated Thermal Power. Below 30% Rated Thermal Power, the High Reactor Pressure and the APRM High Flux functions of the RPS are adequate to maintain the necessary safety margins.

Surveillance Requirements have been added to ensure instrument functioning.

4.5.K Minimum Critical Power Ratio (MCPR) - Surveillance Requirement

At core thermal power levels less than or equal to 25%, the reactor will be operating at minimum recirculation pump speed and the moderator void content will be very small. For all designated control rod patterns which may be employed at this point, operating plant experience indicated that the resulting MCPR value is in excess of requirements by a considerable margin. With this low void content, any inadvertent core flow increase would only place operation in a more conservative mode relative to MCPR. During initial start-up testing of the plant, a MCPR evaluation will be made at 25% thermal power level with minimum recirculation pump speed. The MCPR margin will thus be demonstrated such that future MCPR evaluation below this power level will be shown to be unnecessary. The daily requirement for calculating MCPR above 25% rated thermal power is sufficient since power distribution shifts are very slow when there have not been significant power or control rod changes. The requirement for calculating MCPR when a limiting control rod pattern is approached ensures that MCPR will be known following a change in power or power shape (regardless of magnitude) that could place operation at a thermal limit.

4.5.L MCPR Limits for Core Flows Other Than Rated

The purpose of the K_f factor is to define operating limits at other than rated flow conditions. At less than 100% flow the required MCPR is the product of the operating limit MCPR and the K_f factor. Specifically, the K_f factor provides the required thermal margin to protect against a flow increase transient. The most limiting transient initiated from less than rated flow conditions is the recirculation pump speed up caused by an Adjustable Speed Drive (ASD) speed control failure.

For operation in the automatic flow control made, the K_f factors assure that the operating limit MCPR will not be violated should the most limiting transient occur at less than rated flow. In the manual flow control mode, the K_f factors assure that the Safety Limit MCPR will not be violated for the same postulated transient event.

The K_f factor curves in the CORE OPERATING LIMITS REPORT were developed generically and are applicable to all BWR/2, BWR/3, and BWR/4 reactors. The K_f factors were derived using the flow control line corresponding to rated thermal power at rated core flow.

For the manual flow control mode, the K_f factors were calculated such that at the maximum flow rate and the corresponding core power (along the rated flow control line), the limiting bundle's relative power was adjusted until the MCPR was slightly above the Safety Limit. Using this relative bundle power, the MCPR's were calculated at different points along the rated flow control line corresponding to different core flows. The ratio of the MCPR calculated at a given point of the core flow, divided by the operating limit MCPR determines the K_f.

For operation in the automatic flow control mode, the same procedure was employed except the initial power distribution was established such that the MCPR was equal to the operating limit MCPR at rated power and flow.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
a. Gases from the Steam Jet Air Ejector Discharge shall be processed through the recombiner, holdup pipe, off-gas filter, and off-gas stack.	month in accordance with the methodology and parameters in the ODCM.
b. Gases from the Mechanical Vacuum Pump and Gland Steam Exhauster discharge shall be processed through the off-gas stack.	5b. The appropriate gaseous radioactive waste system equipment as described in Specification 3.8.C.5 shall be demonstrated operable every quarter, unless utilized to process gaseous waste during the previous 13 weeks, by analyzing the gaseous waste processed through the appropriate equipment to determine that it meets the requirements of Specification 3.8.C.1.
c. Reactor, turbine, radwaste, and recombiner building atmospheres shall be processed through permanently or temporarily installed equipment in the appropriate building ventilation system and the Reactor Building Ventilation Exhaust Stack, with the exception of the following unmonitored exhausts: 1. ASD and Reactor Building Cooling Water equipment rooms. 2. Control room utility and toilet rooms. 3. Cable spread room. 4. Emergency switchgear rooms. 5. 125/250 VDC Battery rooms and the 250 VDC Battery rooms. 6. Administration Building maintenance decontamination area.	5c. An air sample shall be obtained and analyzed from all building areas with an unmonitored exhaust once per month.
With gaseous waste being discharged without treatment as required above, prepare and submit to the Commission within 21 working days.	

TABLE 3.14.C.1

FIRE DETECTORS

Location	Detector Type/ Designation (1)	Minimum Detectors Operable
Unit 2		
Primary Containment (2) (3)	S1, S2, S8	3
CRD Area (135') Rms. 208, 209, 212	S7A, S8A, S9A, S10A S11A, S12A, S13A, S14A S15A, S16A, S17A, S18A S19A, S20A	13
Isol. Valve Compt. (135') Rm. 204	S21A	1
Operating Area (165') Rm. 402,403	S31A, S32A, S33A, S34A S35A, S36A, S37A, S38A S39A, S40A, S41A, S42A S43A	12
Laydown Area (195') Rm. 501, 502 508	S45A, S46A, S47A, S48A S49A, S50A, S51A, S52A	7
Vent. Equip. Area (195') Rm. 506	S53A, S54A	2
Vent Stack Rad. Mon.-Refuel Floor (234')	S58A, S59A	2
HPCI Room	S78 H5, H6, H7	1 (See 3.14.B.1.c)
RCIC Room	S45, S46	2
Reactor Bldg. Sump Area	S79	1
Core Spray Pump Rooms	S41, S42, S43, S44	4
Vac. Breaker Area-Rm. 107, 108	S91, S92, S93	3
RHR Rooms		
Room 101	S30, S31, S32	3
Room 102	S33, S34, S35	3
Room 103	S36, S37, S38	3
Room 104	S39, S40	2
Torus Area	S83, S84, S85, S86 S87, S88, S89, S90	7
RBCCW Rm (Rm 105)	S94, S95, S96, S97, S98	4

TABLE 3.14.C.1

FIRE DETECTORS

Location	Detector Type/ Designation (1)	Minimum Detectors Operable
ASD Room	S15, S16, S17 S18, S19, S20	5
Emerg. Switchgear Rooms	S11, S12, S13, S14	4
Battery Rooms		
Room 218	S70, S71	2
Room 225	S68, S69	2
13KV Switchgear Area (116')	S72, S73, S74	3
HPSW Pump Room	S390	1
UNIT 3		
Primary Containment (2)(3)	S103, S104, S106	3
CRD Area (135') Rms. 250 252, 257	S166, S167, S168, S169 S170, S171, S172, S173 S174, S175, S176, S177 S178, S179	13
Isol. Valve Compt. (135') Rm 249	S181	1
Operating Area (165') Rm. 443, 444	S182, S183, S184, S185 S186, S187, S188, S189 S190, S191, S192, S193 S194	12
Laydown Area (195') Rm. 517, 518, 523	S196, S197, S198, S199 S103A, S104A, S105A, S106A	7
Vent. Equip Area (195') Rm. 520	S107A, S108A	2
Vent Stack Rad. Mon.-Refuel floor (234')	S109A, S110A	2
HPCI Room	S148 H115, H116, H117	1 (See 3.14.B.1.c)
RCIC Room	S131, S132	2
Reactor Bldg. Sump Area	S149	1

Location	Detector Type/ Designation (1)	Minimum Detectors Operable
Core Spray Pump Rooms	S133, S134, S135, S136	4
Vac. Breaker Area - Room 160, 161	S158, S159, S160	3
RHR Rooms		
Room 156	S120, S121	2
Room 157	S122, S123, S124	3
Room 158	S125, S126, S127	3
Room 159	S128, S129, S130	3
Torus Area	S150, S151, S152, S153 S154, S155, S156, S157	7
RBCCW Room (Rm 162)	S161, S162, S163 S164, S165	4
ASD Room	S111, S112, S113 S114, S116, S117	5
Emerg. Switchgear Rooms	S107, S108, S109 S110	4
Battery Rooms		
Room 266	S147, S148	2
Room 268	S145, S146	2
13KV Switchgear Area (116')	S75, S76, S77	3
HPSW Pump Room	S391	1
COMMON		
Control Room	S21, S22, S23, S24	4
Control Room Offices	S137, S138, S139 S140, S141, S142	6
Cable Spreading Room	S4, S7, S9, S10 S47 through S67 (total: 25)	23
Computer Room	S5, S6	2
Diesel Generator Rooms	H550A, B thru H557A, B and H796A, B thru H819A, B (16 in each room)	(See 3.14.B.3.c)
D-G Bldg. Cardox Room	S540, S541, S542	3

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.14.E. Water Suppression Systems	4.14.E. Water Suppression Systems
1. The ASD room water suppression systems shall be operable whenever the unit is in reactor power operation.	1. The ASD room water suppression system testing shall be performed as follows:
2. If the requirements of 3.14.E.1 cannot be met,	a. Simulated actuation of the automatic valve(s) and system alarms every refueling cycle.
a. establish a continuous fire watch with portable fire suppression equipment within one hour.	b. Functional test of system integrity alarm (low pipe N_2 pressure) every refueling cycle.
b. restore the system to an operable status within 14 days, or in lieu of any other report required by Specification 6.9.2, submit a Special Report to the Commission pursuant to Specification 6.9.3 within 31 days outlining the cause of the malfunction and the plans for restoring the system to an operable status. Reactor startup and/or continued reactor operation is permissible.	

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of fire patrols in the accessible affected areas is required to provide detection capability until the inoperable instrumentation is returned to service.

D. Fire Barrier Penetrations

The functional integrity of the fire barrier penetration seal ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The fire barrier penetration seals are a passive element in the facility fire protection program and are subject to periodic inspections.

During periods of time when the seals are not functional, a continuous fire watch is required to be maintained in the vicinity of the affected seal until the seal is restored to functional status.

E. Water Suppression System

Water suppression systems located in the ASD room are provided to protect the ASD and safe shutdown components for possible fire in the fire area. The suppression system is a pre-action type using smoke detectors to charge the sprinkler headers with fire water and sprinkler actuation on high temperature. Both fire water flow (high pipe pressure switch) and smoke detector actuation annunciates in the control room. The sprinkler header is normally pressurized with N_2, with a low pressure annunciator to monitor header and sprinkler integrity.

F. Battery Room Ventilation Flow Detector

Loss of the battery room exhaust ventilation flow will result in a buildup of combustible gases and a potential fire hazard to safety-related cables. A flow detector will annunciate an alarm in the control room upon poor ventilation conditions.

ATTACHMENT 3

General Electric Affidavit

and

General Electric Analysis

General Electric Company

AFFIDAVIT

I, Robert C. Mitchell, being duly sworn, depose and state as follows:

(1) I am Project Manager, Safety Evaluations Programs, General Electric Company ("GE") and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.

(2) The information sought to be withheld is contained in the GE proprietary report NEDC-32165P, "End-of-Cycle Recirculation Pump Trip Analysis For Peach Bottom Atomic Power Station Units 2 and 3," Revision 2, Class III (GE Company Proprietary Information), dated February 1994. The proprietary information is delineated by bars marked in the margin adjacent to the specific material.

(3) In making this application for withholding of proprietary information of which it is the owner, GE relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), 2.790(a)(4), and 2.790(d)(1) for "trade secrets and commercial or financial information obtained from a person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information", and some portions also qualify under the narrower definition of "trade secret", within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).

(4) Some examples of categories of information which fit into the definition of proprietary information are:

a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by General Electric's competitors without license from General Electric constitutes a competitive economic advantage over other companies;

b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;

c. Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of General Electric, its customers, or its suppliers;

d. Information which reveals aspects of past, present, or future General Electric customer-funded development plans and programs, of potential commercial value to General Electric;

e. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in both paragraphs (4)a. and (4)b., above.

(5) The information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GE, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GE, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.

(6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge. Access to such documents within GE is limited on a "need to know" basis.

(7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his delegate), and by

the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GE are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.

(8) The information identified in paragraph (2), above, is classified as proprietary because it contains detailed results of analytical models, methods and processes, including computer codes, which GE has developed, obtained NRC approval of, and applied to perform evaluations of the loss-of-coolant accident for the BWR.

The development and approval of the BWR technology and computer codes used in this analysis was achieved at a significant cost, on the order of several million dollars, to GE.

The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GE asset.

(9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

The research, development, engineering, analytical and NRC review costs comprise a substantial investment of time and money by GE.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE experience to normalize or verify their own process or if they are able to claim

an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to GE would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing these very valuable analytical tools.

STATE OF CALIFORNIA)
) ss:
COUNTY OF SANTA CLARA)

Robert C. Mitchell, being duly sworn, deposes and says:

That he has read the foregoing affidavit and the matters stated therein are true and correct to the best of his knowledge, information, and belief.

Executed at San Jose, California, this 23rd day of MARCH 1994.

Robert C. Mitchell
Robert C. Mitchell
General Electric Company

Subscribed and sworn before me this 23rd day of March 1994.

Mary L. Kendall
Notary Public, State of California

MARY L. KENDALL
COMM. # 987864
Notary Public — California
SANTA CLARA COUNTY
My Comm. Expires MAR 26, 1997