



Carolina Power & Light Company

Brunswick Steam Electric Plant
P. O. Box 10429 • Southport, N. C. 28461

OCT 07 1992

R. B. RICHEY
Vice President
Brunswick Nuclear Project

SERIAL: BSEP-92-0024

United States Nuclear Regulatory Commission, Region II
Attention: Mr. S. D. Ebner
101 Marietta Street, N.W.
Suite 2900
Atlanta, GA 30301

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62
REQUEST FOR TEMPORARY WAIVER OF COMPLIANCE
ECCS ACTUATION AND INJECTION PERMISSIVE INSTRUMENTATION

Gentlemen:

The purpose of this letter is to request a temporary Waiver of Compliance for the Brunswick Steam Electric Plant, Unit 1 and Unit 2.

The proposed waiver will exempt the requirements of Technical Specification 3.0.3 for Technical Specification 3.3.3, Emergency Core Cooling System Actuation Instrumentation, when in OPERATIONAL CONDITION 4 (COLD SHUTDOWN). The proposed waiver will also be used to allow one channel from each of two trip systems of the reactor vessel water level - low level 3 ECCS actuation instrumentation, while in OPERATIONAL CONDITION 4 (COLD SHUTDOWN), to be inoperable simultaneously due to the surveillance of excess flow check valves, for up to twelve hours before requiring the verification of at least one LPCI subsystem operable. The proposed waiver will also allow fewer than the minimum number of channels in a reactor steam dome pressure - low trip system and allow one channel to be placed in the inoperable status for up to seven days, provided the other channel in the same trip system is operable, that both channels in the other trip system are operable, that the inoperable channel is placed in the condition that would satisfy the logic for allowing injection by the ECCS with the reactor steam dome pressure below 410 psig \pm 15 psig, and that actions are taken to ensure that the reactor steam dome pressure will not exceed 410 psig \pm 15 psig. This is needed to perform modifications to upgrade the seismic qualification of instrument racks.

The detailed basis for the proposed waiver is provided in Enclosure 1. Carolina Power & Light Company is requesting this waiver for four (4) separate 12 hour periods for each Brunswick unit to accommodate the excess flow check valve surveillance testing and two (2) separate 7 day periods for each Brunswick unit to accommodate seismic upgrade modifications of two instrument racks. The Company will notify the NRC Resident Inspector within 24 hours prior to starting work associated with each waiver period.

The Plant Nuclear Safety Committee has reviewed and recommended approval of this request.

The Company requests approval of this proposed waiver by October 21, 1992 to support the required surveillance and modification schedule.

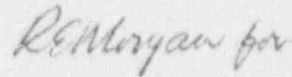
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Please refer any questions regarding this submittal to Mr. R. C. Godley at (919) 457-2412.

Yours very truly,

A handwritten signature in cursive script, appearing to read "R. B. Richey".

R. B. Richey
Vice President
Brunswick Nuclear Project

WRM/wrm (eccswalv 005)

Enclosure

cc: NRC Document Control Desk
Mr. R. H. Lo
Mr. R. L. Prevatte

ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 NRC DOCKET NOS. 50-325 & 50-324 OPERATING LICENSE NOS. DPR-71 & DPR-62 REQUEST FOR TEMPORARY WAIVER OF COMPLIANCE EXCESS FLOW CHECK VALVE SURVEILLANCE

REQUIREMENTS FOR WHICH A WAIVER IS REQUESTED:

The Brunswick Plant design has an Emergency Core Cooling System (ECCS) comprised of the core spray system and the low pressure coolant injection mode of the residual heat removal system. Both the core spray system and the residual heat removal system consist of two sub-systems. Actuation of these low pressure subsystems occurs upon either drywell pressure - high coincident with low reactor pressure, or reactor vessel water level - low level 3. Either of these actuations would indicate conditions that may require injection of additional coolant to maintain reactor vessel inventory. Following actuation, each of these systems is designed to inject when the pressure vessel reaches the reactor steam dome pressure - low (injection permissive) pressure.

Technical Specification 3.5.3.2 requires two independent low pressure coolant inject (LPCI) subsystems of the residual heat removal system shall be OPERABLE. ACTION b states in part that "... with one or more LPCI subsystems inoperable take the ACTION required by Specification 3.5.3.1."

Technical Specification 3.5.3.1 requires two independent core spray system (CSS) subsystems to be OPERABLE. ACTION b.2 states in part that with both CSS subsystems inoperable, "...suspend all operations that have a potential for draining the reactor vessel and verify that at least one low pressure coolant injection subsystem is OPERABLE within 4 hours."

Technical Specification 3.3.3, ACTION c states that "The provisions of Specification 3.0.3 are not applicable in OPERATIONAL CONDITION 5."

The proposed waiver to Technical Specification 3.3.3 would allow the requirements of Specification 3.0.3 not to be applicable in OPERATIONAL CONDITION 4 for the periods of time indicated below.

The proposed waiver to Technical Specification 3.5.3.1 will allow in OPERATIONAL CONDITION 4 (COLD SHUTDOWN):

1) with both core spray and both low pressure coolant injection ECCS subsystems inoperable due to functional surveillance of an excess flow check valve, suspend all operations that have a potential for draining the reactor vessel and verify that at least one low pressure coolant injection subsystem is operable within 12 hours.

2) with both core spray and both low pressure coolant injection ECCS subsystems inoperable due to the inoperable status of a steam dome reactor pressure - low, (injection permissive) channel pressure transmitter (for the purpose of instrument rack modification), suspend all operations that have a potential for draining the reactor vessel and verify that at least one low pressure coolant injection subsystem is operable within seven days and

- a) verify the other channel in the same trip system is OPERABLE,
- b) verify both channels in the other trip system are OPERABLE,

- c) place the inoperable channel in the condition that would satisfy the logic for allowing injection by the ECCS when the reactor steam dome pressure is below the Technical Specification required injection permissive setpoint of 410 psig \pm 15 psig, and
- d) take actions to ensure the reactor pressure vessel pressure will not exceed the Technical Specification injection permissive setpoint of 410 psig \pm 15 psig by maintaining the reactor head vent in the open position.

DISCUSSION OF CIRCUMSTANCES LEADING TO THE REQUEST:

Technical Specification 4.3.6.4 requires that each primary containment isolation valve be demonstrated to be operable at least once each 18 months by cycling each valve through at least one complete cycle of full travel. This requirement applies to four excess flow check valves (B21-F042A, B21-F042B, B21-F044A, and B21-F044B) that are associated with the two channels in each of the two ECCS actuation instrumentation systems which actuate the core spray and low pressure coolant injection systems when reactor vessel water level - low level 3 is reached. Table 1 identifies the instrument lines and instrumentation associated with these four excess flow check valves. Two of these four excess flow check valves are also associated with the reactor steam dome pressure - low (injection permissive) ECCS actuation instrumentation systems of core spray and low pressure coolant injection systems. Isolation and testing of each of the four excess flow check valves requires that one channel in each of the two low pressure ECCS actuation trip systems be taken out of service and, for two of these excess flow check valves, that one channel in one trip system of the injection pressure permissive function of the low pressure ECCS be taken out of service.

In addition, two of four instrument racks (instrument rack nos. P009 and P010) containing one each of the four reactor steam dome pressure - low pressure transmitters require modification to satisfy upgraded seismic qualification requirements. The instrument rack modifications will require that the associated pressure transmitter (B21-PT-N021C for instrument rack P009; B21-PT-N021D for instrument rack P010) be taken out of service for a period of time longer than the 4 hour period for restoring at least one OPERABLE low pressure coolant injection subsystem as required by Technical Specification 3.5.3.1, ACTION b.2. The pressure transmitters located on these instrument racks are the two that are not required to be taken out of service when the excess flow check valves identified above are taken out of service.

The isolation and testing of the excess flow check valves and the modifications to the two instrument racks will require more than four hour period for restoring one OPERABLE low pressure coolant injection subsystem. Were isolation and testing of the excess flow check valves to occur during OPERATIONAL CONDITIONS 1, 2, 3, and 4, the required actions of Table 3.3.3-1 (ACTION 30) would be applicable. Since each of the four excess flow check valves of interest serves one of two channels in each of the two ECCS actuation trip systems, isolating each excess flow check valve would require declaring the associated ECCS inoperable. Thus, both trains of both the core spray system and low pressure coolant injection system would therefore be required to be declared inoperable and the actions of Technical Specifications 3.5.3.1 and 3.5.3.2 would be followed. Also, for the two excess flow check valves which would require associated reactor steam dome pressure - low pressure transmitters to be taken out of service (i.e., excess flow check valves B21-F042A and B21-F044A), the requirements of Table 3.3.3-1 (ACTION 31) would require that the associated ECCS be declared inoperable. Since each of the four pressure permissive pressure transmitters are associated with each of the two trains of both core spray and low pressure coolant injection, the actions of Technical Specifications 3.5.3.1 and 3.5.3.2 are required.

For the reasons described above, the isolation and testing of the B21-F042A, F042B, F044A, and F044B excess flow check valves has historically occurred when the operability of the low pressure coolant

injection and core spray systems were not required. The requirements of Technical Specifications 3.5.3.1 and 3.5.3.2 are not applicable in OPERATIONAL CONDITION 5 with the reactor vessel head removed, the refueling cavity flooded, and the spent fuel gates removed.

Modification of two instrument racks in each Brunswick Plant unit will require several days to complete. If the modifications were performed during OPERATIONAL CONDITIONS 1, 2, 3, or 4, the actions of Table 3.3.3-1 (ACTION 31) would be applicable and the associated ECCS would be required to be declared inoperable. As noted above, with both trains of both the core spray system and low pressure coolant injection systems declared inoperable, the actions of Technical Specifications 3.5.3.1 and 3.5.3.2 would be required.

Both Brunswick units are currently in mid-cycle outages. The outages were entered when concerns arose that seismic design requirements were not satisfied. Work that must be completed prior to resumption of the current cycles has been identified and modifications are being made to upgrade the seismic qualification of several structures and components. For each unit, each of two instrument racks identified for modification contain one of the pressure transmitters that provide input to the reactor steam dome pressure - low ECCS injection permissive trip systems.

The current cycle of Unit 1 began in February 1991; the current cycle of Unit 2 began in January 1992. As identified above, the isolation and testing of the four excess flow check valves has historically occurred during OPERATIONAL CONDITION 5 (REFUELING) with the vessel head removed, the cavity flooded, and the spent fuel pool gates removed. The surveillance of the excess flow check valves is required to be performed once every 18 months. The next surveillance for Unit 1 is due September 1992, and for Unit 2 the surveillance is due July 1993.

Before the current mid-cycle outages, the next refueling outage for Unit 1 was scheduled to begin in September 1992. Unit 1 is now currently scheduled to begin its next refueling on March 4, 1993. Also, before the current mid-cycle outage, the next refueling outage for Unit 2 was scheduled to begin in March 1993. Unit 2 is now currently scheduled to begin its next refueling outage on September 9, 1993.

The Company currently plans to upgrade the seismic qualification of the two instrument racks containing the B21-PT-N021C and B21-PT-N021D reactor steam dome pressure - low pressure transmitters prior to either Brunswick Plant unit resuming operation. As identified above, these instrument rack modifications will require that the associated pressure transmitter be taken out of service for a period of time.

SAFETY SIGNIFICANCE AND POTENTIAL CONSEQUENCES:

Carolina Power & Light Company has evaluated the safety significance and potential consequences of the proposed waiver of compliance and determined there is no adverse impact associated with the proposed request.

The proposed waiver would exempt the requirements of Technical Specification 3.0.3 for Technical Specification 3.3.3, Emergency Core Cooling System Actuation Instrumentation, when in OPERATIONAL CONDITION 4 (COLD SHUTDOWN). The proposed waiver would also be used to allow one channel from each of two trip systems of the reactor vessel water level - low level 3 ECCS actuation instrumentation, while in OPERATIONAL CONDITION 4 (COLD SHUTDOWN), to be inoperable simultaneously due to the surveillance of excess flow check valves, for up to twelve hours before requiring the verification of at least one LPCI subsystem operable. The proposed waiver will also allow fewer than the minimum number of channels in a reactor steam dome pressure - low trip system and allow one channel to be placed in the inoperable status for up to seven days, provided the other channel in the same trip system is operable, that both channels in the other trip system are operable, that the

Inoperable channel is placed in the condition that would satisfy the logic for allowing injection by the ECCS with the reactor steam dome pressure below $410 \text{ psig} \pm 15 \text{ psig}$, and that actions are taken to ensure that the reactor steam dome pressure will not exceed $410 \text{ psig} \pm 15 \text{ psig}$.

The design basis LOCA is initiated by a recirculation suction line break with the reactor operating at full power. Loss of coolant inventory occurs due to rapid de-pressurization and blowdown of steam and water into containment. Automatic initiation of the low pressure ECCS systems (core spray and low pressure coolant injection) provides large volumes of make-up coolant inventory and limits the peak clad fuel temperature reached during the accident.

Actuation of the low pressure ECCS systems occurs on either high drywell pressure + low reactor pressure or reactor vessel water level - low level 3. The reactor steam dome pressure - low injection permissive must be satisfied in order to allow the injection valves to open. Automatic initiation of the low pressure ECCS systems ensures these systems are able to inject coolant as soon as possible relative to the time it takes the reactor pressure vessel to depressurize to the low pressure injection permissive for the design basis accident conditions. Opening of the injection valves prior to vessel pressure falling below the low pressure permissive has the potential for additional loss of vessel coolant inventory through the ECCS piping.

When the vessel pressure is below the injection permissive Technical Specification pressure limit of $410 \text{ psig} \pm 15 \text{ psig}$, placing one channel of one of the two Reactor Steam Dome Pressure - Low trip systems in the condition that would satisfy the logic for allowing injection by the ECCS will enable the trip systems to function properly in the event the core spray and low pressure coolant injection ECCS subsystems are required. When the vessel pressure is greater than the low pressure injection permissive, placing one channel in the condition that would allow injection could make the single failure of a pressure transmitter in the other trip system (thereby completing the logic for opening the injection valves) cause additional loss of vessel inventory during a loss of coolant accident. To ensure that the potential for reaching reactor conditions (vessel pressure greater than the injection permissive pressure of $410 \text{ psig} \pm 15 \text{ psig}$) which could enable a single failure to have an adverse impact on the capability of the ECCS to supply coolant inventory during a loss of coolant accident, actions to ensure the vessel pressure will not exceed $410 \text{ psig} \pm 15 \text{ psig}$ will be put into place. Specifically, the reactor head vent will be maintained in the open position.

By placing the inoperable channel in the condition that satisfies the logic for injection, and by requiring the actions to ensure the vessel pressure will not exceed $410 \text{ psig} \pm 15 \text{ psig}$, the proposed waiver will not reduce plant safety to an unacceptable level.

At present, both Brunswick Plant units have been in cold shutdown for more than 4 months. Therefore, a pipe break under current conditions would result in a peak clad temperature that is significantly less than that resulting from a design basis accident because significantly less decay heat exists than that assumed in the design basis accident. In addition, the rate of coolant inventory loss is significantly less than that assumed in the design basis loss of coolant accident due to the reduced pressure difference between the pressure vessel and containment. This reduced rate of inventory loss provides greater opportunity for the operator to identify and monitor the loss of pressure vessel coolant inventory and to manually actuate the low pressure ECCS systems, if required.

Any delay in a required low pressure ECCS actuation on vessel water level would be due to a combination of the following three low probability events:

- Loss of coolant accident with the reactor vessel depressurized.
- Failure of one of the two operable channels for Low Level 3 (these channels are functionally tested monthly and have historically had a very low failure rate).

- Failure of the operators to manually initiate the required systems after the level drops below the plant setpoint of 45 inches and before it reaches the Technical Specification limit of 2.5 inches.

Due to the insignificant probability of this combination occurring during the short interval of time specified, the proposed waiver to allow isolation and testing of the Unit 1 and 2 excess flow check valves will not reduce plant safety to an unacceptable level.

DISCUSSION OF JUSTIFICATION FOR DURATION:

Surveillance Testing:

The isolation and testing of each Unit 1 and 2 excess flow check valve is expected to require fewer than 12 hours. Although a realistic estimate is that isolation and testing can be completed in approximately four hours, a 12 hour duration for the waiver of compliance for requirements in Technical Specification 3.5.3.1 for the verification of at least one LPCI subsystem operable is being requested to allow for unforeseen problems that may occur during the process.

Instrument Rack Modification:

The modification of the instrument racks containing pressure transmitters B21-PT-N021C and B21-PT-N021D is expected to require fewer than seven days. Although a realistic estimate is that the modification can be completed in approximately three days, a seven day duration for the waiver of compliance for requirement in Technical Specification 3.5.3.1 for verification of at least one LPCI subsystem operable as a result of reactor steam dome pressure - low instrumentation inoperability is being requested to allow for unforeseen problems that may occur during the process.

DISCUSSION OF COMPENSATORY ACTIONS:

The compensatory actions described below will be taken to ensure the plant configuration remains capable of responding to conditions requiring the actuation of the low pressure ECCS systems during functional surveillance of the excess flow check valves and the modification of the instrument racks.

Technical Specifications 3.5.3.1, ACTION b.2 allow operation to continue provided at least one low pressure coolant injection subsystem is verified OPERABLE within 4 hours. During the surveillance testing of the B21-F042A and F042B excess flow check valves to be performed under the proposed waiver, one channel in each of the two ECCS actuation instrumentation trip systems will be inoperable. During the surveillance testing, at least one channel in each trip system will be required to be operable.

The modifications to the instrument racks will require taking two of four injection permissive pressure transmitters out of service at separate times. As discussed above, the injection permissive is designed to ensure that the reactor vessel pressure is sufficiently low enough to ensure that the low pressure ECCS systems will be able to inject into the vessel during a loss of coolant accident. In OPERATIONAL CONDITION 4 the reactor vessel is essentially unpressurized. At very low reactor vessel pressures, the developed pump head of the low pressure systems is more than adequate to ensure injection into the reactor vessel in the event of a loss of coolant accident.

With the vessel unpressurized, placing the inoperable pressure permissive channel in the condition that satisfies the logic for allowing injection and requiring both channels of the other trip system to be OPERABLE will ensure that the injection permissive will be satisfied should the low pressure coolant injection systems be needed. Satisfying the logic to allow injection would not be appropriate should the reactor vessel pressure exceed the injection permissive. To ensure that the reactor vessel does not

become pressurized above the injection permissive, the reactor head vent will be maintained in the open position.

SIGNIFICANT HAZARDS ANALYSIS:

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. Carolina Power & Light Company has reviewed this proposed temporary waiver of compliance and determined that its adoption would not involve a significant hazards consideration. The basis for this determination follows:

1. The proposed waiver will allow, while in OPERATIONAL CONDITION 4, 12 hours to restore at least one OPERABLE low pressure coolant injection subsystem while performing surveillance testing of excess flow check valves B21-F042A, F042B, F044A, and F044B. The proposed waiver will also allow, while in OPERATIONAL CONDITION 4, seven days to restore at least one OPERABLE low pressure coolant injection subsystem while performing modifications to instrument rack nos. P009 and P010 to upgrade their seismic qualification.

No accident initiators or precursors are changed by the proposed waiver. Neither the low pressure coolant injection actuation instrumentation nor the low pressure coolant injection systems themselves will initiate an accident. This equipment is instead provided to mitigate the consequences of an accident. Therefore, the proposed waiver will not significantly increase the probability of an accident previously evaluated.

During the excess flow check valve surveillance testing, one channel in each of two reactor vessel water level - low level 3 trip systems will be inoperable at the same time. The two remaining water level monitoring channels, one in each of the two low pressure ECCS actuation trip systems, will be required to be OPERABLE. Under these conditions, a single failure in either of the two remaining water level instrument channels could prevent the trip system from responding to an actual vessel low water level and thereby prevent automatic actuation of the low pressure ECCS. Automatic actuation is most important for the design basis loss of coolant accident (LOCA) assumed to be initiated from full power conditions. Under full power conditions, a design basis loss of coolant accident results in rapid loss of coolant inventory from the reactor vessel. In the event of a loss of coolant accident with the units in OPERATIONAL CONDITION 4, the rate of loss of coolant inventory from the unpressurized reactor vessel would be greatly reduced. In the event that a single failure involving one of the two remaining water level instrument channels were to occur, alarms and trips from other reactor vessel water level instrumentation would occur and provide the operator sufficient time to monitor, and if necessary, manually initiate the low pressure ECCS prior to uncovering the reactor core.

During the planned instrument rack modifications, one channel of the two injection permissive trip systems will be inoperable. The planned compensatory action of placing the affected injection permissive channel in the condition that satisfies the logic will ensure the capability to actuate and inject low pressure ECCS, if required. In addition, the planned compensatory action of opening the reactor head vent will ensure that the reactor vessel cannot pressurize and thereby inhibit the capability of the low pressure ECCS to inject during a loss of coolant accident in OPERATIONAL CONDITION 4.

Based on the above discussions, the proposed waiver does not involve a significant increase in the consequences of an accident previously evaluated.

2. The proposed waiver will allow the simultaneous inoperability of one channel in each of two reactor vessel low water level instrumentation trip systems. This instrumentation is designed to detect low water level and to actuate the low pressure ECCS. Compensatory actions will be taken to ensure that the other channel in the affected trip system is OPERABLE and that both channels in the other trip system are OPERABLE.

The proposed waiver will also allow one channel of the two drywell pressure - low trip systems to be inoperable without requiring at least one LPCI subsystem be declared operable within 4 hours when that channel is placed in the condition that satisfies the logic for the injection permissive for the low pressure ECCS. In addition, both channels in the other trip system will be OPERABLE, and actions to prevent pressurization of the reactor vessel will be taken.

Thus, based on the fact that no new equipment failure modes are being introduced as a result of the proposed waiver and the compensatory actions being implemented, the proposed waiver does not create the possibility of a new or different kind of accident.

3. The proposed waiver to allow the performance of surveillance testing for excess flow check valves B21-F042A, F042B, F044A, and F044B and to upgrade the seismic qualification of instrument rack nos. P009 and P010 will not significantly reduce the margin of safety. Although the level of redundancy associated with the low pressure ECCS actuation instrumentation will be temporarily reduced during the excess flow check valve surveillance testing, at least one low pressure ECCS actuation instrumentation channel will remain OPERABLE in each actuation trip system and will be capable of initiating low pressure coolant injection, if needed.

In the event of a loss of coolant accident in OPERATIONAL CONDITION 4, the rate of coolant inventory loss from the unpressurized reactor vessel would be significantly less than during full power operation. Nevertheless, during the period of time when this surveillance testing is being performed, other reactor vessel water level instrumentation alarms and trips would occur and provide the operator sufficient time to manually initiate the low pressure ECCS systems prior to the reactor core becoming uncovered. Furthermore, during the testing, operations with the potential to drain the reactor vessel will not be performed.

During the planned instrument rack modifications, one channel of the two injection permissive trip systems will be inoperable. The planned compensatory action of placing the affected injection permissive channel in the condition that satisfies the logic will ensure the capability to actuate and inject low pressure ECCS, if required. In addition, the planned compensatory action of opening the reactor head vent will ensure that the reactor vessel cannot pressurize and thereby inhibit the capability of the low pressure ECCS to inject during a loss of coolant accident in OPERATIONAL CONDITION 4.

Therefore, based on the actual capability of the low pressure ECCS systems to inject, if required, and the compensatory actions being taken, the proposed waiver does not involve a significant reduction in a margin of safety.

ENVIRONMENTAL EVALUATION:

10 CFR 51.22(c)(9) provides criteria for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. Carolina Power & Light Company has reviewed this request and determined that it meets the eligibility criteria for categorical exclusion set forth in 10 CFR 50.91(c)(9) and that this request does not involve irreversible environmental

consequences. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with granting of the temporary waiver of compliance. The basis for this determination is as follows.

1. As demonstrated in the above significant hazards analysis, the proposed waiver does not involve a significant hazards consideration.
2. The proposed waiver does not result in a significant change in the types or significant increase in the amounts of any effluent that may be released offsite. The proposed waiver does not introduce any new equipment nor does it require any existing equipment or systems to perform a different type of function than they are presently designed to perform. During normal plant operation, the reactor vessel water level - low level 3 and reactor steam dome pressure - low instrumentation are not used as control systems nor for performance monitoring indications although they are required to be operable. The primary function of this instrumentation is during upset and accident conditions where additional reactor vessel coolant inventory is required by providing automatic actuation of the low pressure ECCS and inhibiting the opening of the injection valves until the pressure in the reactor vessel is sufficiently low enough to ensure coolant injection by the low pressure ECCS. The proposed waiver will not alter the function of this instrumentation and compensatory actions will ensure that the consequences of any previously evaluated accident do not increase. Therefore, it is concluded that there will not be a significant increase the types or amounts of any effluent that may be released offsite and, as such, does not involve irreversible environmental consequences beyond those already associated with normal operation.
3. The proposed waiver does not result in a significant increase in individual or cumulative occupational radiation exposure.

TABLE 1

PENETRATION NUMBER	EXCESS FLOW CHECK VALVE DESIGNATION	NORMAL VALVE POSITION	SHUTDOWN VALVE POSITION	POST ACCIDENT VALVE POSITION	AFFECTED INSTRUMENT TAG NUMBER(S)	INSTRUMENT FUNCTION
X-60A	B21-F042B	Open	Open	Open	B21-PI-N004B B21-PT-N021B B21-PT-N023C B21-PT-N023D B21-LT-N031B B21-LT-N031D B21-LT-N025A-1 B21-LT-N025A-2 B21-LT-N025B-1 B21-LT-N025B-2 C32-PT-N008	Reactor Pressure and Level
X-60B	B21-F044B	Open	Open	Open	B21-LT-N025A-1 B21-LT-N025A-2 B21-LT-N025B-1 B21-LT-N025B-2 B21-LT-N026B B21-LT-N031B B21-LT-N031D	Reactor Pressure and Level
X-62B	B21-F042A	Open	Open	Open	B21-PI-N004A B21-PT-N021A B21-PT-N023A B21-PT-N023B B21-LT-N024A-1 B21-LT-N024A-2 B21-LT-N024B-1 B21-LT-N024B-2 B21-LT-N031A B21-LT-N031C	Reactor Level and Pressure
X-62D	B21-F044A	Open	Open	Open	B21-LT-N024A-1 B21-LT-N024A-2 B21-LT-N024B-1 B21-LT-N024B-2 B21-LT-N026A B21-LT-N031A B21-LT-N031C	Reactor Level