Omaha Public Power District
1623 Harney Omaha, Nebraska 68102
402/536-4000

July 7, 1983
LIC-83-161

Mr. Robert A. Clark, Chief
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Licensing
Operation Reactors Branch No. 3
Washington, D.C. 20555

Reference: Docket No. 50-285

Subject: Relief Requests from ASME Boiler and Pressure Vessel Code, Section XI

Dear Mr. Clark:

Pursuant to 10CFR50.55a(g)(5)(iii), Omaha Public Power District is forwarding for approval the attached relief requests for the Fort Calhoun Station. The District has completed a review of the criteria of the Winter 1980 Addenda to the ASME Boiler and Pressure Vessel Code (the Code) and has determined that certain requirements are impractical for the Fort Calhoun Station. The attachment identifies those code requirements determined to be impractical and provides information to support this determination.

Please note the District is still developing the new ten-year Inservice Inspection (ISI) program that will become effective September 26, 1983. As development continues, additional code requirements may be determined to be impractical; however, the District is confident that the attached listing represents the full set of exceptions that are of a short term recurring nature. Thus, approval of the attached relief request will ensure District compliance with 10CFR50.55a(g) as a minimum to the start of the 1984 refueling outage. Additional relief requests, if identified, will be submitted with the new ten year ISI program to be submitted by September 26, 1983.

The majority of these exemption requests were previously approved under the District's current ten-year ISI program. Those requests which differ from the requests previously granted are denoted by an asterisk. The changes to the Class 1 Examination Exceptions are due to minor code

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changes. Thus far, no additions to the District's previous inservice testing of valves exception requests (provided in the District's letter dated December 1, 1982) have been identified.

Sincerely,

R L Jaworski for

W. C. Jones
Division Manager
Production Operations

WCJ/TLP/rh

Attachment

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20555

Mr. L. A. Yandell
Senior Resident Inspector

Exceptions to Compliance with the Examination Requirements of the Winter 1980 Addenda to the ASME Boiler and Pressure Vessel Code, Section XI, Rules for Inspection of Nuclear Power Plant Components

Exceptions, Class 1 Examinations

Item No.	
*B1.40	The closure head-to-flange weld is inaccessible for examination due to interference from the seismic skirt. Visual examination for leakage shall be performed in accordance with IWB-5221 and IWB-5222.
B3.10	The reactor vessel nozzle-to-vessel welds cannot be 100% volumetrically examined from the outside due to interference from nozzle supports. These welds will be examined to 100% of the volume from inside of the vessel near the end of the inspection interval.
B3.20	The reactor vessel inside radius section cannot be 100% volumetrically examined from the outside due to interference from nozzle supports. This area will be examined to 100% of the volume from the inside of the vessel near the end of the inspection interval.
B3.30	The pressurizer surge line nozzle-to-shell weld cannot be 100% volumetrically examined due to interference from heater penetrations. The weld will be volumetrically examined to the extent possible. The weld area will be visually examined for leakage near the end of the inspection interval in accordance with IWB-5221 and IWB-5222.
B3.40	The pressurizer surge line inside radius section cannot be 100% volumetrically examined due to interference from heater penetrations. The area will be volumetrically examined to the extent possible. The area will be visually examined for leakage near the end of the inspection interval in accordance with IWB-5221 and IWB-5222.
B6.20 & B6.30	Closure head studs will be ultrasonically examined from the center drilled hole in accordance with ASME Code Case N-307 as referenced in Regulatory Guide 1.147, Inspection Code Case Acceptability.
B12.10	The District is evaluating the feasibility in terms of economics, radiation exposure, and experiences at other PWR facilities in the volumetric examination of reactor coolant pump casing welds. The District may request exemption from this testing requirement at a later date.
B12.20	A visual examination of the RC pump casing internal surfaces will be performed only if the pump is disassembled for volumetric examination, or maintenance such that internal surfaces

Exceptions, Class 1 Examinations

B12.20 (Continued)

become accessible. Examination during the leakage and hydro testing of IWB-5221 and IWB-5222 during the first 10 year inspection interval revealed no leakage from the pump casing. This test will be repeated near the end of the second inspection interval and is judged to be adequate based upon design, fabrication, and accessibility considerations.

B15.50 & B15.51 The following are inaccessible piping welds:

Figure No.*	Line No.	Weld No.
A-22	12 In. - SI-12	16
A-25	12 In. - SI-24	16
A-27	6 In. - SI-14	10
A-27	6 In. - SI-14	11
A-32	3 In. - HPH-22	1
A-32	3 In. - HPH-22	3
A-38	2 In. - HPH-2.12	5
A-42	12 In. - SDC-20	7

The welds listed above are inaccessible for examination because they are located within walls or floors. Areas on either side of the walls or floors containing these piping welds will be examined for signs of leakage during the pressure and hydrostatic testing of the piping systems in accordance with IWB-5221 and IWB-5222.

*See the 10-Year Inservice Examination Plan, Fort Calhoun Nuclear Station Unit No. 1, dated October 1978.

Exceptions, Class 2 Examinations

C5.20 The following are inaccessible piping welds:

Figure No.*	Line No.	Weld No.
B-12	12 In-LPSI-12	4
B-13	12 In-LPSI-14	7
B-13	12 In-LPSI-14	10
B-13	12 In-LPSI-14	11
B-14	12 In-LPSI-22	10
B-15	12 In-LPSI-24	4

The welds listed above are inaccessible for examination because they are located within walls or floors. Areas on either side of the walls or floors containing these piping welds will be examined for signs of leakage during the pressure and hydrostatic testing of the piping systems in accordance with IWB-5221 and IWB-5222.

*See the 10-Year Inservice Examination Plan, Fort Calhoun Nuclear Station Unit No. 1, dated October 1978.

Exceptions, Class 3 Examinations

D2.10 Inaccessible Piping:

Buried raw water lines from the intake structure to the auxiliary building cannot be tested since the isolation valves are not designed to be leak-tight shut-off valves. Flow instrumentation in the system is capable of detecting significant leaks by sensing a reduction of flow.

Exception, Article IWF-5000

Snubbers:

The District has in effect, surveillance procedures meeting the requirements of our Technical Specification 3.14, Shock Suppressors, and will continue to follow these requirements in exception to the ASME Section XI requirements of Article IWF-5000.

Exceptions to the Inservice Testing of Pumps, Article IWP-3000

General:

All the pumps subject to testing are directly coupled to induction motor drivers; therefore, the rotation speed need not be measured as prescribed in Subarticle 4400.

Low Pressure Safety Injection Pumps SI-1A, B Class 2

Function: The LPSI pumps are available for safety injection of borated water into the reactor coolant system following a LOCA and are used to remove residual heat for cold shutdowns.

Containment Spray Pumps SI-3A, B, C Class 2

Function: The CS pumps are available to spray borated water into containment following a LOCA.

High Pressure Safety Injection Pumps SI-2A, B, C Class 2

Function: The HPSI pumps are available for safety injection of borated water into the reactor coolant system following a LOCA and are used to maintain the required water level in the safety injection tanks.

Exceptions:

IWP-3000 Inlet and differential pressure measurement

Basis: Inlet pressure for these tests will be determined by measuring the static head tank level.

Exceptions to the Inservice Testing of Pumps, Article IWP-3000

Component Cooling Pumps AC-3A, B, C Class 3

Function: The component cooling pumps supply cooling water to equipment in the containment and auxiliary building.

Exceptions:

IWP-3110 Establishment of a reference value for flow rate.

Basis: There are many components or subsystems on the component cooling water system with several possible piping configurations. Some of the components are critical elements to which the flow rate cannot arbitrarily be varied for the sake of running a pump test. Reference values are established instead using pump curves and previous data. Consequently, establishing a reference flow rate for a pump test on a periodic basis is impractical.

IWP-3110 Lubricant level or pressure observation.

Basis: The pump bearings are cartridge type that have been re-packed with the proper amount of grease and under normal conditions require no further attention for the life of the bearings.

Raw Water Pumps AC-10A, B, C, D Class 3

Function: The raw water pumps provide a cooling medium for the component cooling water system.

Exceptions:

IWP-3100 Inlet pressure measurement

Basis: System design does not permit direct measurement of inlet pressure. Varying river level and unknown accumulations of sand near the pump suction bell makes it impossible to determine the inlet pressure.

IWP-3100 Differential pressure measurement.

Basis: Because of the inability to measure inlet pressure, differential pressure measurement is not possible. In lieu of a differential pressure measurement, a discharge pressure vs. motor amperage measurement will be taken. An acceptable motor amperage value will be determined over a discharge pressure range of 26 psig to 40 psig.

Exceptions to the Inservice Testing of Pumps, Article IWP-3000

Raw Water Pumps AC-10A, B, C, D Class 3 (Continued)

IWP-3100 Flow rate measurement.

Basis: The system design does not provide an accurate indication of flow rate due to fouling by untreated river water.

IWP-3100 Bearing temperature measurement.

Basis: All bearings are inaccessible for temperature measurement. All are submerged in river water.

Exception to IWP-3220 for All Pump Tests:

All test data shall be analyzed within 4 working days after completion of a test.

Basis: An allowance of 4 working days to analyze test data instead of the 96 hour requirement will allow greater flexibility in scheduling and performing the various tests. Special allowances for weekends and holidays will not have to be made in scheduling the tests. The safety related consequences of completing analysis within 4 working days rather than 96 hours is not considered to be great, since pump tests are performed on a quarterly basis.

Exceptions to the Inservice Testing of Valves, Article IWV-3000

IWV-3420 Leak Rate Testing:

The following Category A valves are listed in groups representing those valves which must be tested simultaneously due to system configuration.

1. TCV-202, HCV-204
2. HCV-241, HCV-206
3. HCV-506A, HCV-506B
4. HCV-467C, HCV-467D
5. HCV-507A, HCV-507B
6. HCV-467A, HCV-467B
7. HCV-438C, HCV-438D
8. HCV-438A, HCV-438B
9. HCV-500A, HCV-500B
10. HCV-2983, SI-185, HCV-2956, HCV-2976, HCV-2936, HCV-2916, PCV-2949, HCV-2969, PCV-2909, PCV-2929
11. HCV-509A, HCV-509B
12. HCV-508A, HCV-508B

IWV-3420 Leak Rate Testing: (Continued)

13. HCV-882, VA-289
14. HCV-425A, HCV-425B
15. HCV-425C, HCV-425D
16. HCV-2603A, HCV-2603B
17. HCV-2604A, HCV-2604B
18. HCV-2504A, HCV-2504B
19. PCV-742E, PCV-742F
20. PCV-742G, PCV-742H
21. HCV-746A, HCV-746B
22. HCV-881, VA-280
23. HCV-1560A, HCV-1560B
24. HCV-1559A, HCV-1559B
25. PCV-742A, PCV-742B
26. PCV-742C, PCV-742D

IWV-3412 Inservice testing at cold shutdown:

Valve testing should commence not later than 48 hours after shutdown and continue until complete or plant is ready to return to power. Completion of all valve testing is not a pre-requisite to return to power. Any testing not completed at one cold shutdown should be performed during subsequent cold shutdown to meet the code required testing frequency.

The following are the Category A, B, and C valves for which exceptions to the Inservice testing requirements are being requested:

Category A Valves:

HCV-241 — This valve is used for reactor coolant pump controlled bleed-off isolation. It cannot be stroked when the reactor coolant system is pressurized, because controlled bleed-off flow must be maintained to prevent damage to the reactor coolant pump seals. The valve cannot be partial-stroked because it is either fully open or fully closed.

HCV-206 — This valve serves as penetration M-7 isolation. This valve cannot be stroked when the reactor coolant system is pressurized because controlled bleed-off flow must be maintained to prevent damage to the reactor coolant pump seals. The valve cannot be partially-stroked because it is either fully open or fully closed.

TCV-202 — This valve is used for RCS loop 2A, letdown isolation and temperature regulation. Stroking of this valve quarterly during operation or at cold shutdowns would result in the termination of the charging and letdown flows. This would also isolate the boronometer, process radiation monitor, and reactor coolant system purification process and would

Exceptions to the Inservice Testing of Valves, Article IWV-3000

Category A Valves: (Continued)

TCV-202	(Continued) have the potential of causing a reactivity excursion. This valve cannot be partial-stroked because it is either fully open or fully closed.
HCV-204	The function of this valve is for containment penetration M-2, isolation and letdown control. The stroking of this valve quarterly during operation or at cold shutdowns would result in termination of the charging and letdown flows. This would also isolate the boronometer, process radiation monitor, and reactor coolant system purifcation process. In addition, the potential would exist for a reactivity excursion. This valve cannot be partial-stroked because it is either fully open or fully closed.
SI-185	This valve is used to isolate the fill line for safety injection tanks. It has been designated as Category A/E. The valve is locked closed, and therefore is not subject to a stroke test. The valve will be leak-tested in accordance with Category A leak testing requirements.
HCV-2916, 2936, 2956, 2976	The function of these valves is to permit filling and draining of safety injection tanks. These valves cannot be stroked during operation because doing so would cause level fluctuations in the safety injection tanks. The level of the safety injection tanks is controlled by Technical Specifications, and stroking the valves may result in a violation of these Technical Specifications.
PCV-742A 742B 742C 742D	These valves are used for containment purge air isolation and are closed during normal operations and cold shutdowns. They are in the position required to fulfill their design functions and when open could provide a direct path for release of contaminants from containment. Therefore, stroking these valves may result in a potential release of contaminants. In addition, valves PCV-742A and 742C cannot be tested in the direction of their design function in accordance with IWV-3420 due to system configuration. The intent of subsection IWV of the Section XI code, to verify operational readiness is met since testing in the direction opposite to the design function will result in a greater leakage than would be experienced in a test in the preferred direction.
HCV-881 882	The function of these valves is to isolate containment hydrogen purge. Stroking at cold shutdown or quarterly intervals is not advisable, since doing so would provide a direct path for release of contaminants from the containment.

Exceptions to the Inservice Testing of Valves, Article IWV-3000

Category A Valves: (Continued)

VA-280 289	The valves serve to isolate containment hydrogen purge and are designated as Category A/E. They meet Category E criteria because they are locked closed. Cycling of these valves would provide a direct path for release of contaminants from the containment during power operation or cold shutdown.
HCV-1559A 1559B	The valves serve to isolate the containment demineralized water line at M-80. Cycling these valves would decrease containment integrity. In addition, these valves are not required to be opened during power operation.
HCV-1560A 1560B	These valves function to isolate the fill and makeup demineralized water lines to the pressurizer quench tank at penetration M-79. Cycling of these valves would decrease containment integrity. These valves are not required to be opened during power operation.
HCV-2504A	This valve serves to isolate the containment reactor coolant system sample line at penetration M-45. This valve cannot be leak-tested in the direction of its design function in accordance with IWV-3420 due to system configuration. The intent of subsection IWV of the Section XI code, to verify operational readiness is met since testing in the direction opposite to the design function will result in a greater leakage than would be experienced in a test in the preferred direction.
HCV-1749	This valve serves to isolate containment penetration M-74, compressed air penetration. This valve cannot be leak-tested in the direction of its design function in accordance with IWV-3420 due to system configuration. The intent of subsection IWV of the Section XI code, to verify the operational readiness, is met since testing in the direction opposite to the design function will result in a greater leakage than would be experienced in a test in the preferred direction.
HCV-425A 425B 425C 425D.	These valves serve to isolate containment penetrations M-39 and M-53, component cooling system penetrations. Stroking cannot be performed during cold shutdown or at quarterly intervals because failure of these valves in the closed position would terminate cooling to safety injection tanks leakage coolers which would in turn have potential for resulting in hot fluid streams entering ion exchange resins of chemical volume control system, thereby causing damage. These valves cannot be partial-stroked because they are either fully opened or fully closed.

Exceptions to the Inservice Testing of Valves, Article IWV-3000

Category A Valves: (Continued)

HCV-438A 438B 438C 438D	These valves serve to isolate containment penetrations M-18, and M-19, component cooling system penetrations. Stroke-testing cannot be performed at quarterly intervals or cold shutdown because one or more reactor coolant pumps are in operation at all times and these pumps require lube oil and seal cooling. Stroking of these valves would terminate lube oil and seal cooling. These valves cannot be partial-stroked because they are either fully opened or fully closed.
HCV-467A 467B 467C 467D	These valves serve to isolate containment penetrations M-15, and M-11, component cooling system penetrations. These valves cannot be stroked quarterly because failure of the valve during testing would render the nuclear detector well cooling units inoperable. Should the nuclear detector well cooling units fail, Technical Specification 2.13 could not be met. The valves cannot be partial-stroked because they are either fully opened or fully closed.
HCV-2603B HCV-2604B	Containment isolation to penetrations M-42 and M-43, nitrogen gas header penetrations. These valves cannot be leak-tested in the direction of their design function in accordance with IWV-3420 due to system configuration. The intent of subsection IWV of the Section XI code, to verify the operational readiness, is met since testing in the direction opposite to the design function will result in a greater leakage than would be experienced in a test in the preferred direction.
PCV-1849	This valve serves to isolate instrument air pressure (via penetration M-7) to containment systems. Stroke-testing cannot be performed at cold shutdown or quarterly since instrument air must be available at all times during operation and cold shutdown. The valve cannot be partial-stroked because it is either fully open or fully closed.

Category B Valves:

LCV-101-1 101-2	These valves serve to maintain pressurizer level control. Stroke-testing cannot be performed during cold shutdown or quarterly because doing so would disrupt pressurizer level regulation capabilities. Upsetting pressurizer level regulation could result in RCS overpressurization. These valves cannot be partial-stroked during operation for the same reason.
LCV-218-2	This valve functions to provide volume control tank level control. The valve cannot be stroke-tested in either cold shutdown or quarterly because doing so would terminate

Category B Valves: (Continued)

LCV-218-2	(Continued) charging flow to the reactor coolant system and would have the potential for disrupting pressurizer level regulation. Pressurizer level regulation disruption can lead to reactor coolant system overpressure transients. Partial stroke-testing cannot be performed because the valve is either fully closed or fully opened.
HCV-240	Cycling this valve during operation would cause excess pressurizer spray, causing a reactivity excursion (see LCV-101-1,2).
HCV-258 265	These valves serve to isolate concentration boric acid from the charging pump suction header. These valves cannot be cycled during cold shutdown or quarterly because doing so would cause concentrated boric acid to be injected into the reactor coolant system via charging pump suction header gravity feedline. Boration of the primary system during normal operation would cause reactivity transients and possibly shut down the plant and during cold shutdowns would delay startup. These valves cannot be partial-stroked for the same reason.
HCV-268	This valve serves to permit direct feed of concentrated boric acid solution to the charging pump suction header. This valve cannot be stroke-tested during cold shutdown or quarterly because doing so would align concentrated boric acid storage to the charging pump suction header through the boric acid pumps. Boration of the primary system during normal operation would cause reactivity transients and possibly shut down the plant and during cold shutdowns would delay startup. The valve cannot be partial-stroked for the same reason.
HCV-344 345	These valves serve as containment spray isolation. Stroke-testing during cold shutdown or quarterly is not advisable since the potential for spraying down the containment is increased. These valves represent the only boundary between the safety injection pump header and containment spray nozzles. The valves cannot be partial-stroked for the same reason.
HCV-347 348	These valves serve to isolate the shutdown cooling line. They cannot be stroked quarterly because the operation of these valves is inhibited by dual pressure interlocks when the reactor coolant system pressure is greater than 265 psia.

Category B Valves: (Continued)

HCV-400A,B,C & D 401A,B,C & D 402A,B,C & D 403A,B,C & D	These valves serve to isolate component cooling to containment air cooling and filtering units. They cannot be cycled quarterly because doing so would terminate component cooling to air cooling and filtering units in containment.
HCV-1041A 1042A	These valves serve to isolate the main steam headers. They cannot be tested quarterly during operation because doing so would isolate steam flow in the steam generators and result in a turbine and reactor trip. The valves cannot be partial-stroked because they are either fully opened or fully closed.
HCV-1041C 1042C	These valves serve to provide a pathway from the steam generators to steam dump and by-pass valves in the event that the main steam isolation valves close. These valves are also used to pre-heat the turbine and related steam system during startup. Cycling of these valves on a quarterly basis during operation would cause the main steam isolation valves to close, causing the turbine to trip and resulting in a reactor trip. The valve cannot be partial-stroked for the same reason.
HCV-1387A 1387B 1388A 1388B	These valves serve to isolate steam generator blowdown. They cannot be stroke-tested quarterly during operation because doing so would terminate steam generator blowdown and disrupt all-volatile chemistry control. They cannot be partial-stroked because they are fully opened or fully closed.
HCV-1385 1386	These valves serve to isolate main feedwater to the steam generators. Quarterly stroke-testing cannot be performed during operation because doing so would isolate feedwater to steam generators resulting in a reactor trip. These valves cannot be partial-stroked because they are either fully opened or fully closed.
HCV-2506A 2506B 2507A 2507B	These valves serve as containment isolation valves to isolate steam generator blowdown sampling lines. Stroke-testing cannot performed quarterly during operation because doing so would terminate blowdown sample line flow. The steam generator blowdown activity monitor is on the sample line. Technical Specification 2.9(1)d requires that blowdown activity shall be continuously monitored by the steam generator blowdown sample monitoring system. Partial-stroking cannot be performed since these valves are either fully opened or fully closed.

Category C Valves:

CH-198	This valve functions to prevent back-flow to the charging pump discharge header. The valve is normally open and

Category C Valves: (Continued)

CH-198	(Continued) there is no way that back-seating can be tested on reversal of flow due to system piping arrangements. Partial stroke-testing cannot be performed for the same reason.
SI-159 160	These valves function to prevent back-flow to the containment lower level. These valves are normally closed and are backed up by motor operated isolation valves HCV-383-4 and HCV-383-3, which are normally closed, fail-as-is, and are opened only on receipt of a containment recirculation actuation signal. No feasible means exists in the system to perform an in place operational test of either SI-159 or SI-160. In lieu of the required testing frequency of every 3 months, the District will remove and inspect, on an alternating five year schedule, each of these valves. The inspection will involve photographic documentation of valve internal condition. The inspection will include an evaluation of valve components for wear, defects or failures, accumulation of deposits, and freedom of movement. Previous examination of SI-159, as reported in our letter to R. A. Clark of the Commission on July 9, 1980, and of SI-160 as reported to R. A. Clark of the Commission on Nov. 20, 1981, revealed the valves to be in like-new condition and fully operational. The District has no reason to believe that this excellent condition will not be maintained. Considering that these valves are redundant to one another in providing a flow path to the SI pumps upon start of the recirculation mode of operation of this safety system, considering that each valve has two independent halves, and since the failure of either half to open would not impede required flow rates, the District believes that the proposed examination schedule is more than adequate to insure proper valve reliability and hence, system availability.
SI-139 140	These valves function to prevent back-flow to the safety injection and refueling water tank. They will be part-stroked exercised every three months and full-stroked exercised at refueling outages. Full-stroke testing cannot be performed during cold shutdown or quarterly during operation because doing so would require safety injection to the containment or reactor coolant system. A safety injection to the reactor coolant system during operation would cause uncontrolled boration and would introduce a thermal shock to the system. The recirculation lines that are used for testing the LPSI and HPSI pumps for partial-stroking are not large enough to fully open the check valves.

Category C Valves: (Continued)

SI-102 108 115 121 129 135 143 149	These valves function to prevent back-flow to high pressure and low pressure safety injection pumps and containment spray pumps. They cannot be tested during operation quarterly or at cold shutdowns because doing so would disrupt safeguard system alignment, and safety injection into the containment or the reactor system would be required for valve testing. Partial stroking cannot be performed for the same reasons.
SI-100 113	These valves serve to prevent back-flow from high pressure headers to main safety injection headers. They cannot be fully tested during operation quarterly or during cold shutdowns since to do so would require a safety injection to the reactor coolant system. Partialstroking quarterly is possible since these pumps can be placed in a minimum recirculation mode of operation.
SI-207 211 215 219	These valves function to isolate reactor coolant system leakage flow from the safety injection tanks. These valves cannot be stroke-tested during cold shutdown or quarterly during operation to do so would cause drainage of the safety injection tanks. Technical Specifications require safety injection tank levels to be maintained. The valves cannot be partial-stroked for the same reason.
SI-208 212 216 220	These valves function to prevent back-flow from the reactor coolant system through the safety injection system. These valves cannot be tested during cold shutdowns or quarterly during operation because to do so would introduce cold charging water to the reactor coolant system causing thermal shock. The valves cannot be partial-stroked for the same reasons noted above.
SI-194 195 196 197 198 199 200 201 202 203 204 205	These valves function to prevent back-flow through the safety injection pump discharge headers. These valves cannot be stroke-tested during cold shutdowns or quarterly during operation because to do so using the safety injection system would require introducing cold water into the reactor coolant system causing a thermal transient and possibly a reactor excursion. To do so using the chemical volume control system would disrupt charging and letdown flow to the reactor coolant system causing chemical and volume control to the system to be disrupted.
SI-175 176	These valves serve to prevent back-flow from the containment spray headers. These valves cannot be tested to the open position since to do so could cause spray in contain-

Category C Valves: (Continued)

SI-175
176

(Continued)

ment. Not stroking the valves poses no safety impact for the following reasons:

1. Adequate heat removal from containment can be achived during a DBA by use of only one containment spray header with three containment spray pumps. Hence, only one of the check valves is required to open.

2. The containment air filtration and cooling system is fully redundant to the containment spray system.

3. The containment air filtration and cooling system contains redundant components. During a DBA, sufficient iodine removal is achieved with 50% of the system operating and sufficient pressure reduction accomplished with any three air coolers operating.