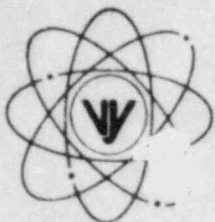


VERMONT YANKEE NUCLEAR POWER CORPORATION



RD 5, Box 169, Ferry Road, Brattleboro, VT 05301

FVY 84-133

REPLY TO:

ENGINEERING OFFICE

1671 WORCESTER ROAD
FRAMINGHAM, MASSACHUSETTS 01701
TELEPHONE 617-872-8100

November 27, 1984

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Office of Nuclear Reactor Regulation
Operating Reactors Branch #2
Division of Licensing

References:

- a) License No. DPR-28 (Docket No. 50-271)
- b) Code of Federal Regulations, Title 10 Chapter 1, Part 50, Section 50.55a
- c) ASME Section XI, 1980 Edition through the Winter 1980 Addenda
- d) ASME Section XI, 1974 Edition through the Summer 1975 Addenda
- e) Letter, VYNPC to USNRC, WYV 79-9, Proposed Change No. 77 to Technical Specifications, dated 1/30/79

Dear Sir:

Subject: Vermont Yankee Inservice Inspection Program Code Exemptions

As required by 10CFR50.55a(g)(5)(iii), we are submitting herewith information which supports our determination that certain of the requirements of Reference c) are impractical for our facility. This information is applicable to the Vermont Yankee Inservice Inspection Program for the second 120-month inspection interval. To facilitate your review of these exemptions, we are also enclosing six (6) copies of the complete program for information only. This program has been developed in accordance with Reference b) to meet the requirements of Reference c) and, where applicable, Reference d). Changes to the program will be submitted for NRC approval prior to implementation only in the event that such changes constitute further exemptions under 10CFR50.55a(g)(5)(iii).

In preparing this program, we have interpreted the statements in 10CFR50.55a(b)(2)(ii) regarding the extent of examination for Category B-J piping welds to mean that the degree to which these components must be examined shall be as defined in Table IWB-2500 and IWB-2600 of Reference d). It is our understanding that "extent of examination" encompasses the degree of interrogation afforded by the nondestructive examination techniques stipulated in Table IWB-2600, and that the examinations listed therein and in Table IWB-2500 of Reference d) are the only examinations required by 10CFR50.55a for these components.

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VERMONT YANKEE NUCLEAR POWER CORPORATION

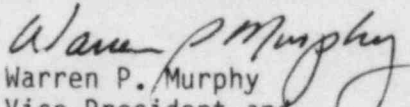
Category C-F and C-G piping welds shall be examined in accordance with 10CFR50.55a(b)(2)(iv), and all other components shall be examined as required by Reference c) unless specific relief is requested in the enclosed Program sections.

In accordance with the provisions of 10CFR170.12, an application fee of \$150 is enclosed. It is important to note that this updated program is being instituted despite the fact that we have not yet received a Technical Specification amendment under 10CFR50.55a(g)(5)(ii) permitting the use of any edition of ASME Section XI later than the 1974 Edition, Summer 1975 Addenda [see Reference e)].

We trust that the information contained in this submittal will be satisfactory; however, should you have any questions or require additional information, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION


Warren P. Murphy
Vice President and
Manager of Operations

WPM/dm

RELIEF REQUEST BASIS

Number, B-1

Component, Circumferential and longitudinal shell welds in reactor vessel

Category, B-A

Items, B1.11 and B1.12

Class, 1

Test
Requirement, Volumetric

Basis for Relief, With the exception of portions of the two longitudinal seam welds adjoining the vessel shell to flange weld, vessel shell welds are inaccessible due to mirror insulation/bio-shield configuration. Insulation is not designed to be easily removable and only 8-1/2 inches of clearance exists between the outside of the insulation and the inside of the shield wall. Nozzle inspection ports do not provide sufficient access to reach shell welds.

Alternate Testing: Accessible length of B1.12 longitudinal welds will be examined 100% during each inspection interval. In addition, the reactor vessel is subjected to a system leakage test before startup after each refueling outage, and to a hydrostatic pressure test at least once each inspection interval.

RELIEF REQUEST BASIS

Number, B-2

Component, Repair welds in reactor vessel beltline region

Category, B-A

Item, B1.51

Class, 1

Test

Requirement, Volumetric

Basis for Relief, Beltline region repair welds are inaccessible for the reasons stated in Relief Request Basis No. B-1.

Alternate Testing, One weld repair area (if any such areas exist) in the region between the top of the bio-shield wall and the vessel flange will be examined during each inspection interval. In addition, the reactor vessel is subjected to a system leakage test before startup after each refueling outage, and to a hydrostatic pressure test at least once each inspection interval.

RELIEF REQUEST BASIS

Number, B-3
Component, Integral attachments for vessels
Category, B-H
Item, B8.10
Class, 1

Test

Requirement, Volumetric or Surface, as applicable

Basis for Relief, 1. The reactor vessel support skirt to vessel weld is only partially accessible from outside the skirt enclosure at two locations, approximately four feet long and 180° apart. The balance of the weld is covered by non-removable mirror insulation.

2. The reactor vessel stabilizer brackets are attached to the vessel with vee-prep fillet-type welds. A volumetric inspection of these welds would not be meaningful. The bottom side of the stabilizer weld is inaccessible due to its location behind the top of the bio-shield wall.

Alternate Testing, 1. The accessible portions of the vessel support skirt weld will be inspected by volumetric and surface methods from outside the skirt enclosure during the second inspection interval, and the total weld length required for the second interval will be examined by surface methods from inside the enclosure.

2. The upper portion of each stabilizer bracket attachment weld will be examined by surface methods during the second inspection interval.

RELIEF REQUEST BASIS

Number, B-4

Component, Primary containment penetration process pipe to flued head welds

Category, B-J

Class, 1

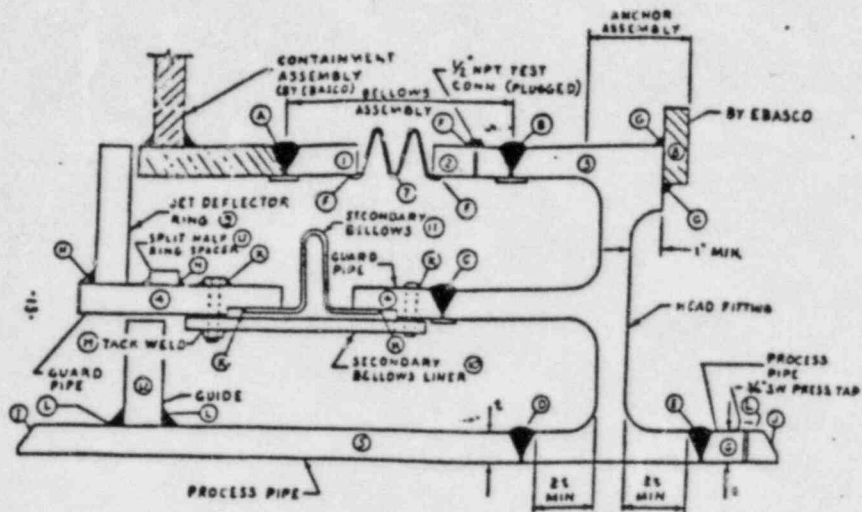
Test

Requirement, Volumetric

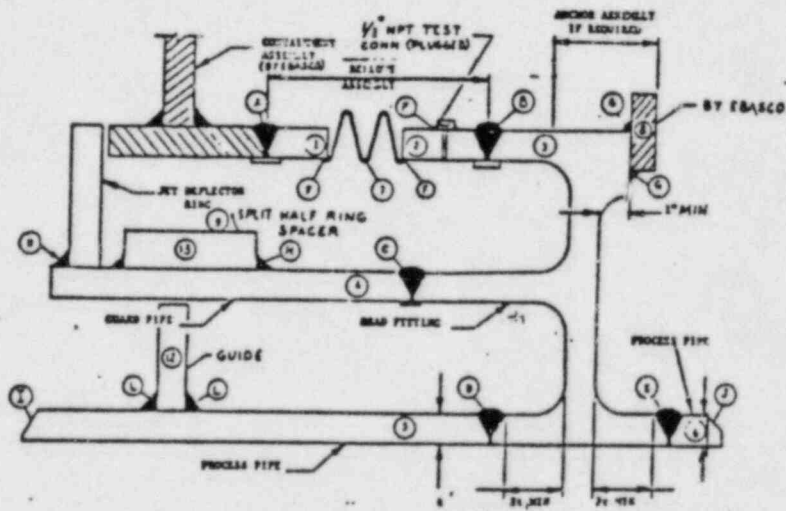
Basis for Relief, Each of the following lines enters the primary containment via a penetration assembly similar in design to those shown in Figure 1. In each case, the Class 1 process pipe has one circumferential pressure retaining weld which is inaccessible for ultrasonic examination. In addition, the complex design of the penetration makes double-wall radiography extremely difficult and unreliable. Meaningful volumetric examination of these welds is not possible.

1. Main Steam A, B, C and D - 18 in.
2. Feedwater A and B - 16 in.
3. RHR A Supply - 20 in.
4. RHR B and C Return - 24 in.
5. HPCI Steam Supply - 10 in.
6. RCIC Steam Supply - 3 in.
7. Core Spray A and B - 8 in.

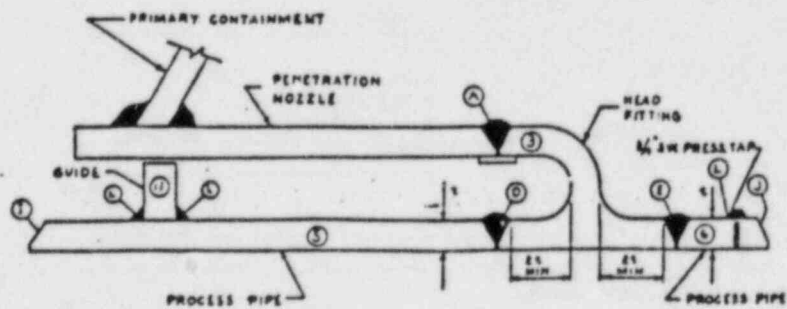
Alternate Testing, The first accessible process pipe weld outside of each listed penetration will be volumetrically examined once each inspection interval. In addition, during the primary coolant boundary hydrostatic pressure test at or near the end of each interval, visual inspection from within the primary containment will be performed to detect leakage from internal welds. During operation, routine surveillance of process monitoring instrumentation will detect significant leakage.



TYPE 1



TYPE 2



TYPE 3

FIGURE 1

TYPICAL PENETRATION ASSEMBLIES

RELIEF REQUEST BASIS

Number, B-5

Component, Main steam line circumferential weld joints A4 and D4

Category, B-J

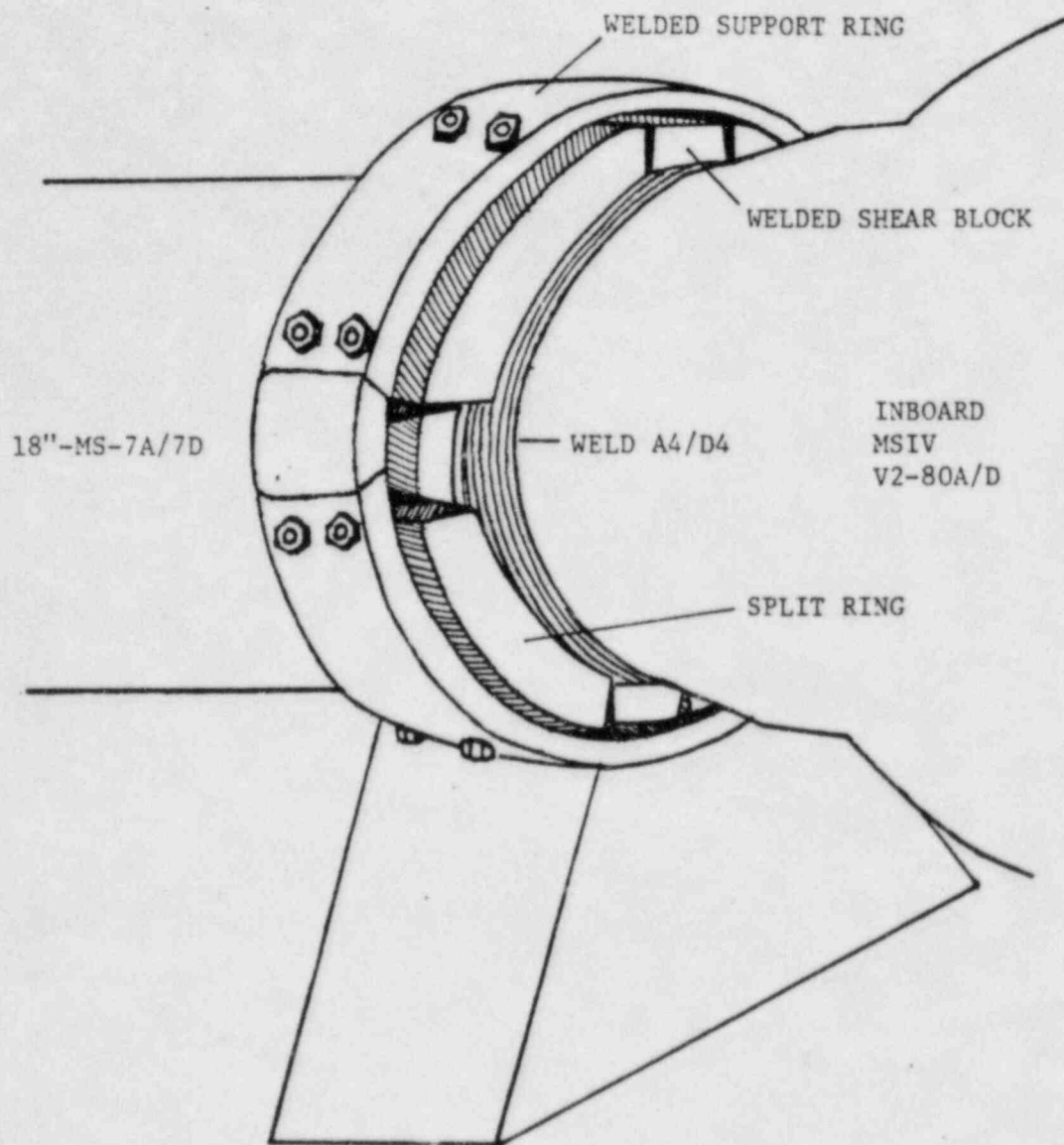
Class, 1

Test

Requirement, Volumetric

Basis for Relief, Welds A4 and D4 are pipe to valve welds which are inspectable from the pipe side only, as discussed in Relief Request Basis B-4. However, most of the weld crown and several inches of base metal on the pipe side are covered by a support ring (see attachment). These rigid supports cannot be removed because the only other restraints on each line are the penetration at one end, several spring hangers and a snubber along the run, and the vessel nozzle at the other end. Removal would introduce unnecessary stress into the piping and remaining support components. Consequently, volumetric examination of these welds is not practical.

Alternate Testing, These welds will be visually examined for leakage during the primary coolant system hydrostatic pressure test. In addition, they will be volumetrically examined, to the extent practical, if the support components are removed for any reason.



RELIEF REQUEST BASIS
NUMBER 10

ATTACHMENT

RELIEF REQUEST BASIS

Number, B-6

Component, Welded and non-welded component supports and restraints on liquid-filled piping and components smaller than 2" schedule 80 and on steam-filled piping and components smaller than 4" schedule 80.

Category, F-A, F-B and F-C

Test

Requirement, VT-3, VT-4 Visual

Basis for Relief, In the interest of keeping personnel radiation exposure ALARA, and to maintain consistency with the allowance of Sub-sub Article IWB-1220, paragraph IWB 1220(a), VT-3 and VT-4 visual examination of non-welded support components and restraints under Section IWF should be limited to those supports and restraints on piping and components which are 2" schedule 80 (liquid service) and larger, and 4" schedule 80 (steam service) and larger.

Alternate Testing, Significant degradation of these support components would be readily observable during visual examinations performed while pressure testing those systems in accordance with IWB-5220.

RELIEF REQUEST BASIS

Number: C-1

Component: RHR Heat Exchangers' Nozzle Welds

Category: C-B

Class: 2

Test Requirement: Volumetric

Basis for Relief: Nozzle design configuration prohibits meaningful volumetric examination of the nozzle welds since the weld is 100% covered by a reinforcement saddle. Refer to detail "A" of drawing I-20.

Alternate Testing: Surface and VT-1 visual examinations shall be performed on the reinforcement saddle-to-nozzle and reinforcement saddle-to-vessel welds.

RELIEF REQUEST BASIS

Number: C-2

Component: Attachment welds for pipe covering protection saddles

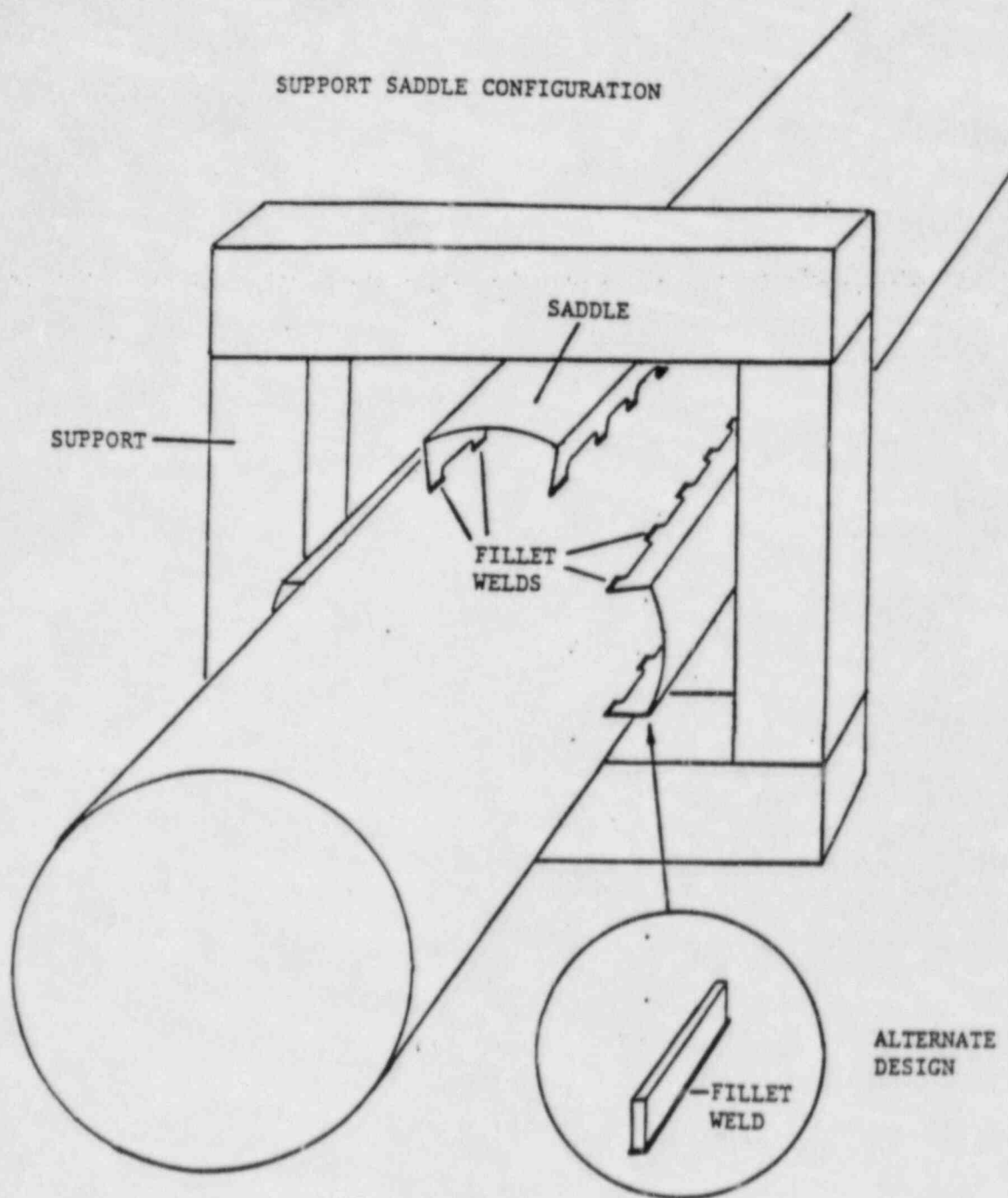
Category: C-E-1

Test Requirement: Surface

Basis for Relief: Saddles are provided to prevent damage to piping caused by excessive lateral deflection. They mainly perform a positional rather than a load-bearing function. The saddles are designed to transmit those loads that do exist in a predominantly compressional mode. Therefore, the intermittent or continuous fillet welds (see attachment) used to join the saddles to the pipe serve to hold them in place but do not contribute significantly to their load-bearing capability.

The saddle configuration is such that access to these welds is severely limited, and surface examination is, consequently, impractical or impossible. The "best effort" examinations which result require considerable work and provide negligible benefit in terms of improved plant safety, reliability and quality.

Alternate Testing: Visual examination will be performed on all fillet-welded saddles.



RELIEF REQUEST BASIS
NUMBER C-2

ATTACHMENT

RELIEF REQUEST BASIS

Number: C-3

Component: Welded and non-welded component supports and restraints \leq 4 in. nominal pipe size

Category: F-A, F-B and F-C

Class: 2

Test Requirement: VT-3, VT-4 Visual

Basis for Relief: To maintain consistency with the allowance of Sub-sub Article IWC-1220, paragraph IWC-1220(c), VT-3 and VT-4 visual examination of welded and non-welded support components and restraints under Section IWF should be limited to those supports exceeding 4 in. nominal pipe size.

Alternate Testing: Significant degradation of support components \leq 4 in. NPS would be readily observable during visual examinations performed while pressure testing these systems in accordance with IWC-5220.

RELIEF REQUEST BASIS

Number,	D-1
Component,	Welded and non-welded component supports and restraints \leq 4-in. nominal pipe size.
Category,	F-A, F-B and F-C
Class,	3
Test Requirement,	VT-3, VT-4 Visual
Basis for Relief,	To maintain consistency with the allowance of Sub-sub Article IWD-1220, paragraph IWD-1220.1, VT-3 and VT-4 visual examination of welded and non-welded support components and restraints under Section IWF should be limited to those supports exceeding 4-in. nominal pipe size.
Alternate Testing,	Significant degradation of support components \leq 4-in. NPS would be readily observable during visual examinations performed while pressure testing these systems in accordance with IWD-5220.

RELIEF REQUEST BASIS

Number, H-1

Systems, Residual Heat Removal Line, Suction and discharge piping
Core Spray from Torus to first shut-off
High Pressure Coolant Injection valve.
Reactor Core Isolation Cooling

Safety Class, 2

Basis for Relief, Piping is non-isolable from primary containment, which has a design pressure of 56 psia.

Alternate Testing, Piping experiences a static head pressure of 5-6 psig with the torus filled to its normal operating level. Visual examinations are made during monthly surveillance testing to verify absence of leakage.

RELIEF REQUEST BASIS

Number, H-2

System, Standby Liquid Control Line, SLC - 2, 3, 4 and 5
Downstream of valves V11-11
and V11-41 to SLC pumps.

Safety Class, 2

Function, sodium pentaborate suction from SLC tanks.

Basis for Relief, This piping has no test connection between the valves and the positive-displacement SLC pumps. The suction piping upstream of the valves is open to atmosphere through the SLC tanks, and provides no boundary.

Alternate Testing, Piping experiences a static head of 3-5 psig from the SLC tank, since V11-11 is normally open. Evidence of leakage would be detectable during surveillance testing and operator rounds.

RELIEF REQUEST BASIS

Number: H-3

System: Standby Liquid Control

Line(s): SLC-11 between valves
V11-15 and V11-16.

Test connection downstream
of V11-16 to V11-36.

Safety Class: 2

Function: Sodium pentaborate injection to reactor vessel.

Basis for Relief: Pressurization of this piping to $1.10 \times P_{sv}$ (1595 psig) would also pressurize the Class 1 portion of SLC-11 to valve V11-18. The latter piping forms part of the reactor coolant pressure boundary, and as such is only required to be tested at $1.02 \times P_0$ (1018 psig).

Alternate Testing: This piping will be hydrostatically tested during the Safety Class 1 primary coolant pressure boundary hydro.

RELIEF REQUEST BASIS

Number: H-4

System: Radwaste

Line(s): Piping to RHR Sys. from RX
Bldg floor drains downstream
of valves 319A-D.

Safety Class: 2

Function: Forms part of Primary Containment Isolation System

Basis for Relief: Safety function of the piping is to contain primary containment atmosphere. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.

Alternate Testing: Containment Isolation portions of this system are tested to 44 psig during the Type "C" Leak Rate Test each refueling and are tested during the Type "A" Leak Rate Test every $3\frac{1}{3}$ years.

RELIEF REQUEST BASIS

Number: H-5

System: Radwaste

Lines: Drywell Sump Pump
Discharge from Penetrations
X-18 and X-19 to Valves
AO-83 and AO-95.

Function: Forms part of Primary Containment Isolation System.

Basis for Relief: Safety function of the piping is to contain primary containment atmosphere. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.

Alternate Testing: Containment Isolation portions of this system are tested to 44 psig during the Type "C" Leak Rate Test each refueling and are tested during the Type "A" Leak Rate Test every 3-1/3 years.

RELIEF REQUEST BASIS

Number: H-6

System: Reactor Water Cleanup

Line: Discharge (CUW-55)

Safety Class: 2

Function: Return demineralized water to reactor coolant.

Bases for Relief: The portion of CUW-55 between V12-63 and V12-62 cannot be isolated from the Safety Class 3 line CUW-54. Extending the 1.25 x Pd (2375 psig) test boundary beyond V12-63 would over pressurize CUW-54, which require testing at 1.25 x Psv (1813 psig).

Alternate Testing: The portion of CUW-55 between V12-63 and V12-62 will be included in the 1.25 Psv test of CUW-54.

RELIEF REQUEST BASIS

Number: H-7

System: HPCI, RCIC

Line(s): HPCI 15A RCIC 8A

Safety Class: 2

Function: HPCI and RCIC Pump Discharge to Feedwater System

Basis For Relief: Portions downstream of HPCI MOV 23-19 and RCIC MOV 13-21 are non-isolable from feedwater piping.

Alternate Testing: These lines will be tested during the feedwater system test.

RELIEF REQUEST BASIS

Number: H-8

System: Service + Instrument Air

Line(s): Full System

Safety Class: 2

Function: Forms part of Primary Containment Isolation System.

Basis for Relief: Safety function of the piping is to contain primary containment atmosphere. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.

Alternate Testing: Containment Isolation portions of this system are tested to 44 psig during the Type "A" Leak Rate Test every 3-1/3 years.

RELIEF REQUEST BASIS

Number, H-9
System, Atmospheric Control Line(s), Full System
Safety Class, 2
Function, Forms part of Primary Containment Isolation System.
Basis for Relief, Safety Function of the piping is to contain primary containment atmosphere. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.
Alternate Testing, Containment Isolation Portions of this system are tested to 44 psig during the Type "A" Leak Rate Test every 3-1/3 years.

RELIEF REQUEST BASIS

Number, H-10
System, Sampling Line(s), Containment Air
Safety Class, 2 + 3
Function, Forms part of Primary Containment Isolation System.
Basis for Relief, Safety Function of the piping is to contain primary containment atmosphere. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.
Alternate Testing, Containment Isolation portions of this system are tested to 44 psig during the Type "A" Leak Rate Test every 3 1/3 years.

RELIEF REQUEST BASIS

Number: H-11

System: Containment Air Dilution

Line(s): Portions of system from Primary Containment penetration to the second outboard isolation valve.

Safety Class: 2

Function: Forms part of Primary Containment Isolation System.

Basis for Relief: Safety function of the piping is to contain primary containment atmosphere. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.

Alternate Testing: Containment Isolation portions of this system are tested to 44 psig during the Type "A" Leak Rate Test every 3-1/3 years.

RELIEF REQUEST BASIS

Number: H-12

System: CRD Hydraulic

Line(s): Drive Water, Charging Water and Cooling Water, Piping and Hydraulic Control Units

Safety Class: 2

Basis for Relief: Isolation of this piping for hydrostatic testing would involve repositioning and independent verification of approximately 450 valves before and after the test. The slight increase in reliability assurance provided by a once-per-interval 1.1 x Pd hydro test vice that provided by the much more frequent on-line inspections and surveillance at operating pressures in excess of 1000 psig does not justify the effort required to place the system in the test configuration.

Alternate Testing: Primary coolant boundary portions of this piping will experience a hydrostatic test pressure of 1018 psig during the reactor vessel hydro. The balance of the system functions at a normal operating pressure of between 1040 and 1500 psig and any evidence of leakage would be detected by routine operator surveillance.

RELIEF REQUEST BASIS

Number: H-13

System: Standby Gas Treatment Line(s): Containment purge lines to SGT Units.

Safety Class: 2

Function: Forms part of Primary Containment Isolation System.

Basis for Relief: Safety function of the piping is to limit airborne fission product release to environment. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.

Alternate Testing: Containment isolation portions of this system are tested to 44 psig during the Type "A" Leak Rate Test every 3-1/3 years. Duct work portions of system are outside the scope of the code.

RELIEF REQUEST BASIS

Number: H-14

System: Service Water Line(s): Supply piping between valves V70-5A and 5B.

Common return piping for redundant trains of plant safety systems.

Safety Class: 3

Function: Supply piping between valves V70-5A + 5B provides pressurization for Fire Protection System. Return piping provides removal of plant waste heat.

Basis for Relief: Isolation of this supply piping for testing would simultaneously exclude the Fire Protection System from pressurization by the Service Water pumps and the station fire water pumps, effectively disabling the Fire Protection System for the duration of the test. Isolation of the common return piping would disable both trains of several plant safety systems for the duration of the test. At least one train of these systems must be operable, or available to operate, during all modes of plant operation, and Service Water is required to remove waste heat resulting from their operation.

Alternate Testing: Since the Service Water System runs approximately 100% of the time, routine operator surveillance would detect evidence of leakage from visible portions of the system.

RELIEF REQUEST BASIS

Number: H-15

System: AOG

Line(s): Guard Beds and Absorbers

Safety Class: 3

Basis for Relief: Gaseous Radwaste System must continuously operate during all modes of station operation and cannot be isolated for testing.

Alternate Testing: System operates under vacuum. In-leakage would result in increased flow which would be detected by flow elements located downstream of vacuum pumps.

RELIEF REQUEST BASIS

Number: H-16

System: Recirc Pump Seal Purge System Line(s): All

Safety Class: 2

Function: Forms parts of Primary Containment Isolation System.

Basis for Relief: Safety function of the piping is to contain primary containment atmosphere. Piping integrity in this service is adequately demonstrated by periodic pneumatic leak rate testing.

Alternate Testing: Containment Isolation portions of this system are tested to 44 psig during the Type "A" Leak Rate Test every 3-1/3 years, and type "C" Leak Rate tested every year.

RELIEF REQUEST BASIS

Number, H-17

System, HPCI
RCIC

Line, Condensate suction, from MUV HPCI-17 and RCIC-18 to check valves immediately downstream.

Safety Class, 2 and 3

Basis for Relief, Piping cannot be effectively pressurized from HPCI/RCIC side due to blockage by check valves, and cannot be pressurized from CST side due to check valves opening on flow from CST.

Alternate Testing, Since MUV HPCI-17 and RCIC-18 and associated CST manual shut-off valves are normally open, this piping experiences a constant static head of 6-25 psig from the Condensate Storage Tank. Piping is not insulated and leakage would be visible during routine surveillance and operator rounds.

RELIEF REQUEST BASIS

Number, H-18

System, High Pressure Coolant Injection
Reactor Core Isolation Cooling

Line(s), 125 Pd HPCI Steam Supply Line MS-4B from turbine stop valve to turbine casing.

1250 Pd HPCI Steam Drain Lines

1250 Pd RCIC Steam Supply Line MS-5B from MUV13-131 to Turbine Casing.

Safety Class, 2 and 3

Requirement, Pressure test at $1.25 \times Pd$ per IWC-5222(a) or IWD-5223(a)

Basis for Relief, Piping cannot be effectively isolated from 150 Pd turbine casing and exhaust lines.

Alternate Testing, Piping will be included in the 188 psig pressure test of the turbine casing and exhaust lines.

RELIEF REQUEST BASIS

Number, H-19

System, RHR

Lines, RHR-13A and 13B between valves V10-69A and 69B and V10-16A and 16B.

Safety Class, 2

Function, Minimum flow bypass for RHR pumps

Basis for Relief, Piping contains no test connection for pressurization. Opening of V10-69A and 69B places this piping in communication with lower-pressure RHR suction piping through the centrifugal RHR pumps, while piping downstream of V10-16A and 16B is open-ended to the torus.

Alternate Testing, This piping will be included in the lower-pressure pump suction hydro.

RELIEF REQUEST BASIS

Number, H-20

System, CRD Scram Discharge
Headers, Instrument Volumes
and Associated Piping

Line(s), Entire System

Function, Receive CRD discharge water during reactor scram.

Basis for Relief, Table IWC - 2500 - 1 requires a functional test per IWC-5221 once each inspection period. This system would receive a functional test only during reactor scrams. Since the Vermont Yankee FSAR limits the number of scrams permitted during the life of the plant, Vermont Yankee has discontinued the practice of initiating manual scrams at each refueling outage. Consequently, although it is unlikely, a reactor scram may not be experienced once each inspection period.

Alternate Testing, Visual inspections conducted by operators following reactor scram events would detect any evidence of leakage from this piping.

RELIEF REQUEST BASIS

Number, H-21

System, CRD Scram Discharge Headers, Instrument Volumes and Associated Piping. Line(s), Eighty-nine (89) 3/4" scram discharge lines, between scram outlet valves and V13-112 manual valves.

Function, Transport CRD discharge water to discharge headers during reactor scram.

Basis for Relief, General Electric Company recommends not pressurizing against the scram outlet valves to a pressure of 1563 psig, to avoid possible damage. Since there is only one check valve between the scram outlet valves and the manual valves, it is prudent to close the eighty-nine (89) manual valves prior to pressurizing the Scram Discharge Headers, Instrument Volumes and associated 3/4" discharge piping to 1563 psig.

Alternate Testing, Hydro test is required only once every ten years. Reactor scrams occur more frequently, and this piping is subjected to reactor pressure during scram events. Evidence of leakage would be visible during post-scram visual inspections by operators.

Relief Request Basis

NUMBER: P1

SYSTEM: Service Water

PUMP: P7-1A-D

CLASS: 3

TEST REQUIREMENT: Bearing temperature per IWP-3300

BASIS FOR RELIEF: Service water pump bearings are physically submerged under a minimum of 30 feet of river water. Contact pyrometer readings would be impractical.

ALTERNATIVE TESTING: None

Relief Request Basis

NUMBER: P2
SYSTEM: Service Water
PUMP: P7-1A-D
CLASS: 3

TEST REQUIREMENT: Quarterly testing per IWP-3100

BASIS FOR REQUEST: Flow is calculated using a computer program which fits a head/capacity curve from the data inputs. Since flow can not be throttled or differential pressure cannot be fixed, (dependent on river water levels and temperatures) the data received from the computer may not be a true indication of the pump's performance. Vibration levels are also subject to change since the reference parameter of differential pressure cannot always be achieved.

ALTERNATE TESTING: Each refueling outage one pump will be taken out of service and overhauled for preventive maintenance. Quarterly readings will continue to be taken, recorded, and analyzed for trends to the degree possible.

Relief Request Basis

NUMBER: P3

SYSTEM: Residual Heat Removal Service Water

PUMP: P8-1A-D

CLASS: 3

TEST REQUIREMENT: Bearings temperature per IWP-3300

BASIS FOR RELIEF: Bearings are internal to the pump casing and are inaccessible for temperature measurements. Contact pyrometer would not be feasible since the casing is large and would quickly dissipate the heat.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P4

SYSTEM: Residual Heat Removal

PUMP: P10-1A-D

CLASS: 2

TEST REQUIREMENT: Bearing temperature per IWP-3300

BASIS FOR RELIEF: Bearings are internal to the pump casing and are inaccessible for temperature measurements. Contact pyrometer would not be feasible since the casing is large and would quickly dissipate the heat.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P5

SYSTEM: High Pressure Coolant Injection

PUMP: P44-1A

CLASS: 2

TEST REQUIREMENT: Bearing temperature per IWP-3300

BASIS FOR RELIEF: Bearings are internal to the pump casing and are inaccessible for temperature measurements. Contact pyrometer would not be feasible since the casing is large and would quickly dissipate the heat.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P6

SYSTEM: Standby Liquid Control

PUMP: P45-1A/B

CLASS: 2

TEST REQUIREMENT: Bearing temperature per IWP-3300

BASIS FOR RELIEF: Bearings are internal to the pump casing and are inaccessible for temperature measurements. Contact pyrometer would not be feasible since the casing is large and would quickly dissipate the heat.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P7

SYSTEM: Standby Liquid Control

PUMP: P45-1A/E

CLASS: 2

TEST REQUIREMENT: Reference values per IWP-3100, Table 3100-1

BASIS FOR RELIEF: In accordance with Table IWP-3100-1, flow will be measured from flow element FI-11-1. This parameter will be established as the reference value and trends analyzed per IWP-3100. Differential pressure will not be measured as it is variable since suction is from a vented tank. Inlet pressure will only be measured to assure that there is liquid in TK-21-1A, as not to damage the pumps.

ALTERNATIVE TESTING: Continue testing and analysis of flow and vibration results per IWP-3200.

Relief Request Basis

NUMBER: P8

SYSTEM: Core Spray

PUMP: P46 1A/B

CLASS: 2

TEST REQUIREMENT: Bearing temperature per IWP-3300

BASIS FOR RELIEF: Bearings are internal to the pump casing and are inaccessible for temperature measurements. Contact pyrometer would not be feasible since the casing is large and would quickly dissipate the heat.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P9

SYSTEM: Reactor Core Isolation Cooling

PUMP: P47-1A

CLASS: 2

TEST REQUIREMENT: Bearing temperature per IWP-3300

BASIS FOR RELIEF: Bearings are internal to the pump casing and are inaccessible for temperature measurements. Contact pyrometer would not be feasible since the casing is large and would quickly dissipate the heat.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P10

SYSTEM: Reactor Building Closed Cooling Water

PUMP: P59-1A/B

CLASS: 3

TEST REQUIREMENT: Proper lubrication level and or pressure per
IWP-3110 Table IWP-3100-1.

BASIS FOR RELIEF: Pump has grease packed bearings and therefore
cannot be checked.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P11

SYSTEM: Reactor Building Closed Cooling Water

PUMP: P59-1A/B

CLASS: 3

TEST REQUIREMENT: Inservice test quantities per IWP-3100, Table IWP-3100-1

BASIS FOR RELIEF: Table IWP-3100-1 specifies the Inservice Test Quantities to be measured or observed. For these pumps, there is no method available for measuring flow. Differential pressure varies due to the distribution of cooling water to the various loads as regulated by temperature and pressure control valves in the system. Inlet pressure also cannot be measured before the pump test since the pumps are normally running. The vibration levels are also subject to change since the reference parameters cannot always be achieved.

ALTERNATE TESTING: Monthly readings will continue to be taken, recorded, and analyzed for trends to the degree possible.

Relief Request Basis

NUMBER: P12

SYSTEM: Fuel Oil Transfer

PUMP: P92-1A/B

CLASS: 3

TEST REQUIREMENT: Bearing temperature per IWP-3300

BASIS FOR RELIEF: Per IWP-3500, bearing temperature measurements require that each pump be run until the bearing temperatures stabilize... A bearing temperature is considered stable when three successive readings taken at ten minute intervals do not vary by more than 3%. The fuel oil transfer pump operability test can only be performed when the diesel is undergoing testing. When low level is sensed in the day tank, the fuel oil transfer pumps provide the make-up. This normally takes less than 15 minutes. This is not sufficient time to record a meaningful bearing temperature.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P13

SYSTEM: Fuel Oil Transfer

PUMP: P92-1A/B

CLASS: 3

TEST REQUIREMENT: Proper lubrication and or pressure per IWP 3110

Table IWP-3100-1

BASIS FOR RELIEF: Pump has grease-packed bearings and therefore
cannot be checked.

ALTERNATIVE TESTING: None.

Relief Request Basis

NUMBER: P14

SYSTEM: Fuel Oil Transfer

CLASS: 3

TEST REQUIREMENTS: Differential pressure and flow measurements per IWP-3100, Table IWP-3100-1.

BASIS FOR RELIEF: Fuel oil pumps are positive displacement pumps which are in a fixed resistance system. Per Table IWP-3100-1, Note 1, it is required to measure differential pressure or flow rate. There is no method available for measuring flow. Differential pressure varies with the amount of fuel in the diesel fuel storage tank, TK-40-1A. The differential pressure is also subject to viscosity changes of the fuel oil due to seasonal temperature variations. These variations are not indicative of positive displacement pump performance.

ALTERNATIVE TESTING: Measure discharge pressure in lieu of differential pressure and take corrective action if the discharge pressure falls below a calculated reference value, which is the amount of discharge pressure necessary to supply fuel oil to the day tanks.

Relief Request Basis

Number: GP-1

Code Paragraph: Table IWP-3100-2

Basis For Relief:

A thorough review of past operating surveillance data and continuing difficulty in obtaining consistent data indicates a need to re-evaluate the ranges specified in the code paragraph listed above. There are many causes for the difference in readings which have no relation to pump degradation. Differences in the manner by which gauges or meters are read, accuracies associated with each instrument, the affect on the instrument system due to the inaccuracies of each component all contribute to readings that are out of specification by more than than 2% allowed by the code.

The nature of the test method required by ASME XI also contributes to the inconsistent data. When establishing the fixed parameter, there can be no tolerance since errors here will compound the error in reading the variable parameter. Because of the instrument inaccuracies and the test method, the data often unjustifiably falls into the required action level of ASME XI. These test method induced discrepancies are not syptomatic of a pump failure.

Based on our experience in surveillance testing since commercial operation in 1972, the ranges proposed in the following section represent reasonable and expected deviations of the pump parameters. The proposed changes only expand the range in the more conservative direction, i.e., allowing more flow or a higher differential pressure. These ranges are consistent with our Safety Analysis in that they do not lower the minimum flow or discharge pressure required.

Alternative:

The high end of the various ranges will be adjusted upward as indicated in the following table:

<u>Parameter</u>	<u>Acceptable</u>	<u>Alert</u>	<u>Action</u>
Q	.94 - 1.08	.90 - <.94 >1.08 - 1.12	<.90 >1.12
ΔP	.93 - 1.08	.90 - <.93 >1.08 - 1.12	<.90 >1.12

RELIEF REQUEST BASIS

NUMBER, V1

SYSTEM, Service Water

VALVE, V70-1A-D

CATEGORY, C

CLASS, 3

FUNCTION, Service Water Pump Discharge Check Valves

TEST REQUIREMENT, CV

BASIS FOR RELIEF, During summer operation, all four (4) service water pumps are required for plant operation. The shutting down of a pump for check valve testing is not practical. Also, during the remainder of the year, three (3) of the four (4) pumps are used in plant operation. The pumps are routinely rotated when possible.

ALTERNATE TESTING, Valves will be exercised as pumps are rotated in service upon startup. Proper pump operation will indicate proper opening of the check valves. Absence of pump runback or system pressure loss as noted by operations personnel will indicate proper closure of the check valves.

RELIEF REQUEST BASIS

NUMBER, V2
SYSTEM, Reactor Building Closed Cooling Water
VALVE, V70-113
CATEGORY, C
CLASS, 2
FUNCTION, RBCCW to containment check valve
TEST REQUIREMENT, CV
BASIS FOR RELIEF: Valve is required to be open during power operation.
Shutting the valve would stop cooling water flow to vital
containment equipment.
ALTERNATE TESTING: Valve will be verified shut during cold shutdowns and
refueling outages.

RELIEF REQUEST BASIS

NUMBER, V3
SYSTEM, Reactor Building Closed Cooling Water
VALVE, V70-117
CATEGORY, B
CLASS, 2
FUNCTION, RBCCW return isolation valve
TEST REQUIREMENT, Q
BASIS FOR RELIEF, Valve cannot be exercised during power operation since closing the valve would stop cooling water flow to vital containment equipment.
ALTERNATE TESTING, Valve will be full stroke exercised during cold shutdowns and refueling outages.

RELIEF REQUEST BASIS

NUMBER, V4

SYSTEM, Recirculation pump

VALVE, 2-2-7A/B, 2-2-8A/B

CATEGORY, C

CLASS, 2

FUNCTION, Excess flow check valves for instrument isolation

TEST REQUIREMENT, CV

BASIS FOR RELIEF, Valves can only be verified to shut by leak testing which is performed during the refueling outage hydrostatic test. Valves cannot be exercised shut during power operation since shutting these would isolate instrumentation required for power operation.

ALTERNATE TESTING, Valves will be functionally tested each refueling outage.

RELIEF REQUEST BASIS

NUMBER, V5
SYSTEM, Service and Instrument Air
VALVE, V72-38A/B, V72-89B/C, V72-103
CATEGORY, A
CLASS, 2
FUNCTION, Primary Containment Isolation
TEST REQUIREMENT, LT
BASIS FOR RELIEF, Primary containment isolation valves are covered by 10 CFR
50, Appendix J, via Technical Specification Section 4.7.2
ALTERNATE TESTING, Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER, V6

SYSTEM, Service and Instrument Air

VALVE, V72-89B/C

CATEGORY, C

CLASS, 2

FUNCTION, Primary Containment Isolation

TEST REQUIREMENT, CV

BASIS FOR RELIEF, Valve cannot be exercised during power operation since closing the valve could cause the air operated main steam isolation valves to close, resulting in a reactor scram.

ALTERNATE TESTING, Valve is verified open during normal system operation. Valve is verified closed during leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER, Y7

SYSTEM, Nuclear Boiler

VALVE, SR 2-14E-L

CATEGORY, C

CLASS, 3

FUNCTION, Relief Valve Discharge Line Vacuum Breaker

TEST REQUIREMENT, CV

BASIS FOR RELIEF: Valves cannot be exercised during power operation since valves are inside the drywell and are inaccessible when at power.

ALTERNATE TESTING: Valves will be manually exercised during cold shutdown.

RELIEF REQUEST BASIS

NUMBER, V8

SYSTEM, Nuclear Boiler

VALVE, V2-27A, V2-39, V2-40, V2-74, V2-77, V2-80A-D, V2-86A-D,
V2-96A

CATEGORY, A

CLASS, 1

FUNCTION, Primary Containment Isolation

TEST REQUIREMENT, LT

BASIS FOR RELIEF, Primary containment isolation valves are covered by 10 CFR
50, Appendix J, via Technical Specification Section 4.7.2

ALTERNATE TESTING, Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER,	V9
SYSTEM,	Nuclear Boiler
VALVE,	V2-28A/B
CATEGORY,	A
CLASS,	1
FUNCTION,	Primary Containment Isolation
TEST REQUIREMENT,	LT
BASIS FOR RELIEF,	Valves presently exempted, per Technical Specification Section 4.7.2, from leak testing.
ALTERNATE TESTING,	None

RELIEF REQUEST BASIS

NUMBER, V10

SYSTEM, Nuclear Boiler

VALVE, V2-53A/B, V2-54A/B

CATEGORY, B

CLASS, 1

FUNCTION, Recirculation pump discharge and bypass valve - required for LPCI operation.

TEST REQUIREMENT, Q

BASIS FOR RELIEF, Valve exercising during power operation would require a reactor trip.

ALTERNATE TESTING, Valves will be full stroke exercised during cold shutdowns of duration greater than 48 hours and during refueling outages.

RELIEF REQUEST BASIS

NUMBER, V11

SYSTEM, Nuclear Boiler

VALVE, RV2-71A-D, SV2-70A/B

CATEGORY, C

CLASS, 1

FUNCTION, Automatic Depressurization/Overpressure Protection

TEST REQUIREMENT, SRV (IWV-3511)

BASIS FOR RELIEF, The present program for testing main steam relief and safety valves as described in the Vermont Yankee Inservice Inspection Program is more conservative than the test frequency described in IWV-3511. Per the ISI Program, all the main steam relief and safety valves are tested every two refuel outages. The valves that are removed each refuel outage for testing are either tested and replaced or replaced with a previously tested spare valve. In the case where the valves are replaced with a previously tested spare, the removed valves are not tested for as-found conditions until a convenient time after the refuel outage is over. This would make the additional testing as described in IWV-3513 unreasonable, since the plant would be operating before it could be determined whether the removed valve fails to function properly or not.

ALTERNATE TESTING, Continue to test the main steam relief and safety valves per the requirements of the Inservice Inspection Program.

RELIEF REQUEST BASIS

NUMBER, V12

SYSTEM, Nuclear Boiler

VALVE, RV2-71A-D

CATEGORY, B

CLASS, 1

FUNCTION, Automatic Depressurization

TEST REQUIREMENT, Q

BASIS FOR RELIEF, Valves cannot be exercised during power operation since failure in the open position would require tripping the reactor. Also, live steam would be discharged to the suppression pool which would heat the water and pressurize the containment. Valves cannot be exercised during cold shutdowns since steam is required to stroke the main piston in the valve. Based on the following references, the testing of each relief valve at a frequency of once per operating cycle is assessed to be adequate by Vermont Yankee and the industry. In a letter from Brian K. Grimes of the NRC to All Boiling Water Reactor Licensees dated July 16, 1979 regarding relief and safety-relief valves, it states that "we have concluded that implementation of a requirement for increased surveillance testing would not be the most effective way of assuring safety-relief valve reliability." Also referenced is a letter from Darrel G. Eisenhut of the NRC to All Operating Reactor Licensees dated May 7, 1980 regarding the Five Additional TMI-2 Related Requirements to Operating Reactors. Item II.K.3.16 entitled Reduction of Challenges and Failures of Relief Valves - Feasibility Study and System Modification states that, "Those changes which are shown to reduce relief valve challenges without compromising the performance of the relief valves or other systems should be implemented." Vermont Yankee's response to an NRC suggested Tech. Spec. change dated February 2, 1978 states that "Both General Electric Company and Target Rock strongly recommend that these valves be manually operated only when absolutely necessary. The only time we consider to be absolutely necessary, other than if plant conditions warrant, is once a cycle."

ALTERNATE TESTING, During power ascension after a refueling outage, each relief valve will be manually opened to full stroke with the reactor at low pressure until the thermocouple downstream of the valve indicates fluid is flowing from the valve.

RELIEF REQUEST BASIS

NUMBER, V13
SYSTEM, Nuclear Boiler
VALVE, V2-27B, V2-96B
CATEGORY, C
CLASS, 2
FUNCTION, Feedwater Checks for HPCI/RCIC Operation
TEST REQUIREMENT, CV

BASIS FOR RELIEF: Valves are required to be open during power operation. Shutting these valves will cause a reactor trip. Testing via the HPCI/RCIC systems would cause thermal shocking of the feedwater nozzles and could result in damage to reactor internals. Testing the valves during cold shutdown would require removing the only mechanism of vessel level control (via reactor cleanup system).

ALTERNATE TESTING, Valves will be verified shut during the refueling outages.

RELIEF REQUEST BASIS

NUMBER, V14

SYSTEM, Nuclear Boiler

VALVE, 2-62-A-D, 2-64-A-D, 2-73-A-H, 2-301 C/D, 2-305 A/B

CATEGORY, C

CLASS, 2

FUNCTION, Excess Flow Check Valves for Instrument Isolation

TEST REQUIREMENT, CV

BASIS FOR RELIEF, Valves can only be verified to shut by leak testing which is performed during the refueling outage hydrostatic test. Valves cannot be exercised shut during power operation since shutting these would isolate instrumentation required for power operation.

ALTERNATE TESTING, Valves will be functionally tested each refueling outage.

RELIEF REQUEST BASIS

NUMBER, V15

SYSTEM, Core Spray

VALVE, V14-13A/B

CATEGORY, C

CLASS, 2

FUNCTION, Injection Check Valve

TEST REQUIREMENT, CV

BASIS FOR RELIEF, Valves cannot be exercised manually since valves are located inside the primary containment. Valves cannot be exercised with flow since pump discharge pressure cannot overcome reactor pressure.

ALTERNATE TESTING, These valves will be manually full stroke exercised during cold shutdowns when the drywell is accessible and during refueling outages.

RELIEF REQUEST BASIS

NUMBER, V16

SYSTEM, Core Spray

VALVE, 14-31A/B

CATEGORY, C

CLASS, 2

FUNCTION, Excess flow check valves for instrument isolation

TEST REQUIREMENT, CV

BASIS FOR RELIEF: Valves can only be verified to shut by leak testing which is performed during the refueling outage hydrostatic test. Valves cannot be exercised shut during power operation since shutting these would isolate instrumentation required for power operation.

ALTERNATE TESTING: Valves will be functionally tested each refueling outage.

RELIEF REQUEST BASIS

NUMBER, V17
SYSTEM, High Pressure Coolant Injection
VALVE, V23-15, V23-16
CATEGORY, A
CLASS, 1
FUNCTION, HPCI Steam Line Isolation
TEST REQUIREMENT, LT
BASIS FOR RELIEF, Primary containment isolation valves are covered by 10 CFR
50, Appendix J, via Technical Specification Section 4.7.2.
ALTERNATE TESTING, Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER, V18

SYSTEM, High Pressure Coolant Injection

VALVE, V23-18

CATEGORY, C

CLASS, 2

FUNCTION, Injection check valve

TEST REQUIREMENT, CV

BASIS FOR RELIEF: Valve cannot be exercised during power operation since flow through this valve must be injected into the reactor coolant system. This would thermally shock the reactor nozzles. The cold water injection would also cause a reactivity excursion. Manual valve operation is not possible during power operation since the valve is located in the steam tunnel which is inaccessible.

ALTERNATE TESTING: Valve will be manually fully stroke exercised during cold shutdowns and refueling outages.

RELIEF REQUEST BASIS

NUMBER, V19

SYSTEM, High Pressure Coolant Injection

VALVE, SL23-37A-D

CATEGORY, C

CLASS, 2

FUNCTION, Excess flow check valves for instrument isolation

TEST REQUIREMENT, CV

BASIS FOR RELIEF, Valves can only be verified to shut by leak testing which is performed during the refueling outage hydrostatic test. Valves cannot be exercised shut during power operation since shutting these would isolate instrumentation required for power operation.

ALTERNATE TESTING, Valves will be functionally tested each refueling outage.

RELIEF REQUEST BASIS

NUMBER, V20

SYSTEM, High Pressure Coolant Injection

VALVE, V23-61

CATEGORY, C

CLASS, 2

FUNCTION, Torus suction check valve

TEST REQUIREMENT, CV

BASIS FOR RELIEF: Valve cannot be full stroke exercised during power operation since there is no full flow test loop available to recirculate the water back to the torus. There are no means to manually stroke the valve. Valve cannot be stroked via a system injection into the reactor since that would result in a reactivity excursion and potentially thermally shocking the reactor nozzles.

ALTERNATE TESTING: Valve will be verified to open freely each cold shutdown and refuel outages.

RELIEF REQUEST BASIS

NUMBER, V21

SYSTEM, Control Rod Drive Hydraulic

VALVE, V3-13-114, V3-13-126, V3-13-127

CATEGORY, B or C

CLASS, 2

FUNCTION, Control rod drive scram

TEST REQUIREMENT, Q or CV

BASIS FOR RELIEF, Exercising these valves during power operation would require scrambling the plant or an undesirable reactor transient.

ALTERNATE TESTING, Since scram insertion times are representative of valve operability and stroke times, alternate testing will be performed in accordance with Tech. Spec. Section 4.3.C.1 and 2. This section requires that all control rods be subjected to scram-time measurements on a refueling outage basis. Also, this section requires that 50% of the control rods be measured for scram times every 16 to 32 weeks. An evaluation is required that provides reasonable assurance that proper control rod drive performance is being maintained. These test adequately verify valve operability and stroke times.

RELIEF REQUEST BASIS

NUMBER, V22
SYSTEM, Control Rod Drive Hydraulic
VALVE, V3-181
CATEGORY, C
CLASS, 3
FUNCTION, CRD Return to RMCU System
TEST REQUIREMENT, CV

BASIS FOR RELIEF: Valve cannot be exercised during power operation since this would require isolating and venting a portion of the CRD system. This would cause hydraulic instability throughout the system. This situation is potentially unsafe until the system can be rebalanced and the rod strokes retimed. This cannot be done during power operation.

ALTERNATE TESTING: Valve will be verified to close during cold shutdown.

RELIEF REQUEST BASIS

NUMBER, V23

SYSTEM, Control Rod Drive Hydraulic

VALVE, V13-162A/B

CATEGORY, C

CLASS, 3

FUNCTION, Scram Discharge Volume Vent Check Valves

TEST REQUIREMENT, CV

BASIS FOR RELIEF, Valves cannot be exercised during power operation since this would require taking the CRD system out of service. Operability of these valves is demonstrated by decreasing scram discharge volume water level upon reset from SCRAM.

ALTERNATE TESTING, None

RELIEF REQUEST BASIS

NUMBER, V24
SYSTEM, Standby Liquid Control
VALVE, V11-16, V11-17
CATEGORY, A
CLASS, 1
FUNCTION, Primary Containment Isolation
TEST REQUIREMENT, LT
BASIS FOR RELIEF, Valves presently exempted, per Tech. Spec. Section 4.7.2 from
leak testing.
ALTERNATE TESTING, None

RELIEF REQUEST BASIS

NUMBER: V25
SYSTEM: Standby Liquid Control
VALVE: VII-16, VII-17
CATEGORY: C
CLASS: 1
FUNCTION: SLC Injection into Reactor
TEST REQUIREMENT: CV

BASIS FOR RELIEF: Exercising these valves during power operation would require injecting borated water into the reactor coolant system. This would create a reactivity excursion and potential for reactor trip. Injection of demineralized water would require removing the system from service to clean the borated solution from the piping and replacing the explosive actuated valves. This system is required for power operation.

ALTERNATE TESTING: Valve operability will be demonstrated each refuel outage by the system flow test directly into the reactor vessel.

RELIEF REQUEST BASIS

NUMBER: V26

SYSTEM: Residual Heat Removal

VALVE: V10-17, V10-18, V10-26A/B, V10-31A/B, V10-32, V10-33,
V10-34A/B, V10-38A/B, V10-39A/B

CATEGORY: A

CLASS: 1 or 2

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: LT

BASIS FOR RELIEF: Valves presently exempted, per Tech. Spec. Section 4.7.2 from
leak testing.

ALTERNATE TESTING: None

RELIEF REQUEST BASIS

NUMBER: V27

SYSTEM: Residual Heat Removal

VALVE: V10-17, V10-18

CATEGORY: A

CLASS: 1

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: MT

BASIS FOR RELIEF: Valves cannot be exercised during power operation since there is a 100 psig interlock that prevents opening these valves during power operation.

ALTERNATE TESTING: Valves will be exercised during cold shutdowns and refuel outages.

RELIEF REQUEST BASIS

NUMBER: V28

SYSTEM: Residual Heat Removal

VALVE: V10-46A/B

CATEGORY: C

CLASS: 1

FUNCTION: LPCI Injection Check

TEST REQUIREMENT: CV

BASIS FOR RELIEF: Valves cannot be exercised during power operation since the valves are located inside the primary containment. Exercising the valves by system flow is not possible during power operation since pump discharge is unable to overcome reactor coolant system pressure.

ALTERNATE TESTING: Valves will be manually full stroke exercised during cold shutdowns when the drywell is accessible and during refueling outages.

RELIEF REQUEST BASIS

NUMBER: V29

SYSTEM: Residual Heat Removal

VALVE: V10-89A/B

CATEGORY: B

CLASS: 3

FUNCTION: Flow Control

TEST REQUIREMENT: MT

BASIS FOR RELIEF: Valve is a modulating type valve. Stroke time is not an appropriate reference parameter.

ALTERNATE TESTING: Proper valve operation is verified through normal system operation during the pump tests.

RELIEF REQUEST BASIS

NUMBER: V30

SYSTEM: Reactor Core Isolation Cooling

VALVE: V13-15, V13-16

CATEGORY: A

CLASS: 1

FUNCTION: RCIC Steam Line Isolation

TEST REQUIREMENT: LT

BASIS FOR RELIEF: Primary containment isolation valves are covered by 10 CFR 50, Appendix J, Tech. Spec. Section 4.7.2

ALTERNATE TESTING: Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER: V31

SYSTEM: Reactor Core Isolation Cooling

VALVE: V13-22

CATEGORY: C

CLASS: 2

FUNCTION: Injection Check Valve

TEST REQUIREMENT: CV

BASIS FOR RELIEF: Valve cannot be exercised during power operation since flow through this valve must be injected into the reactor coolant system. This would thermally shock the reactor nozzles. The cold water injection would also cause a reactivity excursion. Manual valve operation is not possible during power operation since the valve is located in the steam tunnel which is inaccessible.

ALTERNATE TESTING: Valve will be manually fully stroke exercised during cold shutdowns.

RELIEF REQUEST BASIS

NUMBER: V32

SYSTEM: Reactor Core Isolation Cooling

VALVE: SL 13-55A-D

CATEGORY: C

CLASS: 2

FUNCTION: Excess flow check valves for instrument isolation

TEST REQUIREMENT: CV

BASIS FOR RELIEF: Valves can only be verified to shut by leak testing which is performed during the refueling outage hydrostatic test. Valves cannot be exercised shut during power operation since shutting these would isolate instrumentation required for power operation.

ALTERNATE TESTING: Valves will be functionally tested each refueling outage.

RELIEF REQUEST BASIS

NUMBER: V33

SYSTEM: Reactor Core Isolation Cooling

VALVE: V13-40

CATEGORY: C

CLASS: 2

FUNCTION: Torus suction check valve

TEST REQUIREMENT: VC

BASIS FOR RELIEF: Valve cannot be full stroke exercised during power operation since there is no full flow test loop available to recirculate the water back to the torus. There are no means to manually stroke the valve. Valve cannot be stroked via a system injection into the reactor since that would result in a reactivity excursion and potentially thermally shocking the reactor nozzles.

ALTERNATE TESTING: Valve will be verified to open freely each cold shutdown and refuel outages.

RELIEF REQUEST BASIS

NUMBER: V34
SYSTEM: Reactor Core Isolation Cooling
VALVE: Turb. Gov.
CATEGORY: B
CLASS: 2
FUNCTION: Modulating Valve
TEST REQUIREMENT: MT
BASIS FOR RELIEF: Valve is a modulating type valve. Stroke time is not an appropriate reference parameters.
ALTERNATE TESTING: Proper valve operation is verified through normal system operation during the pump tests.

RELIEF REQUEST BASIS

NUMBER: V35

SYSTEM: Primary Containment and Atmosphere Control

VALVE: V16-19-5 A to J

CATEGORY: A

CLASS: 2

FUNCTION: Torus-drywell vacuum breakers

TEST REQUIREMENT: LT

BASIS FOR RELIEF: Valves cannot be leak tested individually

ALTERNATE TESTING: Leak test will be done which will demonstrate that with an initial differential pressure of not less than 1.0 psi, the differential pressure decay rate shall not exceed the equivalent of the leakage rate through a 1-inch orifice.

RELIEF REQUEST BASIS

NUMBER: V36

SYSTEM: Primary Containment and Atmosphere Control

VALVE: SB16-19-6, SB16-19-6A/B, SB16-19-7, SB16-19-7A/B, SB16-19-8, SB16-19-9, SB16-19-10, SB16-19-11A/B, V16-19-12A/B, V16-20-20, V16-20-22A/B, V16-19-23

CATEGORY: A

CLASS: 2

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: LT

BASIS FOR RELIEF: Primary containment isolation valves are covered by 10 CFR 50, Appendix J, via Tech. Spec. Section 4.7.2.

ALTERNATE TESTING: Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER: V37

SYSTEM: Primary Containment and Atmosphere Control

VALVE: SB16-19-6, SB16-19-8, V16-19-23

CATEGORY: A

CLASS: 2

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: Q

BASIS FOR RELIEF: Valves cannot be exercised during power operation since this would cause the loss of the differential pressure between the drywell and the suppression chamber. This DP is a required condition of plant operation.

ALTERNATE TESTING: Valves will be full stroke exercised during cold shutdowns and refueling outages.

RELIEF REQUEST BASIS

NUMBER: V38

SYSTEM: Primary Containment and Atmosphere Control

VALVE: V16-19-12A/B

CATEGORY: A, C

CLASS: 2

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: CV

BASIS FOR RELIEF: Vacuum breaker cannot be exercised during power operation since there is no test loop available. There are no means to manually stroke the vacuum breaker.

ALTERNATE TESTING: Each refueling outage, each vacuum breaker will be tested to determine that the force required to open the vacuum breaker does not exceed the force specified by Tech. Spec. Section 3.7.A.5.a and each vacuum breaker will be inspected and verified to meet the design requirements.

RELIEF REQUEST BASIS

NUMBER: V39
SYSTEM: Radwaste
VALVE: V20-82, V20-83, V20-94, V20-95
CATEGORY: A
CLASS: 2
FUNCTION: Primary Containment Isolation
TEST REQUIREMENT: LT
BASIS FOR RELIEF: Primary containment isolation valves are covered by 10 CFR 50, Appendix J, via Tech. Spec. Section 4.7.2
ALTERNATE TESTING: Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER: V40

SYSTEM: Nuclear Boiler Vessel Instrumentation

VALVE: 2-3-11, 2-3-13A/B, 2-3-15A/B, 2-3-17A/B, 2-3-19A/B,
2-3-21A-D, 2-3-23A-D, 2-3-25, 2-3-27, 2-3-29A/B, 2-3-31A-H,
2-3-31I-Q, 2-3-33, 2-3-35

CATEGORY: C

CLASS: 2

FUNCTION: Excess flow check valves for instrument isolation

TEST REQUIREMENT: CV

BASIS FOR RELIEF: Valves can only be verified to shut by leak testing which is performed during the refueling outage hydrostatic test. Valves cannot be exercised shut during power operation since shutting these would isolate instrumentation required for power operation.

ALTERNATE TESTING: Valves will be functionally tested each refueling outage.

RELIEF REQUEST BASIS

NUMBER: V41

SYSTEM: Containment Atmosphere Dilution

VALVE: FSO-109-75A1,2, FSO-109-75B1,2, FSO-109-75C1,2,
FSO-109-75D1,2, VG-75A-3,4, VG-24, VG-25, VG-33, VG-34

CATEGORY: A

CLASS: 2

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: LT

BASIS FOR RELIEF: Valves presently exempted from leak testing per Tech. Spec.
Section 4.7.2

ALTERNATE TESTING: None

RELIEF REQUEST BASIS

NUMBER: V42
SYSTEM: Containment Atmosphere Dilution
VALVE: FSO-109-76A/B, VG-23, VG-26
CATEGORY: A
CLASS: 2
FUNCTION: Primary Containment Isolation
TEST REQUIREMENT: LT
BASIS FOR RELIEF: Primary containment isolation valves are covered by 10 CFR 50, Appendix J, via Tech. Spec. Section 4.7.2
ALTERNATE TESTING: Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER: V43

SYSTEM: Containment Atmosphere Dilution

VALVE: VG-9A/B, VG-22A/B, NG-11A/B, NG-12A/B, NG-13A/B

CATEGORY: A

CLASS: 2

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: LT

BASIS FOR RELIEF: Primary containment isolation valves are covered by 10 CFR 50, Appendix J, via Tech. Spec. Section 4.7.2.

ALTERNATE TESTING: Leak testing in accordance with Appendix J.

RELIEF REQUEST BASIS

NUMBER: V44
SYSTEM: TIP
VALVE: Ball A-C, Solenoid
CATEGORY: A
CLASS: 2
FUNCTION: Primary Containment Isolation
TEST REQUIREMENT: LT

BASIS FOR RELIEF: Valves are normally closed and passive during an accident.

ALTERNATE TESTING: Valves will be evaluated for leak tightness during the performance of each type "A" leak test, and by Appendix J leak testing.

RELIEF REQUEST BASIS

NUMBER: V45

SYSTEM: TIP

VALVE: Solenoid

CATEGORY: A

CLASS: 2

FUNCTION: Primary Containment Isolation

TEST REQUIREMENT: MT

BASIS FOR RELIEF: The solenoid valve permits the guide tube, indexers and drive mechanisms to be purged with nitrogen in order to prevent rusting of the drive cables and deterioration of the guide tube lubricant. The stroke time on the solenoid valve is so small that it cannot be measured accurately and therefore cannot be evaluated for trends.

ALTERNATE TESTING: None

RELIEF REQUEST BASIS

NUMBER: GV-1

CODE PARAGRAPHS: IWV-3417 concerning an increase in test frequency

BASIS FOR RELIEF: As defined in the Inservice Test Program, there is sufficient justification to test certain valves on either a cold shutdown or a refueling outage basis. The test frequency of these valves cannot be increased without jeopardizing plant operations.

ALTERNATIVE: If any of the valves that are tested quarterly fail, the test frequency will be increased in accordance with the provisions of the referenced paragraph. If any of the valves that are tested on a cold shutdown basis fail, the valves will be tested each cold shutdown, not to exceed once every month until corrective action is taken.

RELIEF REQUEST BASIS

NUMBER: GV-2

CODE PARAGRAPHS: IWV-3417(b) and IWV-3523 concerning corrective action prior to startup.

BASIS FOR RELIEF: The Vermont Yankee Technical Specifications describe various limiting conditions for operation. These are more appropriately used as a basis for plant startup than are the above-referenced requirements.

ALTERNATIVE: The Technical Specifications limiting conditions for operation will be used as the basis to determine if the plant can startup.

RELIEF REQUEST BASIS

NUMBER: GV-3

CODE PARAGRAPHS: IWV-3410 and IWV-3520 concerning the definition of "cold shutdown"

BASIS FOR RELIEF: Since operations personnel are faced with many activities associated with and maintaining the plant in cold shutdown conditions, the operators require some amount of flexibility in scheduling certain surveillance testing. Surveillance testing alone should not be a cause for the plant to remain in shutdown conditions.

ALTERNATIVE: "Cold Shutdown Testing" will be defined as commencing the required testing not later than 48 hours after cold shutdown is achieved. Testing must continue until complete or the plant is ready to return to power. Completion of all valve testing is not a prerequisite to return to power. Any testing not completed at one cold shutdown should be performed during subsequent cold shutdowns to meet the code specified testing frequency.

RELIEF REQUEST BASIS

NUMBER: GV-4

CODE PARAGRAPHS: IWB-3417(a) concerning an increase in test frequency.

BASIS FOR RELIEF: Certain power operated valves have very short stroke times. The ability to accurately measure these short stroke times with a hand-held stopwatch is difficult and not repeatable. An increase in observed stroke time of 50% or more does not necessarily indicate valve degradation.

ALTERNATIVE: All power operated valves with a reference stroke time of less than or equal to 5 seconds, shall have its test frequency increased to once each month until corrective action is taken, if its stroke time increases to 8 seconds or more. This 8 second maximum stroke time is not applicable if the maximum operating time for the valve is less than 8 seconds.

Record of Changes

[illegible]