ATTACHMENT A

ORGANIZATION OF BYRON 1 FIRST 10-YEAR INSERVICE INSPECTION AND TESTING PROGRAM

SECTION 1.0 - Introduction

SECTION 2.0 - Inservice Inspection Program Plan for Nondestructive Examination

SECTION 3.0 - Preservice/Inspection Testing Program Plan for Pumps

SECTION 4.0 - Preservice/Inservice Testing Program Plan for Valves

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Revision 3

SECTION 3.0

PRESERVICE/INSERVICE TESTING

PROGRAM PLAN FOR PUMPS

Prepared by: David F. Flowers

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3.1

PROGRAM DESCRIPTION

Program Description

The Pump Preservice/Inservice Testing Program for Byron Nuclear Power Station Unit 1, is implemented in accordance with the requirements of Subsection IWP of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition, through the Winter of 1981 Addenda. Where these requirements are determined to be impractical, specific relief is requested. Additional pump relief requests may be necessary and these will be identified during subsequent inservice tests. The pumps subject to ISI testing are those pumps which are identified in the Byron FSAR as Active, and have an emergency power source. Active pumps are defined as those which are called on to perform a safety function as well as to accomplish and maintain a safe reactor shutdown. The only exceptions are the diesel driven auxiliary feedwater pump, (1AFO1PB), and essential service water makeup pumps, (OSXO2PA, OSXO2PB), which are included in the program, although they are not supplied by an emergency power source.

Pump reference values shall be determined from the results of a preservice test, which may be run during preoperational testing, or from the results of the first inservice test run during power operation. Reference values shall be at points of operation readily duplicated during subsequent inservice testing. Additional reference values may be necessary and these will be taken in accordance with IWP-3111 and 3112.

In the event a pump must be declared inoperable as a result of inservice testing, limitations on plant operation will be as stated in the Technical Specifications.

Section XI of the ASME Boiler and Pressure Vessel Code shall not be construed to supersede the requirements of any Technical Specification.

3.2

PROGRAM TABLES

TABLE DESCRIPTION

The following information is included in the summary tables:

The first four columns include the unique Byron Station Equipment Piece Number, the Pump Name, the Code Class, and the P & ID on which the pumps are located.

Speed: Speed will be measured by a tachometer for variable speed drives.

<u>Inlet pressure</u>: Inlet pressure will be measured via permanently installed gauges or other means, provided the equipment accuracy meets the requirements of IWP-4150. This is to be measured both before pump startup and during the test.

<u>Differential pressure</u>: Differential pressures will be measured using calibrated differential pressure gauges or by recording the difference between calibrated inlet and outlet pressure gauges.

Flow rate: Flow rates will be measured using permanently installed instrumentation or other means, provided that equipment accuracy meets the requirements of IWP-4150.

<u>Vibration</u>: Vibration measurement shall be made using portable or hand held instruments at locations as marked on the pumps.

Bearing Temperature: Bearing temperature will be measured by permanently installed devices where such devices are present. Portable measurement devices will be used where temperature wells are provided.

Per IWP-3300, bearing temperatures are required only once per year. Byron Station takes the data for bearing temperatures once per year during summer testing.

Test Interval: An inservice test shall be run on each pump nominally every 3 months during normal plant operation, in accordance with IWP-3400.

<u>Lubrication Level</u>: Lubrication level will be observed through sight glasses for the pumps listed in the program.

Revision: The current revision of the program is listed.

Table Page: The table pages are numbered sequentially and show the total number of pages.

3.3

NOTES

"Deleted"

NOTE 2

The Diesel Oil Transfer, Residual Heat Removal and Containment Spray pumps cannot be measured for lubrication level. These pumps are lubricated by the fluid pumped and hence have no indication for lubrication level.

NOTE 3

These pumps are in a system which is in continuous operation. The idle inlet pressure, therefore cannot be obtained. Proper pump operation is assured by continuous pump operation as well as quarterly monitoring of the remaining ISI pump parameters.

NOTE 4

The Diesel Oil Transfer pumps are positive displacement pumps. The pump differential pressure is not a factor affecting pump performance but rather dependent only on the inlet pressure to the pump. As the pump discharge pressure is constant, and the inlet pressure varies with tank level, the differential pressure is not a valid operational parameter. For this reason, pump discharge pressure will be used to evaluate pump performance in lieu of using pump differential pressure.

3.4 RELIEF REQUESTS

- PUMF NUMBER: All pumps in the program plan.
- NUMBER OF ITEMS: 23 pumps.
- 3. ASME CODE CLASS: 2 & 3
- 4. ASME CODE, SECTION XI REQUIREMENTS: In reference to Table IWP-3100-2,

 "Allowable Ranges of Test Quantities", pump vibration is to be

 measured in and compared to values given in mils displacement.
- 5. BASIS FOR RELIEF: The measurement of pump vibration is required so that developing problems can be detected and repairs initiated prior to a pump becoming inoperable. Measurement of vibration only in displacement quantities does not take into account frequency which is also an important factor in determining the severity of the vibration.
- ment of the vibration amplitude in mils (displacement).

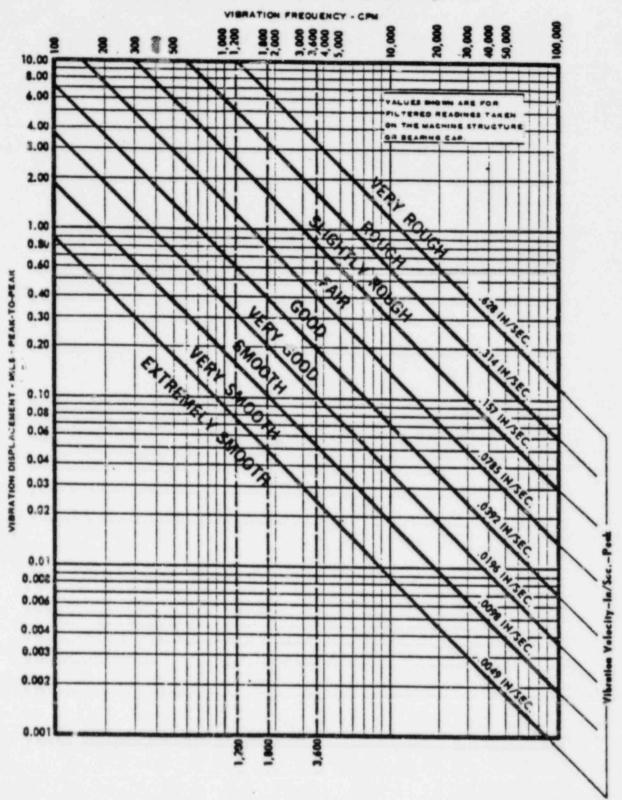
 Byron Station proposes an alternate program of measuring vibration velocity (inches per second) which is more comprehensive than that required by Section XI. This technique is an industry-accepted method which is much more meaningful and sensitive to small changes that are indicative of developing mechanical problems. These velocity measurements detect not only high amplitude vibration, that indicate a major mechanical problem, but also the equally harmful low amplitude, high frequency vibration due to misalignment, unbalance, or bearing wear, that usually go undetected by simple displacements measurements.

The "General Machinery Vibration Severity Chart" published by IRD Mechanalysis, Inc., (see attached) will he used in place of Table IWP-3100-2 for the Allowable vibration ranges. The "Alert Range" will be .314 in/sec \leq V \langle .628 in/sec. The required action range will be V \geq .628 in/sec. Evaluation of data, to assign equipment to the alert or action ranges, will be done within 96 hours (per IWP-3220 of Section XI). This will be done using industry accepted vibration analysis equipment, such as a full spectrum analyzer.

- JUSTIFICATION: Measurements of vibration in mils displacement are not sensitive to small changes that are indicative of developing mechanical problems. Therefore, the proposed alternate of measuring vibration amplitude in inches/second provides added assurance of the continued operability of the pumps.
- 8. APPLICABLE TIME PERIOD: This relief is requested once per quarter during the first inspection interval.

GENERAL MACHINERY VIBRATION SEVERITY CHART

For use as a GUIDE in judging vibration as a warning of impending trouble.



RELIEF REQUEST NO. PR-2

- 1. PUMP NUMBER: OCCO1P, 1CCO1PA, 1CCO1PB, 1CSO1PA, 1CSO1PB, 1RHO1PA, 1RHO1PB, OSXO2PA, OSXO2PB, 1DOO1PA, 1DOO1PB, 1DOO1PC, 1DOO1PD, OWOO1PA, OWOO1PB
- 2. NUMBER OF ITEMS: 15 pumps
- 3. ASME CODE CLASS: 2 & 3
- 4. ASME CODE, SECTION XI REQUIREMENTS: Per IWP-3100, Inservice Test

 Procedure pump bearing temperatures are required to be

 measured to detect any change in the mechanical characteristics of a bearing. IWP-3500(b) requires three

 successive readings taken at ten minute intervals that do

 not vary more than 3%.

5. BASIS FOR RELIEF:

- a. These pumps' bearings are not provided with permanent temperature detectors or thermal wells. Therefore, gathering data on bearing temperature is impractical.
- b. The only temperature measurements possible are from the bearing housing. To detect high bearing temperature at the bearing housing would require that the bearings in question be seriously degraded.
- Measurement of housing temperature on many of these pumps does not provide information on bearing condition or degradation. For example, the bearings on the Essential Service Water pumps (OSXO2PA, OSXO2PB) and Diesel Oil Transfer Pumps (1DOO1PA, 1DOO1PB, 1DOO1PC, 1DOO1PD) are cooled by the fluid pumped.

Therefore, any heat generated by degraded boarings is carried away by the cooling fluid and would not be directly measured at the bearing housing.

- 6. ALTERNATE TESTING: No direct alternate test is proposed for bearing temperatures. However, measurement of hydraulic parameters and vibration readings do provide a more positive method of monitoring pump condition and bearing degradation.
- 7. JUSTIFICATION: By measuring pump hydraulic parameters and vibration velocity, (as described in PR-1), pump operability and the trending of mechanical degradation is assured. Also, since these parameters (i.e., Hydraulic parameters and vibration) are measured quarterly, the pump mechanical condition will be more accurately determined than would be possible by measuring bearing temperature on a yearly basis.
- 8. APPLICABLE TIME PERIOD: This relief is requested once per year, during the first inspection interval.

- 1. PUMP NUMBER: OSXO2PA, OSXO2PB
- 2. NUMBER OF ITEMS: 2 pumps
- 3. ASME CODE CLASS: 3
- 4. ASME CODE, SECTION XI REQUIREMENT: Per IWP-3100, differential pressure shall be measured on all pumps that are tested.
- 5. BASIS FOR RELIEF: It is impractical to measure the inlet pressures of these pumps. Instrumentation for directly measuring the inlet pressure for these pumps does not exist. These pumps are vertical well type pumps which take a suction from the river screen house forebay.
- 6. ALTERNATE TESTING: These pumps will be evaluated using pump discharge pressure. Additionally, delta level across the traveling screens will be measured to assure adequate suction level. There is differential level instrumentation provided, which indicates the difference in level between the river height and the reservoir height in inches. This delta level will be recorded in lieu of inlet pressure for the pumps.
- 7. JUSTIFICATION: The level of plant safety is not affected by not taking suction pressure data on vertical well type pumps.

 These pumps cannot suffer from cavitation as long as their impellers are submersed in the pumped fluid reservoir.

 Recording the delta level across the traveling screens ensures that the pumps will be submersed in the river since no other possible obstructions between the river and pump bays exist.

8. APPLICABLE TIME PERIOD: This relief is requested once per quarter during the first inspection interval.

Revision 3

RELIEF REQUEST NO. PR-4

"Deleted"

RELIEF REQUEST NO. PR-5

- 1. PUMP NUMBER: OCCO1P, 1CCO1PAGB, 1CVO1PAGB, OSXO2PAGB, 1SXO1PAGB, 1DOO1PA-D
- 2. NUMBER OF ITEMS: 13 pumps
- 3. ASME CODE CLASS: 2 & 3
- 4. ASME CODE, SECTION XI REQUIREMENTS: Per IWP-4120, the full scale range of each instrument shall be three times the reference value or less.
- BASIS FOR RELIEF: The full scale range of ultrasonic flowmeters, used to collect Section XI flow data, exceed three times the reference value.
- 6. ALTERNATE TESTING: Ultrasonic flowmeters, with digital readouts and totalizer features will be utilized to obtain Section XI flow data.
- 7. JUSTIFICATION: Ultrasonic flowmeters provide an accurate means of measuring flowrate. They utilize a digital display whose accuracy is independent of the full scale range. In addition, use of the totalizer feature, and integrating the flow for five minutes provides an accuracy of less than ± 1% of the reading. This is well within the requirements of IWP-4110, which refers to an instrument accuracy of ± 2% of full scale.
- 8. <u>APPLICABLE TIME PERIOD</u>: This relief is requested once per quarter, during the first inspection interval.

CLASS 1, 2, & 3 PUMPS
BYRON NUCLEAR POWER STATION REVISION TABLE PAGE

		C						AMETERS	KEV	ISION		TABLE PAGE 1 of 3
PUMP NUMBER	PUMP NAME	A S S	P & ID	SPEED	IPLET PRES	ET DIFF	FLOW		BEARING TEMP	TEST INTERVAL	LUBRI- CATION	
1AF01PA	Auxiliary feedwater pump	2	M-37	No	Yes		Yes	PR-1	Yes	Quarterly	Yes	REMARKS
1AF01PB	Auxiliary feedwater pump (Diesel)	2	M-37	Yes	Yes	Yes	Yes	PR-1	Yes	Quarterly	Yes	
OCCO1P	Component cooling pump	3	M-66-3	No	Yes	Yes	PR-5	PR-1	PR-2	Quarterly	Yes	Note 3
1CCO1PA	Component cooling pump	3	M-66-3	No	Yes	Yes	PR-5	PR-1	PR-2	Quarterly	Yes	Note 3
1CCO1PB	Component cooling pump	3	M-66-3	No	Yes	Yes	PR-5	PR-1	PR-2	Quarterly	Yes	Note 3
ICSO1PA	Containment spray	2	M-46	No	Yes	Yes	Yes	PR-1	PR-2	Quarterly	No	Note 2
ICSO1PB	Containment spray	2	M-46	No	Yes	Yes	Yes	PR-1	PR-2	Quarterly	No	Note 2
	Centrifugal charging pump	2	M-64-3	No	Yes	Yes	PR-5	PR-1	Yes	Quarterly	Yes	Note 3
	Centrifugal charging	2	M-64-3	No	Yes	Yes	PR-5	PR-1	Yes	Quarterly	Yes	Note 3

CLASS	1.	2.	3	3	PIMPS	
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		C		BYR	ON NUC	LEAR	& 3 PU	TATION	REV	ISION 3		TABLE PAGE 2 of 3
PUMP NUMBER PUMP NAME		A S S			INL	ET DI	FF FLOW		BEARIN	G TEST	LUBRI-	2013
1RHO1PA	Residual heat	2		11.	ED PRE			VIBRATION	TEMP	INTERVAL	LEVEL	REMARKS
	removal pump			No	Yes	Yes	Yes	PR-1	PR-2	Quarterly	No	Note 2
1RHO1PB	Residual heat removal pump	2	M-62	No	Yes	/es	Yes	PR-1	PR-2	Quarterly	No	Note 2
1SIO1PA	Safety injection pump	2	M-61-1	No	Yes	Yes	Yes	PR-1	Yes	Quarterly	Yes	
ISIO1PB	Safety injection pump	2	M-61-1	No	Yes	Yes	Yes	PR-1	Yes	Quarterly	Yes	
1SXO1PA	Essential service water pump	3	M-42-1	No	Yes	Yes	PR-5	PR-1	Yes	Quarterly	Yes	Note 3
1SX01PB	Essential service water pump	3	M-42-1	No	Yes	Yes	PR-5	PR-1		Quarterly	Yes	Note 3
OSXO2PA	Essential service water makeup pump (Diesel)	3	M-42-6	Yes	PR-3	PR-3	PR-5	PR-1	PR-2	Quarterly	Yes	note 3
OSXO2PB	Essential service water makeup pump (Diesel)	3	M-42-6	Yes	PR-3	PR-3	PR-5	PR-1	PR-2 (Quarterly	Yes ,	
10001PA	Diesel oil transfer pump	3	M-50-1	No	Yes	No	PR-5	PR-1	PR-2 Q	ouar erly	No	Note 2, 4
10001PB	Diesel oil transfer pump	3	M-50-1	No	Yes	No	PR-5	PR-1			No	Note 2, 4

		C		BYRON	NUCLE	2, & AR POL	3 PUM NER ST	ATION	REVI	SION 3		TABLE PAGE 3 of 3
		L		-				AMETERS				
PUMP NUMBER	PUMP NAME	S S	9 & 10	SPEED	INLET	DIFF	FLOW		BEARING		LUBRI- CATION LEVEL	REMARKS
10001PC	Diesel oil transfer pump	3	M-50-1	No	Yes	No	PR-5	PR-1	PR-2	Quarterly	No	Note 2
10001PD	Diesel oil transfer	3	M-50-1	No	Yes	No	PR-5	PR-1	PR-2	Quarterly	No	Note 2
OWOO1PA	Control room chilled water	3	M-118-1	No	Yes	Yes	Yes	PR-1	PR-2	Quarterly	Yes	

Yes Yes

PR-1 PR-2 Quarterly Yes

M-118-1

No Yes

Control room

chilled water

OWOO1PB

SECTION 4.0

PRESERVICE/INSERVICE TESTING

PROGRAM PLAN FOR VALVES

Prepared by: David F. Flowers

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		VR-5 Accumulator discharge check valves	4-19
			4-20
		IM 7 P	4-21
		VR-8 Component Cooling RC Pump thermal barrier	1177
		valves	4-22
		VR-9 RC pump seal injection CV check valves	4-23
		VR-10 Instrument Air Containment Isolation Valves	4-24
		VR-11 Position Indication Test	4-25

4.1

PROGRAM DESCRIPTION

Program Description

The Preservice/Inservice Testing Program for Class 1, 2, & 3 valves meets the requirements of Subsection IWV of the ASME Section XI Code, 1980 Edition, through the Winter of 1981 Addenda. Where code requirements are determined to be impractical, specific requests for relief are written, referenced, and included with the tables. Additional valve relief requests may be necessary and these will be identified during subsequent inservice tests. The tables list all code Class 1, 2 & 3 valves which have been assigned a specific code category as directed by Subsection IWV of Section VI. The tables are organized by system and further identified by code class and code category, using P & ID references.

After installation and prior to service, all valves identified in this program will be tested as required by Subsection IWV-3100 of Section XI of the ASME Code. These tests will be conducted under conditions similar to those to be experienced during subsequent inservice tests. When a valve or its control system has been replaced or undergone maintenance that could affect its performance, it will be retested, prior to its return to service, to demonstrate that all performance parameters are within

In the event a valve must be declared inoperable as a result of inservice testing, limitations on plant operations will be as stated in the Technical Specifications.

Section XI of the ASME Boiler and Pressure Vessel Code shall not be construed to supersede the requirements of the Technical Specifications.

4.2

PROGRAM TABLES

Table Description

The following information is included in the summary tables:

A. SYSTEM

The system in which a valve is located is denoted by the abbreviated system identification.

B. P&ID

The P & ID column references the specific P & ID number and sheet number, which the valves are located on.

C. REVISION

The revision corresponds to the current revision of the program.

D. PAGE

The pages are numbered sequentially and show the total number of tables.

E. VALVE NUMBER

The valve number references the unique Byron Station equipment piece number (EPN). This specific valve number identifies the unit and system.

F. COORD

The coordinates reference a specific location on a particular P & ID, via an X-Y coordinate system.

G. CLASS

The class refers to the ASME class assigned to the specific valve.

H. VALVE CATEGORY

The valve category identifies the valve category defined in subarticle IWV-2200 of ASME Section XI.

I. VALVE SIZE

The valve size lists the nominal pipe size of each valve in inches.

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7. Part-Stroke Test (Xt)

If only limited operation is practical during plant operation, the valves shall be part-stroke (Xt) exercised during plant operation and full-stroke exercised during cold shutdowns, in accordance with IWV-3412 or IWV-3522.

O. MAX STROKE TIME

For power operated valves requiring a full stroke test (St), in order to meet the requirements of IWV-3413, the maximum allowable stroke time is specified in seconds. N/A indicates that time is not a factor affecting valve operability.

P. TEST MODE

Denotes the frequency and plant condition necessary to perform a given test. The following abbreviations are used:

Normal Operation (OP)

Tests designated "OP" will be performed once every 3 months, except in those modes in which the valve is not required to be operable.

Cold Shutdown (CS)

Valves that cannot be operated during plant operation shall be full stroke exercised during cold shutdowns. Completion of cold shutdown valve testing is not a prerequisite to plant startup. Valve testings which are not completed during a cold shutdown shall be completed during subsequent cold shutdowns to meet the code specified testing frequency. In case of frequent cold shutdowns, valve testing need not be performed more often than once during any three-month period.

Reactor Refueling (RR)

Tests with this designation will be conducted during reactor refueling outages only.

Q. RELIEF REQUEST

Relief requests reference a specific request for relief from code requirements. All relief requests are included immediately following the presentation tables.

4.3

NOTES

NOTE 1

Closure of the Main Steam isolation valves. IMS001A-D, during unit operation would result in reactor trip and safety injection actuation. To avoid this transient, these valves will be partially stroked every three months. Full stroke testing will be done during Mode 4 following, or preceding cold shutdown, per IWV-3412.

NOTE 2

The testing of any emergency boration flowpath valves during unit operation is not practical. Stroke testing the Boric Acid injection isolation valve, 1CV8104, and check valve, 1CV8442, the RWST to CV pump suction check valve, 1CV8546, the RH to CV pump suction isolation valve, 1CV8804A, or the RWST to CV pump suction isolation valves 1CV112D,E, could result in boration of the RCS, resulting in a cooldown transient. Aligning the system in this configuration, even for a short duration, is therefore, unacceptable. These valves will be strole tested during cold shutdown in accordance with IWV-3412.

NOTE 3

These valves are the Main Feedwater isolation valves, 1FW009A-D, and cannot be fully stroked during operation as feedwater would be terminated causing a reactor trip. They will, however, be partially stroked tested during operation as well as full stroke tested during cold shutdown per the requirements of IWV-3412.

NOTE 4

Closure of these letdown and makeup valves. lCV112B. C. lCV8149A-C. lCV8105. lCV8106. lCV8152 and lCV8160 during normal unit operation would cause a loss of charging flow which would result in a reactor coolant inventory transient, and possibly, a subsequent reactor trip. These valves will be full stroke exercised during cold shutdown as required by IWV-3412.

NOTE 5

The 1RH8701A.B and 1RH8702A.B are the isolation boundary between the Residual Heat Removal Pumps and the Reactor Coolant System. Opening one of these valves during unit operation will leave only one valve isolating RHR from the high RCS pressure. This would place the plant in an undesirable condition. Therefore, the valves will be a full stroke tested during cold shutdown, per IWV-3522.

NOTE 6

The following valves have been identified as intersystem LOCA valves. They form a pressure boundary between the RCS and other essential components in order to protect these components from damage. These valves will be leak tested in accordance with the Byron Technical Specifications.

Byron Unit 1 Intersystem LOCA Valves

1RH8701A.B	1SI8702A.B
1RH8705A.B	1518815
1SI8818A-D	1SI8905A-D
1SI8819A-D	1SI8948A-D
1SI8841A.B	1SI8949A-D
1SI8900A-D	1SI8956A-D

NOTE 7

The reactor pressure vessel vent valves, lRC014A-D, cannot be stroked during unit operation as they provide a pressure boundary between the Reactor Coolant system and containment atmosphere. Failure of one of these valves in the open position would result in leaving only one valve as the high pressure boundary. These valves will be stroked when the RCS pressure is at a minimum during cold shutdown, per IWV-3412.

NOTE 8

The Residual Heat Removal Pump discharge check valves, IRH8739A.B, and the Centrifugal Charging Pump discharge check valves, ICV848IA.B. cannot be full stroke exercised during unit operation due to the high RCS pressure. These check valves will be partial stroke tested, however, on a quarterly basis and full stroke exercising during cold shutdown. This is in accordance with IWV-3522.

NOTE 9

Due to the RCS pressure, the check valves listed below cannot be full stroke exercised during unit operation:

ISI8818A-D
RHR Cold Leg Injection
RHR/Accumulator/SI Cold Leg Injection
RHR/Accumulator/SI Cold Leg Injection
RHR Hot Leg Injection
RHR/SI Hot Leg Injection
RHR/SI Hot Leg Injection
RHR/SI To RHR Pump Suction
RSI8815
CV Cold Leg Injection
RSI8800A-D
CV Cold Leg Injection

These valves will be full stroke exercised during cold shutdown, in accordance with IWV-3522.

NOTE 10

The IFW039A-D valves cannot be stroke tested during unit operation as closure of these valves would result in termination of the waterhammer prevention feedwater flow. This would result in undesirable affects on the Steam Generators. These valves will be full stroke tested during cold shutdown per IWV-3412.

NOTE 11

The Primary Containment Purge Supply and Exhaust Valves, 1VQ001A,B, and 1VQ002A.B. cannot be stroke timed during unit operation. These 48 inch valves are the only isolation points between the containment atmosphere and the environment. Stroking these valves at any time other then mode 5 or 6 would be a violation of the Byron Technical Specifications. These valves will be full stroke tested during cold shutdown in accordance with IWV-3412.

The Auxiliary Feedwater check valves, 1AF001A.B. 1AF003A.B. 1AF014A-H and 1AF029A.B cannot be full stroke tested during unit operation, as this would induce potentially damaging thermal stresses in the upper feedwater nozzle piping. The 1AF001A.B and 1AF003A.B valves will be partially stroke tested during operation, and all valves full stroke tested during cold shutdown. This will be performed per Tech. Spec. 4.7.1.2.2 and is in accordance with IWV-3522.

Rev. 4

NOTE 13

The High Head Injection Isolation Valves, ISI8801A.B. cannot be stroke tested during unit operation. These valves isolate the CV system from the RCS. Opening them during operation would enable charging flow to pass directly into the RCS. bypassing the regenerative heat exchanger. The temperature difference of the charging flow and the RCS could result in damaging thermal stresses to the cold leg nozzles as well as causing a reactivity change which would, in turn, cause a plant transient. These valves will be full stroke tested during cold shutdown in accordance with IWV-3412.

NOTE 14

The safety injection system SVAG (Spurious Valve Actuation Group) valves cannot be stroke tested during unit operation. These valves are required by the Technical Specifications to be de-energized in their proper positions during unit operation. Stroking them would be a violation of the Technical Specifications as well as defeating the de-energized SVAG valve principle. These valves will be stroked tested during cold shutdown when they are not required to be de-energized. This is in accordance with IWV-3412.

4.4

RELIEF REQUESTS

1. Valve Number:

All primary containment isolation valves in this program are listed as Category A:

	VALVE #		VALVE #		VALVE #
1)	100685	45)	1PS9354A	89)	1VQ002A
2)	1CC9413A	46)	1PS9354B	90)	1VQ602B
3)	1009414	47)	1PS9355A	91)	1VQ002B
4)	1CC9416	48)	1PS9355B	92)	1VQ004A
5)	1009438	49)	1PS9357A	93)	1VQ004B
6)	1CC9486	50)	1PS9357B	94)	1VQ005A
7)	1009518	51)	1PS9356A	95)	1VQ005B
8)	1CC9534	52)	1PS9356B	96)	1VQ005C
9)	1CS007A	53)	1RE9159A	97)	1VQ016
10)	1CS007B	54)	1RE9159B	98)	1VQ017
11)	1CS008A	55)	1RE9160A	99)	100018
12)	1CS008B	56)	1RE9160B	100)	1VQ019
13)	1CV8100	57)	1RE9157	101)	1WM190
14)	1CV8112	58)	1RE9170	102)	1WM191
15)	1CV8113	59)	1RE1003	103)	1W0006A
16)	1CV8160	60)	1RF026	104)	1₩0006B
17)	1CV8152	61)	1RF027	105)	1W0007A
18)	1FC009	62)	1RY8026	106)	1W0007B
19)	1FC010	63)	1RY8025	107)	1W0020A
20)	1FC011	64)	1RY8028	108)	1W0020B
21)	1FC012	65)	1RY8046	109)	1W0056A
22)	11A066	66)	1RY8047	110)	1W0056B
23)	11A065	67)	1RY8033	111)	1PR002E
24)	11A091	68)	1SA033	112)	1PR002G
25)	10G057A	69)	1SA032	113)	1PR033A
26)	10G079	70)	1SD002A	114)	1PR033B
27)	10G080	71)	1SD002B	115)	1PR002F
28)	10G081	72)	1SD002C	116)	1PR002H
29)	10G082	73)	1SD002D	117)	1PR033C
30)	10G083	74)	1SD002E	118)	1PR033D
31)	10G084	75)	1SD002F		
32)	10G085	76)	1SD002G		
33)	1PR001A	77)	1SD002H		
34)	1PR001B	78)	1SD005A		
35)	1PR066	79)	1SD005B		
36)	1PR032	80)	1SD005C		
37)	1PS228A	81)	1SD005D		
38)	1PS228B	82)	1818888		
39)	1PS229A	83)	1518880		
40)	1PS229B	84)	1SI8871		
41)	1PS230A	85)	1318964		
12)	1PS230B	86)	1518968		
13)	1PS231A	87)	1VQ001A		
14)	1PS231B	88)	1VQ001B		

- 2. Number of Items: 118.
- ASME Code Category: A.
- ASME Code, Section XI Requirements:

Seat Leakage Measurement per IWV-3420.

5. Basis for Relief:

Primary containment isolation valves will be seat leak tested in accordance with 10 CFR 50. Appendix J. For these valves, Section XI testing requirements are essentially equivalent to those of Appendix J.

Alternate Testing:

Primary containment isolation valves will be seat leak tested in accordance with the Appendix J requirements of 10 CFR 50.

Justification:

No additional information concerning valve leakage would be gained by performing separate tests to both Section XI and Appendix J. Therefore, overall plant safety is not affected.

Applicable Time Period:

- 1. Valve Number: 1CS020A 1CS020B
- 2. Number of Items: 2
- 3. ASME Code Category: C
- ASME Code, Section XI Requirements:

Exercise for operability (Ct) of check valves every 3 months. per IWV 3521.

5. Basis for Relief:

The check valves in the spray additive system cannot be stroked without introducing NaOH into the CS system.

Alternate Testing:

These valves will be dismantled each refueling outage in order to demonstrate operability. In addition to this, they will be full flow tested once every five years. The full flow test will be performed in lieu of dismantling the valves.

Justification:

This alternative will adequately maintain the system in a state of operational readiness, while not sacrificing the safety of the plant, by testing the valves as often as is safely possible.

Applicable Time Period:

1. Valve Number: 1SI8905A-D

1SI89498.D 1SI8819A-D 1SI8922A.B

2. Number of Items: 12

3. ASME Code Category: AC & C

4. ASME Code, Section XI Requirements:

Exercise for operability (Ct) of check valves every 3 months, per IWV-3521.

5. Basis for Relief:

These check valves cannot be full flow tested during operation as the shutoff head of the Safety Injection pumps is lower than the reactor coolant system pressure. Performance of this test with the RCS depressurized, but intact, could lead to inadvertent overpressurization of the system. The alternate method of protecting against overpressurization by partially draining the RCS to provide a surge volume is not considered a safe practice due to concerns of maintaining adequate water level above the reactor core.

Alternative Testing:

These valves will be full stroke tested during cold shutdowns provided the reactor vessel head is removed. The testing period will be each refueling outage as a minimum, but no more frequently than once per quarter.

Justification:

This alternative will adequately maintain the system in a state of operational readiness, while not sacrificing the safety of the plant, by testing the valves as often as safely possible.

Applicable Time Period:

- Valve Number: 1CS008A, B 1CS003A, B
- 2. Number of Items: 4
- 3. ASME Code Category: AC & C
- 4. ASME Code, Section XI Requirements:

Exercise for operability (Ct) of check valves every 3 months. per IWV-3521.

5. Basis for Relief:

The ICS008A, B and ICS003A, B valves cannot be full flow tested during unit operation as water from the CS pumps would be discharged through the CS ring headers causing undesirable effects on system components inside containment.

Alternate Testing:

The ICS008A. B valves will be partial stroke tested, using air, on a quarterly basis and full flow tested, or dismantled to demonstrate operability, each refueling outage. The ICS003A, B valves will be partial stroke tested during the quarterly pump surveillance and dismantled, to demonstrate operability, each refueling outage.

7. Justification:

Partial stroke testing of the ICS008A, B check valves, using air. is an adequate means to demonstrate operability. Positive verification of disk movement will be accomplished by noting the rush of air of through the test connection. Performance of a partial stroke test, during the CS pump quarterly surveillance, on the ICS003A, B check valves will ensure adequate check valve operation.

Applicable Time Period:

- 1. Valve Number: 1SI8956A-D
- Number of Items: 4
- ASME Code Category: AC
- ASME Code. Section XI Requirements:

Exercise for operability (Ct) of check valves every 3 months, per IWV-3521.

5. Basis for Relief:

The accumulator check valves cannot be tested during unit operation due to the pressure differential between the accumulators (650 psig) and the reactor coolant system (2235 psig). Full stroke exercising of these valves could occur only with a rapid depressurization of the reactor coolant system.

Alternate Testing:

These valves will be partial stroke tested during cold shutdown by providing a surge volume in the pressurizer and "burping" the accumulator discharge isolation valves. Positive verification of valve operability will be by noting a change in accumulator level.

7. Justification:

This alternative will adequately maintain the system in a state of operational readiness, while not sacrificing the safety of the plant, by testing the valves as often as safely possible.

Applicable Time Period:

- 1. Valve Number: 1818926
- Number of Items: 1
- ASME Code Category: C
- ASME Code, Section XI Requirements:

Exercise for operability (Ct) of check valves every 3 months, per IWV-3521.

5. Basis for Relief:

Full stroke exercising of the Safety Injection pump suction check valve, ISI8926, cannot be demonstrated during unit operation as the reactor coolant system pressure prevents the pumps from reaching full flow injection conditions. Performance of this test with the reactor coolant system intact could lead to an inadvertent overpressurization of the system. The alternate method of protecting against overpressurization by partial draining of the reactor coolant system to provide a surge volume is not considered a safe practice due to concerns of maintaining adequate water level above the reactor core.

Alternate Testing:

The ISI8926 valve will be partial stroke tested during periodic inservice tests with the SI pumps in the recirculation mode. Full stroke exercising for the valve will be done during cold shutdown, providing the reactor vessel head is removed. This testing frequency will be each refueling outage as a minimum, but no more frequently than once per quarter.

7. Justification:

This alternative will adequately maintain the system in a state of operational readiness, while not sacrificing the safety of the plant, by testing the valves as often as safely possible.

Applicable Time Period:

1. Valve Number

1PS228A, B 1RC014A-D 1PS229A, B 1SX101A 1PS230A, B

- Number of Items: 11
- ASME Code Catagory: A & B
- 4. ASME Code Section Requirements:

Stroke timing (St) of power operated valves per IWV-3411.

5. Basis for Relief:

Stroke timing of Solenoid Operated valves is impracticle due to the fast actuation of these valves.

Alternate Testing:

The PS and SX valves will be demonstrated operable by quarterly full stroke testing and fail testing.

The RC valves will be tested in accordance with Note 7.

Justification:

Proper valve operation will be demonstrated by verifying that the valves stroke to their required positions.

Applicable Time Period:

1. <u>Valve Number</u>: 1CC685 1CC9438

1CC9413A, B 1CC9414 1CC9416

2. Number of Items: 6

3. ASME Code Category: A

ASME Code, Section XI Requirements:

Exercise for operability (St) of Category A and B valves every 3 months. per IWV-3411.

5. Basis for Relief:

Component cooling water flow to the reactor coolant pumps is required at all times while the pumps are in operation and for an extended period of time while in cold shutdown. Failure of one of these valves in a closed position during an exercise test would result in a loss of cooling flow to the pumps and eventual pump damage and/or trip.

Alternate Testing:

These valves will be exercised during cold shutdown, provided all of the reactor coolant pumps are not in operation. This testing period will be each refueling outage as a minimum, but no more frequently than once per quarter.

7. Justification:

This alternative will adequately maintain the system in a state of operational readiness, while not sacrificing the safety of the plant, by testing the valves as often as safely possible.

Applicable Time Period:

1. Valve Number:

1CV8100 1CV8112

- 2. Number of Items: 2
- 3. ASME Code Category: A
- 4. ASME Code. Section XI Requirements:

Exercise for operability (St) of Category A & B valves every 3 months per IWV-3411.

5. Basis for Relief:

These valves cannot be tested during unit operation as seal water flow to the reactor coolant pumps is required at all times while the pumps are in operation. Failure of one of these valves in the closed position during an exercise test would result in seal water return flow being diverted to the PRT by lifting a relief valve upstream of the isolation valves.

Alternate Testing:

These valves will be exercise tested during cold shutdown, providing all reactor coolant pumps are not in operation. This testing period will be each refueling outage as a minimum, but no more frequently than once per quarter.

7. Justification:

This alternative will adequately maintain the system in a state of operational readiness, while not sacrificing the safety of the plant, by testing the valves as often as safely possible.

Applicable Time Period:

- 1. Valve Number: 1IA066 1IA065
- 2. Number of Items: 2
- 3. ASME Code Category: A
- ASME Code. Section XI Requirements:

Exercise for operability (St and Ft) of category A and B valves every 3 months per IWV-3411.

5. Basis for Relief:

Stroke testing of these valves during plant operation would isolate the air operated instruments and valves inside the containment building.

Alternate Testing:

These valves will be exercised during cold shutdown, providing that all necessary equipment required for cold shutdown operations would not be affected.

This testing period will be each refueling outage as a minimum, but no more frequently than once per quarter.

7. Justification:

Stroke exercising of these valves would be impractical because if these valves failed in the close position during unit operation, instrumentation would not function properly and valves would stroke to their failure position, causing the loss of support equipment and possibly a reactor trip. This alternative will adequately maintain the system in a state of operational readiness, while not sacrificing the safety of the plant, by testing the valves as often as safely possible.

Applicable Time Period:

VR-11 Rev. 4

- 1. <u>Valve Number</u>: All valves subject to Travel/Position Indication Test
- Number of Items: 183
- ASME Code Category: A & B
- ASME Code. Section XI Requirements:

Observation of remote position indicators once every 2 years to verify that the valve operation is accurately indicated per IWV-3300.

5. Basis for Relief:

Position indication checks are required once every two years. Historically, plants have been on a one year refueling cycle and thus, performed this test every other refueling outage. Therefore, the intent of the code appears to be that the test be executed every other refueling outage. Byron Station, however, is on an 18 month refueling cycle. Executing a position indication test by either coming down in power or every refueling outage is not practical. Increasing the frequency of testing, in radiation areas, would increase personnel exposure by as much as 25% over plants on a two year refueling cycle.

Alternate Testing:

Position/Travel indication examinations will be performed on a frequency of approximately once every 3 years, or once every other refueling outage. All active power operated valves (except SOV's) listed in the ISI Valve Program will be stroked timed. For valves with remote indication, timing is done remotely. This time is then recorded in a procedure which trends the stroke time of each valve. If the maximum stroke time for the valve is exceeded, a local stroke timing of the valve will be initiated, provided ALARA concerns allow such a test. If the local time varies by more than 20% or I second, whichever is greater, from the remote time, the limit switches will be adjusted accordingly.

Justification:

Position indication tests executed on a frequency of once every 3 years, along with a case by case investigation of Position/Travel Indication discrepancies, will adequately maintain the system in a state of operational readiness. In addition to this, radiation exposure levels for personnel will be greatly reduced.

8. Applicable Time Period:

This relief is requested every refueling outage during the first inspection interval.

INSERVICE TESTING PROGRAM COMMONWEALTH EDISON ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION UNIT 1 P & 10 SYSTEM REVISION AB PAGE 1 of 47 VALVE VALVE VAL VE VALVE ACT. NORMAL STROKE MAX. STROKE NUMBER COORD CLASS CATEGORY SIZE TEST TEST RELIEF REMARKS TYPE TYPE POSITION DIRECT. TIME ME THOD MODE (IN.) REQUEST (SEC.) PAGE DELETED 02481)

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	At							P & I M-37	D REVISIO	N	PAGE 2 of	47	
NUMBER NUMBER	COORD	CLASS	VALVE	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
IAF001A	0-2	3	С	6.0	CK	S.A.	С	0	N/A	Ct	CS OP		Note 12
IAF 001B	8-2	3	С	6.0	CK	S.A.	С	0	N/A	Ct	CS OP		Note 12
ALOO IA	D-5	3	С	6.0	CK	S.A.	С	0	N/A	Ct	CS JP		Note 12
AF003B	B-5	3	С	6.0	CK	S.A.	С	0	N/A	Ct	CS OP		Note 12
AF 006A	E-3	3	В	6.0	GA	M.O.	С	0	15.0	St	OP OP		
AF 006B	8-3	3	8	6.0	GA	M.O.	C	0		St	OP OP	VR-11	
AF014A	C-8	2	С	4.0	CK	S.A.	С	0		It Ct	RR CS	VR-11	Note 12
AF014B	A-8	2	С	4.0	CK	S.A.	C	0		Ct	CS		Note 12

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

UNIT 1

SYSTEM	AF							P & 1 M-37	D REVISIO	ON	PAGE 3 of	47		
VALVE NUMBER	COORD	CLASS	VALVE	VALVE SIZE (IN.)	TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	TEST	RELIEF REQUEST	REMA	RKS
1AF014C	E-8	2	С	4.0	CK	S.A.	С	0	(SEC.)	Ct	CS		Note	12
1AF014D	B-8	2	С	4.0	СК	S.A.	С	0	N/A	Ct	CS		Note	
IAFO14E	D-8	2	С	4.0	CK	S.A.	С	0	N/A	Cŧ	CS		Note	
IAFO14F	8-8	2	С	4.0	CK	S.A.	С	0	N/A	Ct	CS		Note	
IAFO14G	E-8	2	С	4.0	CK	S.A.	С	0	N/A	Ct	CS		Note	
ALO14H	C-8	2	С	4.0	CK	S.A.	C	0	N/A	Ct	CS		Note	
IAF01/A	F-3	3	8	6.0	GA	M.O.	C	0	15.0	St	OP		Mote	12
AFO17B	C-3	3	В	6.0	GA	M.O.	С	0	15.0	It St	RR	VR-11		
AFO29A	C-5	3	C	6.0	СК	0.0				It	OP RR	VR-11		
AF 029B	B-5					S.A.	С	0	N/A	Ct	CS		Note	12
		3	С	6.0	CK	S.A.	C	0	N/A	Ct	CS		Note	12

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SYSTEM	CC							P & 1 M-66-		N		PAGE 4 of 47	
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TES. METHOD	TEST	RELIEF REQUEST	REMARKS
1CC685	B-3	2	A	4.0	GA	M.O.	0	C	(SEC.)				
								C	10.0	St	CS	VR-8	
10004134			_							It	RR	VR-11	
ICC9413A	E-2	2	A	6.0	CA	M.O.	0	С	10.0	Lt	RR	VR-1	
								C	10.0	St	CS	VR-8	
										It	RR	VR-11	
CC9413B	E-2	2	В	6.0	CA	** *				Lt	RR	VR-1	
			D	0.0	GA	M.O.	0	C	10.0	St	CS	VR-8	
CC9414	B-3	2	A	6.0	GA	M 0				It	RR	VR-11	
				0.0	GH	M.O.	0	C	10.0	St	CS	VR-8	
										It	RR	VR-11	
CC9416	A-3	2								Lt	RR	VR-1	
			A	6.0	GA	M.O.	0	C	10.0	St	CS	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	
										It		VR-8	
										Lt	RR	VR-11	
CC9437A	E-1	2	В	3.0	GL	A.O.	С	С		St	RR	VR-1	
											OP		Passive
CC9437B	0.0									It	RR	VR-11	
(C)43/D	B-2	2	В	3.0	GL	A.O.	0	C	10.0	St	OP		
Y'0430	0.3									It	RR.	VR-11	
CC9438	B-3	2	A	4.0	GA	M.O.	0	C		Ft	OP		
								-		Lt	RR	VR-1	
	-									It	RR	VR-11	
CU9486	E-3	2	A	6.0	СК	CA	^			St	CS	VR-8	
				0.0	CK	S.A.	0	C	N/A	Lt	RR	VR-1	
CC9518	B-3	2	A	A 76	CH.			-					
				0.75	CK	S.A.	C	C	N/A	Lt	RR	VR-1	Dansi
C9534	A 3	2	^							1-7.7	N.N.	VK-1	Passive
		2	Α (0.75	CK	S.A.	С	С	N/A	Lt	RR	VR-1	Passive

	COMMON	WEALTH E	DISON		13	SI CLASS	I TESTING P 1, 2 and 3 LEAR POWER	VAL VES					UNIT 1
SYSTEM	CC							P & I	D REVISIO	N .		PAGE	
VALVE NUMBER	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE	MAX.STROKE TIME	TEST METHOD	TEST	5 of 47 RELIEF REQUEST	REMARKS
1CC9412B	F-3	3	В	12.0	GA	M.O.	С	0	(SEC.) 120.0	St	OP		
ICC9412A	D-3	3	В	12.0	Gn	M.O.	С	0	120.0	It St It	OP RR	VR-11	
				-							KK	VR-11	
				A commence of the second									
							-						
			T 10 10 10 10 10 10 10 10 10 10 10 10 10										
							-						
-					1								
-				7									
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SYSTEM	23							P & 1D M-66-3	D REVISION 3 4	2		PAGE 6 of 47	
VALVE	COORD	CLASS	VALVE VALVE CATEGORY SIZE (IN.)	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL	STROKE DIRECT.	KE	TEST	TEST	RELIEF	REMARKS
ICC9463A	9O	3	J	12.0	Š	S.A.	o	0	N/A	Ct	do		
ICC9463B	C-5	3	3	12.0	X	S.A.	0	0	N/A	Ct	do		-
OCC9464	6-4	3	2	12.0	×	S.A.	0	0	N/A	Ct	do		
ICC9473A	E-5	3	В	0.91	5	M.0.	О	0	120.0	St	do		
ICC94738	9-0	9	8	0.91	CA	M.0.	0	0	120.0	It St	OP OP	VR-11	

	NOS	
	EDI	
California L	=	
	AL AL	
SAC. AS	305	
F10144	5	

SYSTEM	cs							P & ID M-61-4	D REVISION	,		PAGE 7 of 47	
VUMBER	COORD	CLASS	CATEGORY SIZE	VALVE SIZE (IN.)		ACT. TYPE	NORMAL	STROKE DIRECT.	MAX. STROKE TE	TEST ME THOD	TEST	RELIEF	REMARKS
CS001A	B-3	2	8	14.0	GA	M.0.	0	C	(SEC.)	45	900		
CS001B	A-3	2	8	14.0	GA	0				It	R. C.	VR-11	
0000		The same of the same of the same of	The second secon				0	ی	30.0	St	dO		
Laconsh	6-4	2	8	0.91	CA	M.0.	3	0	30.0	St	RR	VR-11	
SS009B	A 4	2	В	16.0	***		The second second second second second second	The same of the sa		It	88	VP-11	
-	The second second second		3	0.01	3	3.0	o	0	30.0	St	ОР		
				-	Company of the Same control of the Same	And in case of the last of the	Contraction of the contraction o	And the party of the last of t		It	RR	VP-11	

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SYSTEM	CS							P & I M-46-		N		PAGE 8 of 47	
NUMBER 1CS007A	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX. STROKE	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1C300/H	E-7	2	A	10.0	GA	M.O.	С	0	(SEC.) 30.0	Lt	RR	VR-1	
1000076		Commence of the Artist State of the Artist Sta								St	OP	• 11 - 1	
1CS007B	C-7	. 2	A	10.0	GA	M.O.	C	0	30.0	It Lt	RR	VR-11	
-										St	RR OP	VR-1	
1CS008A	E-7	2	AC	10.0	СК	S.A.	C	0	N/A	It Xt/Ct	RR	VR-11	
ICSO08B	C-7	2	AC	10.0	CM4				N/H	Lt	OP/RR RR	VR-4	
			nc.	10.0	CK	S.A.	C	0	N/A	Xt/Ct	OP/RR	VR-1 VR-4	
1CS011A	D-2	2	С	6.0	CK	S.A.				Lt	RR	VR-1	
ICS0118	0 0				OR .	3.H.	С	0	N/A	Ct	OP		-
10.50110	C-2	2	C	6.0	CK	S.A.	C	0					
IC5019A	C-5	2	В	3.0				U	N/A	Ct	OP		
				3.0	GA	M.O.	C	0	30.0	St	OP		
ICS019B	B-5	2	В	3.0	GA	* ^				It	RR	VP 11	
					OH	M.O.	С	0	The second secon	St	OP	VR-11	
CS020A	C-3	2	C	3.0	CV	0.4				It	RR	VR-11	
					CK	S.A.	C	0	N/A	Ct	RR	VR-2	
C5020B	H 2	2	C 3	3.0	СК	S.A.	C					VK-Z	
CS003A	E-3	2			No. of the second secon	J. II.	С	0	N/A (Ct	RR	VR-2	
The state of the s	- 3	2	C 1	0.0	CK	S.A.	С	0	N/A)	11.101	00.6		
CS0038	C-3 ·	2	C 1	0.0	CV				14/11 /	(t/Ct	OP/RR	VR-4	
	NATIONAL PROPERTY OF THE PARTY.		- 1	0.0	CK	S.A.	C	0	N/A X	(t/Ct	OP/RR	VR-4	-

Total Tota		Transport		*		海寨		ACCOUNT THE TOTAL PARTY AND THE PARTY AND TH	**************************************					
									**				1	
	A SE		10.60	Name of the last	1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 ×	* 1	*	PERSONAL PROPERTY.	17 Mag.	And in the contract of the con				N Manager
							10 M			100			1 1	
	100					(8)	16			15	i ge i	ESCI	# E E I	
	1000						* 1			***	32	2 2	2 2	Parcelage

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	CV							P & 1 M-64-	1100 1100 1100	N		PAGE 10 of 47	
NUMBER	COORD	CLASS	CATEGORY	VALVE	VALVE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.		TEST METHOD	TEST MODE		REMARKS
CV8481A	C-4	2	С	4.0	CK	S.A.	С	0	(SEC.)	Ct/Xt	CC (OD		Note 0
CV8481B	B-4	2	С	4.0	CK	S.A.	C	0			CS/OP		Note 8
CV8105	E-/	2	В	3.0	GA				N/A	Ct/Xt	CS/OP		Note 8
V8106	E-6	2			· · · · · · · · · · · · · · · · · · ·	M.O.	0	С	10.0	St	CS		Note 4
	. ,		В	3.0	GA	M.O.	0	С	10.0	St	CS		Note 4
						***********				It	RR	VR-11	

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	CV							P & I M-64-		N		PAGE 11 of 4	,
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VAL VE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST	TEST	RELIEF	REMARKS
1CV112D	8-4	2	В	8.0	GA	M ()		THE REST OF STREET, SAN ASSESSMENT	(SEC.)		TROUL	REQUEST	
					Gn	M.O.	С	0	15.0	St	CS		41
ICV112E	A-4	2	В	8.0	GA	M ()		-		It	RR	VR-11	Note 2
					GH	M.O.	C	0	15.0	St	CS		N-1 - 0
1CV8546	A-5	2	С	8.0	CK					It	RR	VR-11	Note 2
ICV8804A	D (0.0	CN	S.A.	C	0	N/A	Ct	CS		Note 2
CVOOCH	8-6	2	В	8.0	GA	M.O.	С						Note 2
ICV8104	8-1							0	10.0	St	CS		Note 2
	D-1	2	В	2.0	GL	M.O.	С	0	10.0	It	RR	VR-11	
CWOAAA	-							U		3t	CS		Note 2
ICV8442	B-1	2	C	2.0	СК	S.A.	C		The state of the s	It	RR	VR-11	
ICV112B	D-5			CONTRACTOR OF THE PARTY OF		J.H.	С	0	N/A	Ct	CS		Note 2
	U-3	2	В	4.0	GA	M.O.	0	C	10.0				MOLE Z
CV112C	D-5									St	CS		Note 4
	0 3	2	В	4.0	GA	M.O.	0	С		It	RR	VR-11	
		-	-							St	CS		Note 4
										It	RR	VR-11	

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SYSTEM	CV							P & II		N		PAGE 12 of 47	
VALVE NUMBER	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	1EST MODE	RELIEF REQUEST	REMARKS
1CV8160	F-4	2	A	3.0	GL	A.O.	0	C	(SEC.)	C.L			100
									10.0	St	CS		Note 4
										It	RR	VR-11	
	-									Ft	CS		Note 4
CV8152	E-4	2	A	3.0	GL	A 0				Lt	RR	VR-1	
				3.0	GL.	A.O.	0	C	10.0	St	CS		Note 4
										It	RR	VR-11	MOLE 4
										Ft	CS	44-11	
CV8149A	E-5	2								Lt	RR	WD 4	Note 4
		2	В	3.0	GL	A.O.	0	С	10.0	St	THE RESERVE AND PERSONS ASSESSED.	VR-1	
CURTARR		-							10.0		CS		Note 4
CV8149B	E-5	2	В	3.0	GL	A.O.	0		10.0	It	RR	VR-11	
	-						U	С	10.0	St	CS		Note 4
CV8149C	E-5	2	В	3.0	GL	0.0		-	-	It	RR	VR-11	
					GL.	A.O.	0	C	10.0	St	CS		Note 4
		-	THE STREET STREET, SAN ASSESSMENT					-		It	RR	VR-11	MOLE 4

P 6 10 REVISION PAGE PAG	P 6 10 REVISION PAGE P		COLLON	COMPRONME AL TH EDISON	NOSIG		IS	I CLASS RON NUCL	IST CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION	PROGRAM 3 VALVES 5 STATION					UNIT 1
COORD CLASS CATECORY SIZE TYPE POSITION DIRECT. TIME NETHOD MODE REQUEST C-2 3 C 1.5 CK S.A. C 0 N/A CL OP C-6 3 C 1.5 CK S.A. C 0 N/A CL OP C-6 3 C 1.5 CK S.A. C 0 N/A CL OP C-6 3 C 1.5 CK S.A. C 0 N/A CL OP C-6 3 C 1.5 CK S.A. C 0 O N/A CL OP C-6 3 C 1.5 CK S.A. C 0 O N/A CL OP C-6 3 C 1.5 CK S.A. C 0 O N/A CL OP C-6 C O O N/A CL	COORD CLASS CAFEGORY STATE TYPE TYPE POSITION DIRECT. THE PREST TEST RELIEF CL2 3 C 1.5 CK S.A. C 0 N/A Ct OP C.6 3 C 1.5 CK S.A. C 0 N/A Ct OP G.6 S.A. C 0 N/A	SYSTEM	00							P & II		NO		11 "	
C-2 3 C 1.5 CK S.A. C 0 (SP.C.) B-2 3 C 1.5 CK S.A. C 0 N/A Ct OP C-6 3 C 1.5 CK S.A. C 0 N/A Ct OP B-6 3 C 1.5 CK S.A. C 0 N/A Ct OP	6-2 3 C 1.5 CK S.A. C O N/A Ct OP C-6 3 C 1.5 CK S.A. C O N/A Ct OP B-6 3 C 1.5 CK S.A. C O N/A Ct OP	- E	COORD		CATEGORY		VALVE	ACT. TYPE	NORMAL POSITION		MAX.STROKE TIME		TEST	RELIEF REQUEST	REMARKS
B-6 3 C 1.5 CK S.A. C O N/A Ct B-6 3 C 1.5 CK S.A. C O N/A Ct	B-6 3 C 1.5 CK S.A. C O N/A Ct B-6 3 C 1.5 CK S.A. C O N/A Ct B-6 3 C 1.5 CK S.A. C O N/A Ct	938	C-2		C	1.5	Š	S.A.	3	0	N/A	Ct	do		
B-6 3 C 1.5 CK S.A. C 0 N/A Ct 8.6 3 C 1.5 CK S.A. C 0 N/A Ct	8-6 3 С 1.5 СК S.A. С О N/A Сt	030	8-2	9	C	1.5	Š	S.A.	C	0	N/A	Ct	dO		
8-6 3 C 1.5 CK S.A. C O N/A Ct	8-6 3 C 1.5 CK S.A. C O W/A CL	3.0	9-0	3	C	1.5	č	S.A.	0	0	N/A	64	90		
		3C	8-6	3	C	1.5	CK	S.A.	C	0	N/A	Ct	90		
					The second secon										
					the designation of contrast of the second						And the second s				
				And the second second second	-		-								
					And the state of t				e emiliario de emi						
		-	Market Company of the Company	tion verifying the state down - year					And the second s						
		The state of the state of	The second second second	-					The second section of the sect			The state of the s			
			The state of the s	The second second second second				-	The second secon						
									the late of the first of the fi				-		

A STATE OF THE PARTY OF THE PAR				84	TRON NUCI	BYRON NUCLEAR POWER STATION	TATION					UNIT 1
FC							P & 1D M-63-1	D REVISION	2		PAGE 14 of 47	
COORD	CLASS	CATEGORY SIZE	VALVE SIZE	VALVE	ACT. TYPE	NORMAL	STROKE DIRECT.	STROKE MAX. STROKE TEST DIRECT. TIME METHOD	TEST ME THOD	TEST	RELIEF REQUEST	REMARKS
9-0	2	A	4.0	Ь	Σ	J	-	(SEC.)				
CE			-			١	ر	N/A	1.1	RR	VR-1	Passive
6	7	Œ	4.0	d	Σ	3	3	N/A	11	RR	VP. 1	Daceine
8-8	2	A	3.0	Ь	Σ	0		V/10			.	rassive
0 0						,	,	H/H	Lt	RR	VR-1	Passive
0 0	7	В	3.0	g.	ε	3	0	N/A	Lt	RR	VR-1	Pacciuo

E-6 2 B 4.0 GL		COMMON	COMMONWEALTH EDISON	NOSIG		IS. IS. BYI	NSERVICE I CLASS RON NUCLE	INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION	ROGRAM VALVES STATION					UNIT 1
COORD CLASS CATEGORY SIZE TYPE TYPE POSITION DIRECT TIME METHOD MODE REDUEST (SEC.) St OP REDUEST (LIN.) E-6 2 B 4.0 GL A.0. 0 C 12.0 St OP REDUEST (SEC.) IT RR VR-11 FT OP VALUE HELLEF CLASS CATEGORY SIZE TYPE TYPE POSITION DIRECT TIME METHOD MODE REDUEST (SEC.) FT OP VR-11	SYSTEM	£.						and the second s	P & 10 M-52-1		N		PAGE 15 of 47	
E-6 2 B 4.0 GL A.0 0 C (SEC.) with the last of the las	VALVE	COORD		VALVE	VALVE	VALVE	ACT. TYPE	NORMAL		MX. STROKE		TEST	RELIEF	
	1FP010	6-6	2	8	4 0 4	5	А.О.	0	J	(SEC.) 12.0	St. It	RR OP OP	VR-11	
		and the second second												

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						TROP NOCE	LEAR POWER :	STATION					UNIT 1
SYSTEM	FW							P & I M-36-		ON		PAGE 16 of 4	17
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE	TEST METHOD	TEST	RELIEF	REMARKS
1FW009A	D-5	2	В	16.0	GA	H.O.	0	C	(SEC.)			REQUEST	
1FW035A	E-4	2	В	3.0	GL	A.O.	0	C	6.0	St/Xt It	CS/OP RR	VR-11	Note 3
FW009B	A-5	2	В	6.0	C0				0.0	St It Ft	OP RR	VR-11	
FW035B	B-4				GA	н.о.	0	C	5.0	St/Xt	OP CS/OP		Note 3
		2	В	3.0	GL	A.O.	0	С	6.0	St It	OP OP	VR-11	
FW009C	E-5	2	В	6.0	GA	H.O.	ō	C	5.0	Ft St/Xt	OP CS (OR	VR11	
FW035C	F-4	2	В	3.0	GL	A.O.	0	С	6.0	It St	CS/OP RR OP	VR-11	Note 3
W009D	8-5	2	В	16.0	GA	H.O.				It Ft	RR OP	VR-11	
W0350	C-4	2				п.о.	0	С	5.0	St/Xt	CS/OP		Note 3
			В	3.0	GL	A.O.	0	С		It St It	OP OP	VR-11	
W043A	D-5	2	В	3.0	GL	A.O.	С	C		Ft St	OP OP	VR-11	
W043B	A-5	2	В	3.0	GL	A.O.	С	C		It St	RR OP	VR-11	Passive
W043C	F-5	2	В	3.0	GL.	A.O.	С	С		ItSt	RR OP	VR-11	Passive
W043D	C-5	2	8 3	3.0	GI.	A.O.	C	C		It St	RR OP	VR-11	Passive
W039A	D-4	2	В 6	5.0	GA	A.O.	0	С		It St	RR CS	VR-11	Passive
W039B	A-4	2	B 6	0.0	GA	A.O.	0	C		It St		VR-11	Note 10
4039C	E-4	2	8 6	.0	GA	A.O.	0	C		t	RR	VR-11	Note 10
1 039D	8-4	2	В 6	.0		A.O.	0	С		t t	CS RR	VR-11	Note 10
							-			t	CS RR	VR-11	Note 10

COMMONWEALTH EDISON	COMMON	WEAL	TH	EDI	SOM
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SYSTEM	IA							P & 10 M-55-2		N		PAGE	
NUMBER	COORD	CLASS	VALVE		VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME		TEST	17 of 47	REMARKS
11A066	E-7	2	A	(IN.) 3.0	GL	A.O.			(SEC.)	METHOD	MODE	REQUEST	
							U	С	15.0	Lt St	RR CS	VR-1 VR-10	
1A065	E-6	2	A	2.0						Ft	CS	VR-10	
				3.0	GL	A.O.	0	С	15.0	i t	RR RR	VR-11	
										St	CS	VR-10	
IA091	E 7									ft	CS	VR-10	
	1-/	2	A	0.75	CK	S.A.	C	C		It	RR	VR-11	
								C	N/A	Lt	RR	VR-1	Passive

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COMMO	INME HE	111	t.D	SON

SYSTEM	MS .							P & IC M-35-1		N		PAGE 18 of 47	
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1MS001B	E-5	2	8	32.75	GA	H.O.	0	С	5.0	St/Xt It	CS/OP RR	VR-11	Note 1
IM:001D	B-5	2	8	30.25	GA	н.о.	0	С	5.0	St/Xt It	CS/OP RR	VR-11	Note 1
1MS013B	F-4	2	С	6.0X10.0	sv	S.A.	С	0	N/A	Rt			
IMS013D	C-4	2	С	6.0X10.0	SV	S.A.	С	0		*********	RR		
MS0148	E-4	2	C	6.0X10.0	sv	S.A.	C	0		Rt	RR		
MS014D	C-4	2	C	5.0X10.0	sv	S.A.	С	0		Rt	RR		
MS0158	E-3	2		5.0X10.0	-	S.A.				Rt	RR		
MS015D	C-3	2					С	0	N/A	Rt	RR		
MS016B	E-2			0.0X10.0	-	S.A.	С	0	N/A	Rt	RR		
MS016D		2		.0X10.0		S.A.	С	0	N/A	Rt	RR		
	C-3	2	C 6	.0X10.0	SV	S.A.	С	0	N/A I	Rt	RR		
MS017B	F-2	2	C 6	.0X10.0	sv	S.A.	С	0	N/A I	Rt	RR		
MS017D	C-2	2	C 6	.0X10.0	sv	S.A.	С	0	N/A F	Rt	RR		
MS101B	E-5	2	В	4.0	GA	A.O.	С	С		St	OP	VR-11	Passive
181010	8-5	2	В	1.0	GA	A.O.	C	С		it t	OP	WD 11	
150188	F-2	2	C 8.	0X10.0 I	PORV	M.O.	С	С				VR-11 F	assive
150180	C-2	2		0X10.C F		M.O.				t	OP RR	VR-11 P	assive
						11.0.	С	С	20.0 S	ţ.	OP RR		assive

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SYSTEM	MS							P & I M-35-		N		PAGE 19 of 4	,
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VAL VE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1MS001A	C-4	2	В	30.25	GA	н.о.	0	С	5.0	St/Xt It	CS/OP RR	VR-11	Note 1
IMSOOTC .	E-4	2	8	32.75	GA	H.O.	0	С	5.0	St/Xt It	CS/OP RR	VR-11	Note 1
1MS013A	C-4	2	С	6.0X10.0	SV	S.A.	C	0	N/A	Rt	RR		
1MS013C	F-4	2	С	€.0,10.0	sv	S.A.	С	0	N/A	Rt	RR		
1MS014A	F-3	2	С	6.0X10.0	sv	S.A.	C	0		Rt	RR		
IMS014C	F-3	2	C	6.0X10.0	SV	S.A.	C	0		Rt	RR		
IMSO15A	F-3	2	C	6.0X10.0	SV	S.A.	С	0		Rt	RR		
IMS015C	F-3	2	С (6.0X10.0	sv	S.A.	С	0		Rt	RR		
IMSO16A	f-3	2	С (5.0X10.0	sv	S.A.	С	0	N/A	Rt	RR		
IMS016C	F-3	2	С 6	.0X10.0	SV	S.A.	С	0	N/A	Rt	RR		
MS017A	F-2	2	C 6	.OX10.0	SV	S.A.	С	0	N/A	Rt	RR		-
MS01/C	F - 2	2	C 6	.0X10.0	sv	S.A.	С	0	N/A	Rt	RR		
MS101A	C-4	2	В	4.0	GA	A.O.	С	С	The same of the sa	St	OP RR	VR-11	Passive
MS101C	E-4	2	В	4.0	GA	A.O.	С	С	March Carlo	St	OP RR		
MSO18A	D-1	2	C 8	.0X10.0	PORV	M.O.	С	C	-		OP	VR-11	Passive
MSO18C	F-1	2	C 8	.0X10.0	PORV	M.O.	С	C]	it it		VR-11	Passive
			-						i	t		VR-11	Passive

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	OG							P & I M-47-		N		PAGE 20 of 4	7
NUMBER 10G057A	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VAL VE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	TEST	RELIEF	REMARKS
1000278	E-6	2	A	3.0	BTF	M.O.	C		(SEC.)				
								С	60.0	Lt	RR OP	VR-1	Passive
10G079	t-6	2	A	3.0	BTF	M.O.				It	RR	VR-11	
						11.0.	С	С	60.0	Lt	RR OP	VR-1	Passive
10G080	E-5	2	A	3.0	BIF	M.O.				It	RR	VR-11	
					011	п.0.	С	С	60.0	Lt	RR OP	VR-1	Passive
OG081	81 D-5 2 A	3.0	BIF	M.O.				It	RR	VR-11			
					011	н.о.	С	С		Lt St	RR OP	VR-1	Passive
OG082	E-6	2	A	3.0	DTC	-				It	RR	VR-11	
				3.0	BTF	M.O.	С	С	60.0	Lt	RR OP	VR-1	Passive
OGO83	D-6	2	A	3.0 BTF	RTC	M /\				It .	RR	VR-11	
					DIF	M.O.	С	С	60.0	Lt	RR OP	VR-1	Passive
0G084	E-4	2	A	3.0	BTF	M.O.				It	RR	VR-11	
					011	n.u.	С	С		Lt	RR OP	VR-1	Passive
0G085	D-4	2	A	3.0	DTC					It	RR	WD	
					BTF	M.O.	С	С	60.0	t	RR	VR-11 VR-1	Passive
		-								St	OP		. 23116
				-]	[t	RR	VR-11	

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	PR							P & II		N		PAGE 21 of A	
NUMBER 1PROOZE	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
TPROOZE.	C-5	2	A	2.0	GL	M	С	С	(SEC.)				
1PROO2G	C-5	2	A	2.0					N/A	Lt	RR	VR-1	Passive
IPRO33A		-		2.0	CK	S.A.	С	С	N/A	Lt	RR	VR-1	One of
TI NO 3 3 H	C-8	2	A	2.0	GL	M	С	С	N/A			VN-1	Passive
IPRO33B	C-8	2	A	2.0	GL		-		N/A	Lt	RR	VR-1	Passive
PRO02F	C-5				OL.	M	С	С	N/A	Lt	RR	VR-1	Passive
	U-0	2	A	2.0	GL	M	С	С	N/A	Lt			1433106
PROO2H	C-5	2	A	2.0	CK	S.A.				LL	RR	VR-1	Passive
PRO33C	C-8	3	-	-		э.н.	С	С	N/A	Lt	RR	VR-1	Passive
	C-0	2	A	2.0	Gl	M	C	С	N/A	Lt	00		
PRO33D	C-8	2	A	2.0	GL	•			****		RR	VR-1	Passive
						M	С	С	N/A	t	RR	VR-1	Passive

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	PR							P & I M-78-		N		PAGE 22 of 4	,
VALVE NUMBER 1PROO1A	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
TLYOOTH	F-7	2	A	1.0	GL	A.O.	0	<u> </u>	(SEC.)				
									4.5	Lt	RR	VR-1	
										Ft	OP		
IPROO1B	F 0									St	OP		
11 10010	F-8	2	A	1.0	GL.	A.O.	0			It	RR	VR-11	
							•	C	4.5	Lt	RR	VR-1	-
										Ft	OP		
00000										St	OP		
IPRO66	E2	2	A	1.0	GL	A.O.				It	RR	VR-11	
						n.u.	0	C	5.0	Lt	RR	VR-1	
										Ft	OP	***-1	
										It	RR	VR-11	
PRO32	E-1	2	A	1 0	-744					St	OP	4K-11	
				1.0	CK	S.A.	C	С	N/A	-			Passive
							***			Lt	RR	VR-1	

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	PS							P & 1 M-68		N	,	PAGE 23 of 47	
NUMBER	COORD	CLASS	VALVE	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1PS9354A	D-6	2	A	. 375	GL	A.O.	С	С	10.0	St Lt It	OP RR	VR-1	Passive
1PS9354B	D-6	2	A	. 375	GL	A.O.	С	С	10.0	St	OP RR	VR-11	Passive
IPS9355A	D-6	2	A	. 375	GL	A.O.	С	С	10.0	It St Lt	OP RR	VR-11 VR-1	Passive
IPS9355B	D-6	2	A	. 375	GL	A.O.	С	С	10.0	It St Lt	OP RR	VR-11	Passive
PS9357A	C-6	2	A	. 375	GL	A.O.	С	С	10.0	It St Lt	OP RR	VR-11 VR-1	Passive
PS9357B	C-6	2	A	375	GL	A.O.	С	С		It St Lt	RR OP RR	VR-11 VR-1	
PS9356A	C-6	2	Α .	375	GL	A.O.	С	С		It St	OP OP	VR-11	Passive
S9356B	C-6	2	Α .	375	GL	A.O.	С	С		It St	OP OP	VR-1 VR-11	Passive
-									10.0	t [t		VR-1 VR-11	Passive

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SYSTEM	PS							P & 1 M-68-		N		PAGE 24 of 4	7
NUMBER	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1PS228A	E-7	2	A	0.50	GL	S.O.	0	С	N/A	Lt St Ft	RR OP OP	VR-1 VR-7	
1PS2?9A	E-6	2	A	0.50	GL	S.O.	0	С	N/A	It Lt St Ft	RR RR OP OP	VR-11 VR-1 VR-7	
1PS230A	D-7	2	A	0.50	GL	S.O.	0	С	N/A	It Lt St Ft	RR RR OP	VR-11 VR-1 VR-7	
IPS231A	D-8	2	А	0.50	СК	S.A.	C	С	N/A	It Lt	OP RR RR	VR-11 VR-1	On and
PS228B	C-7	2	A	0.50	GL.	\$.0.	0	С	N/A	Lt St Ft	RR OP OP	VR-1 VR-7	Passive
PS229B	C-6	2	Α (0.50	GL	\$.0.	0	С	N/A	It Lt St Ft	RR OP OP	VR-11 VR-1 VR-7	
PS2308	B-7	2	Α ().50	GL	s.o.	0	С	N/A	It Lt St	RR OP OP	VR-11 VR-1 VR-7	
PS2318	8-8	2	A 0	. 50	CK	S.A.	C	С		It t	RR RR	VR-11 VR-1	Passive

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SYSTEM	RC							P & I M-60-		N		PAGE 25 of 47	
NUMBER LECOLAR	COORD	CLASS	VALVE	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1RCO14A	E-5	1	В	1.0	GL	S.O.	C		(SEC.)				
						5.0.	C	0	N/A	St	CS	VR-7	Note 7
-										ft	CS		
IRCO14B	F-5	1	8	1.0	GL	0.0		-		It	RR	VR-11	
				1.0	GL	S.O.	С	0	N/A	St	CS	VR-7	Mata 7
										ft	CS	VN-7	Note 7
RC014C	F-5	1								It	RR	WD	
			В	1.0	Gil	S.O.	C	0		St	The same of the same of the same of	VR-11	
											CS	VR-7	Note 7
DOOLAD										Ft	CS		
RCO14D	E-5	1	В	1.0	GL.	S.O.				It	RR	VR-11	
				7/10 T		3.0.	C	0	N/A	St	CS	-	Note 7
										Ft	CS	*** *	Note 7
					-		-			It	RR	VR-11	

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SYSTEM	RE							P & 1		N		PAGE 26 of 4	7
VALVE NUMBER	COORD	CLASS	VALVE	VALVE SIZE (IM.)	VAL VE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	7 300 300	TEST	TEST	RELIEF	REMARK:
1RE9159A	D-3	2	A	.75	D	A.O.	0	С	(SEC.)				
									10.0	St	OP		
										It	RR	VR-11	
			-							ft	OP		
1RE9159B	D-2									St	RR	VR-1	
101.21.330	D-7	2	A	. /5	D	A.O.	C	С	10.0		OP		
1RE9160A	D-3								10.0	Lt It	RR	VR-1	Passive
an stoon	D-3	2	A	1.0	D	A.O.	0	C	10.0	St	RR	VR-11	
									10.0	It	OP		
										Ft	RR	VR-11	
IRE9160B	D-2	2								Lt	OP		
	0-2	2	A	1.0	D	A.O.	0	C	10.0	St	RR	VR-1	
									10.0	It	OP		
											RR	VR-11	
IRE9157	C-2			-						Ft	OP		
ME 21 37	C-2	2	A	1.0	D	A.O.	0	С		Lt	RR	VR-1	
										St	OP		
										It Ft	RR	VR-11	
RE9170	B-2	2				والماليس				Lt	OP		
	0-2	2	A	3.0	D	A.O.	0	C		St	RR	VR-1	
										It	OP DD	WD	
										Ft	RR OP	VR-11	
				-						Lt	RR	140	
RE1003	B-3						BHILL THE			St	OP	VR-1	
	W-3	2	Α :	3.0	D	A.O.	C	С		Lt		WD .	
										It	RR	VR-1	Passive
										4.6	RR	VR-11	

	COMPONE	COMMONNE AL TH EDISON	NOSIO		I IS	NSERVICE I CLASS ROW NUCL	INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION	ROGRAM VAI VES					UNIT 1
SYSTEM	RF							P & 10 M-48-6	D REVISION 6 4	2		PAGE	
VALVE NUMBER	COORD	C1 06.2	COORD CLOSS CATEGORY	VALVE	VALVE	ACT.	NORMAL	STROKE	MAX STROKE	TEET	46.04		
185026	n E	2	CHIEGORY	(IN.)	TYPE	IYPE	POSITION	DIRECT.	DIRECT. TIME METHOD	METHOD	MODE	REQUEST REQUEST	REMARKS
	2	,	Œ	2.0	d.	А.О.	0	0	15.0	Lt	RR OD	VR-1	
186037	* 0									It	S S S	VR-11	
		7	Œ	2.0	d	А.О.	0	C	15.0	111	88	VR-1	
			The contract of the same of							It	2 32	VR-11	

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	RH							P & I M-62		N		PAGE 28 of 4	,
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.		TEST	TEST	RELIEF REQUEST	REMARKS
1RH8701A	E-2	1	A	12.0	GA	M.O.			(SEC.)				
					1311	H.U.	C	0	120.0	St	CS		Note 5
										It	RR	VR-11	more 3
1RH87018	£-1	1	A	12.0	GA	M.O.	C			Lt	RR		Note 6
					3000	11.0.	C	0	120.0	St	CS		Note 5
1000 2024										It	RR	VR-11	
1RH8702A	D-2	1	A	12.0	GA	M.O.	C			Lt	RR		Note 6
					-			0	120.0	St	CS		Note 5
RH8702B	0.1									It	RR	VR-11	
1 KIIO / UZD	D-1	1	A	12.0	GA	M.O.	С	0	120.0	Lt	RR		Note 6
								U	120.0	St	CS		Note 5
DUB 701 A										It	RR	VR-11	
RH8705A	D-1	1	A	0.75	CK	S.A.	С			l.t	RR		Note 6
Bug zaco					-	V.111.		С	N/A	Lt	RR		Note 6
RH87058	C-1	2	A	0.75	CK	S.A.	С			-			Passive
Disa yana						J. n.		С	N/A	Lt	RR		Note 6
RH8730A	E-3	2	C	8.0	CK	S.A.	С	^					Passive
0110 7 7 0 0						J. 11.	C	0	N/A	Ct/Xt	CS/OP		Note 8
RH8730B	B-3	2	C	8.0	CK	S.A.	С	^					
Pug 700A								0	N/A	Ct/Xt	CS/OP		Note 8
RH8708A	E-2	2	C	3.0X4.0	RV	S.A.	C	0					
RH8708B	0.2	*						0	N/A	RL	RR		
WHO / OOD	0-2	2	. C	3.0X4.0	RV	S.A.	С	0	21/0				
	-							U	N/n	81	RR		

SYSTEM RY VALVE				8 k	RON NUCL	BYRON NUCLEAR POWER STATION	VALVES					UNIT 1
LVE	4						P & 10	REVISION 4	2		PAGE 29 of A7	
NUMBER COORD	CLASS	CATEGORY SIZE	VALVE SIZE	VAL VE TYPE	ACT. TYPE	NORMAL	STROKE DIRECT.	MAX. STROKE TEST TIME METHOD.	TEST METHOD.	TEST	RELIEF REGIEST	REMARKS
1RY8010n D-6	1	3	0.9	SV	5.0	0		(SEC.)			100000	
1RY80108 0-5	-	3	0.9	SV	S.A.	2		N/N	KI	KR		
1RY8010C 0-4	-	3	0.9	SV	SA			H/H	Kt	RR		
18Y456 D-8	-	8	3.0	ngug				N/A		RR		
	1		2	LORA	н.о.	2	0	2.0	St	do		
1K1435H C-8	-	8	3.0	PORV	A.O.	C	0	2.0	31	N O	VR-11	
IRYBOOOA C-8	-	8	3.0	GA	A.O.	0	2		It	- W	VR-11	
IRYBOOOB C-8	-	69	3.0	GA	А.О.	0	0		It	3000	VR-11	
			-	-					It	RR	VR-11	

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	RY							P & 1 M-60-		N		PAGE 30 of 47	
VALVE NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	7. (2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	TEST METHOD	TEST	RELIEF	REMARKS
JRY8026	F-3	2	A	.375	GL.	A.O.			(SEC.)				
						n.u.	0	С	10.0	1 t:	RR	VR-1	
										St	OP		
										It	RR	VR-11	
					****					Ft	OP		
IRY8025	F-2	2	A	.375	GL.					St	OP		
				. 37 3	GL.	A.O.	C	C	10.0	Lt	RR.	VR-1	Passive
										It	RR	VR-11	rassive
1RY8028	t-2	2	A	3.0	D	A 0				Ft	OP	*** **	
			100	3.0	U	A.O.	0	C	10.0	Lt	RR	VR-1	
										St	OP	*** *	
										It	RR	VR-11	
IRY8046	F-3	2	A	3.0	CV					Ft	OP		
				3.0	CK	S.A.	С	C	N/A	Lt	RR	VR-1	Danning
RY8047	F-3	2	A	.75	CK	C A						***	Passive
Buscas				. 7 3	Ch	S.A.	С	C	N/A	Lt	RR	VR-1	Passive
RY8033	E-2	2	A	.75	D	A.O.	0					*** *	rassive
					-		· ·	С		Lt	RR	VR-1	
										St	OP		
										It	RR	VR-11	
										Ft	OP		

SYSTEM SA VAI VE COORD C ISA033 C-7 C-6	CLASS CATEGORY 2 A 2 A	VALVE VALVE SIZE TYPE (IN.) 1.5 GL	F TYPE A.O. A.O.	E ACT. NORMAL STROKE TYPE POSITION DIRECT A.O. O C A.O. O C	FI.	REVISIO 4 AX. STROKE TIME (SEC.) 4.5	METHOD METHOD St. Lt. Lt. Lt. Lt. Lt. Lt. Lt. Lt. Lt. L	TEST MODE OP	PAGE 31 of 47 RELIEF REQUEST VR-11 VR-11 VR-11	REMARKS
COORD COORD	VALVE CATEGORY A			NORMAL POSITION O		1 TIME (SEC.) 4.5	TEST METHOD St. 11t Lt. 1t Lt.	MODE MR OP	14 S 1 1 1 1 1 1	
	e e		A.O.	0 0	J J		1	2	VR-11 VR-11 VR-11	
	e		A.0.	0	2			\$ 0 % 0 % d	VR-11 VR-11	

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SYSTEM	SD							P & I M-48-		ON		PAGE 32 of 47	
NUMBER	COORD	CLASS	VALVE	VALVE SIZE (IN.)	TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.		TEST	TEST	RELIEF	REMARKS
15D002A	E-8	2	A	2.0	GL	A.O.	0	C	(SEC.)				
								C	7.5	Lt	RR	VR-1	
										St	OP		
1SD002B	E-7									It	RR	VR-11	
1000020	E-/	2	A	2.0	GL	A.O.	0	С	7.5	Ft	OP		
										St	RR	VR-1	
										It	OP		
1SD002C	E-7									Ft	RR	VR-11	
	L-7	2	A	2.0	GL.	A.O.	0	С	7.5	Lt	OP		
										St	RR	VR-1	
										It	OP		
1SD002D	E-6	2		0.0						Ft	RR OP	VR-11	
		2	A	2.0	GL	A.O.	0	С	7.5	it	RR	V0 +	
										St	OP	VR-1	
										It	RR	VR-11	
ISDOO2E	E-5	2	A	2.0	GL	A.O.				Ft	OP	*****	
					GL.	н. О.	0	С	7.5	Lt	RR	VR-1	
										St	OP		
										It	RR	VR-11	
SD002F	E-4	2	A	2.0	GL	A.O.	0			Ft	OP		
						n.v.	0	С		Lt	RR	VR-1	
										St	OP		
										It	RR	VR-11	
SDOO2G	E-3	2	A	2.0	GL	A.O.	^	-		Ft	OP		
							0	С		Lt	RR	VR-1	
										St	OP		
SD002H	-									It	RR	VR-11	
SLOUZH	E-3	2	A 2	2.0	GL	A.O.	0	C	7.6	Ft	OP		
										Lt	RR	VR-1	
										St It	OP	un	
										t	RR OP	VR-!1	

	COMMON	WEALTH E	DISON		IS	I CLASS	TESTING PI 1, 2 and 3 LEAR POWER S	VAL VES					UNIT 1
SYSTEM	SD							P & I M-48-		N		PAGE 33 of 47	
VALVE NUMBER	COORD	CLASS	VALVE	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1SD005A	D-8	2	A	. 375	GL.	3.0.	С	С	3.0	St Lt It	OP RR RR	VR-1	Passive
19D005B	D-7	2	A	. 375	GL	A.0.	c	С	3.0	St Lt It	OP RR RR	VR-11 VR-1 VR-11	Passive
1SD005C	D-5	2	A	. 375	GL	A.O.	C	С	3.0	St Lt It	OP RR RR	VR-1 VR-11	Passive
ISD005D	D-4	2	A	. 375	GL	A.O.	C	С		St Lt It	OP RR RR	VR-11 VR-11	Passive

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SYSTEM	SI							P & I M-61-		N		PAGE 34 of 47	
VALVE NUMBER	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1S18804B	B-4	2	В	8.0	GA	M.O.	C	0	(SEC.) 10.0	St	OP		
1518806	B-3	2	В	8.0	GA	M.O.	0	C	15.0	It St	RR CS	VR-11	
1S18807A	C-3	2	В	6.0	GA	M.O.	C	0	15.0	It St	RR	VR-11	Note 14
1SI8807B	C-3	2	В	6.0	GA	M.O.	С	0		It	OP RR	VR-11	
1S18922A	C-5	2	С	4.0			**************************************		15.0	St It	OP RR	VR-11	
		-	· ·	4.0	CK	S.A.	С	0	N/A	Ct	CS	VR-3	
15189228	8-5	2	С	4.0	CK	S.A.	С	0	N/A	Ct	CS	VR-3	
ISI8926	B-3	2	С	8.0	СК	S.A.	С	0	N/A	Ct/Xt	CS/OP	VR-6	
ISI8924	D-3	2	В	6.0	GA	M.O.	0	C		St	OP OP	- VK-B	
		-	-							<u>It</u>	RR	VR-11	

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	SI							P & I M-61-		N		PAGE 35 of 4/	
VALVE NUMBER	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST METHOD	TEST	RELIEF REQUEST	REMARKS
1SI8801A	D-5	2	В	4.0	GA _	M.O.	С	0	10.0	St	CS		Note 13
1ST8801B	0-5	2	В	A 0		** **	Water the Santal Control of the Santal			It	RR	VR-11	
			ь	4.0	GA	M.O.	С	0	10.0	St	CS		Note 1
1SI8900A	F 0				***					It	RR	VR-11	
13109001	E-8	- 1	AC	1.5	CK	S.A.	C	0	N/A	Ct	CS		Note 9
1S18900B	F 0									Lt	RR		Note 6
13103008	E-8	1	AC	1.5	CK	S.A.	C	0	N/A	Ct	CS		Note 9
1S18900C	D-8	*			-					Lt	RR		Note 6
1010000	0-0	1	AC	1.5	CK	S.A.	C	0	N/A	Ct	CS		Note 9
1S18900D	C-8	1	00		-744					Lt	RR		Note 6
	C-0		AC	1.5	CK	S.A.	C	0	N/A	Ct	CS	-	Note 9
ISI8815	D-6	1	AC	2 0	C144			-		Lt	RR		Note 6
	0 0		AC	3.0	CK	S.A.	С	0	N/A	Ct	CS		Note 9
		The Second Section 2014 Control Section 1								Lt	RR		Note 6

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	SI			See				P & II		N		PAGE 36 of 4	7	
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE	TEST	TEST	RELIEF REQUEST	REMARKS	;
15I8802A	E-3	2	В	4.0	GA	M.O.	C		(SEC.)		TRALL	KEYUE31		
ISI8802B	D- 3	2	В	4.0	GA	M.O.		0	10.0	St It	CS RR	VR-11	Note 14	
1518840		-			on	11.0.	С	0	10.0	54	CS		Note 14	-
1318840	8-4	2	В	12.0	GA	M.O.	С	0	15.0	It St	RR CS	VR-11		
ISTRB88	6.2		-							It	RR	VR-11	Note 14	
	E-3	2	A	. 75	GL	A.O.	C	С	10.0	St	OP RR	VR-1	Passive	
IS18905A	E-5	- 1	AC	2.0	CK	S.A.	С	0	N/A	It Ct	RR	VR-11	rassive	
ST89058	D-7	1	AC	2.0	~~					Lt	CS RR	VR-3 /	Note 6	
OTAQ AF A		•	HG	2.0	CK	S.A.	C	0	N/A	Ct	CS	VR-3	Note 6	
S18905C	D-7	1	AC	2.0	CK	S.A.	С	0		Lt Ct	RR CS	VR-3	Note 6	
S18905D	E-4	1	AC	2.0	CK	S.A.	С	0	-	Lt	RR		Note 6	
S18835	C-4	2	8	4.0	CA	-		0		Ct Lt	CS RR	VR-3	Note 6	
S18949A	C 0	Tallette and the second second second		4.0	GA	M.O.	0	С		St	CS		Note 14	
-	F-8	1	AC	6.0	CK	S.A.	С	0		It Lt	RR RR	VR-11	Sloke C	
\$189498	D-8	1	AC	6.0	CK	S.A.	С			Ct	CS		Note 6	
518949C	C-8	1	Λ.		-			0		Ct	RR CS	VR-3	Note 6	
-		•	AC	6.0	CK	S.A.	С	0	N/A	Lt	RR	_ vn-3	Note 6	
518949D	E-8	1	AC	6.0	СК	S.A.	С	0		<u>Ct</u> .t	CS	-	Note 9	
A618819	A-5	1	AC .	2.0	CV		-	-		Ct	RR CS	VR-3	Note 6	
T00100			no ,	2.0	CK	S.A.	С	0		t	RR		Note 6	
188198	A-7	1	AC 2	2.0	CK	S.A.	С	0		t	CS RR	VR-3	N-1-	man,u.
18819C	A-6	1	AC 2	2.0	СК	S.A.				t	CS	VR-3	Note 6	
188190	A-5	1					С	0		t	RR	VP 2	Note 6	
		1	AC 2	2.0	CK	S.A.	C	0	N/A L		RR CS	VR-3	Note 6	

						F-76.8 MC.	ON TOMES	*					1
Miles I								20 日本	Market and A			1	
NAMES OF	(See	13.800	THE R. P. LEW.	N 10 1	N N N	*	A 100 m	10 km	Mary San	10.00			N Marie
Children			*			*			1,000	1	1		
\$11,000 to 11.00			¥	**	*	* 4				W 10			
11198111	* 6		*	8.8	15	10 ME					1 53		* 100
11(1941)3	*		*	:: *	5	100	ŀ		帝 营	20.2	23	11 34	

SYSTEM	SI							P & IO M-61-4		N		PAGE 38 of 47		
VALVE NUMBER	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST METHOD	TEST	RELIEF REQUEST	REMARKS	
1SI8809A	E-4	2	В	8.0	GA	M.O.	0	С	(SEC.) 10.0	St				-
1010000									10.0		CS		Note 14	
15188098	D-4	2	В	8.0	GA	M.O.	0	С	10.0	It St.	RR	VR-11		
10100110	-		-						10.0		CS		Note 14	
IS18811A	8-5	2	В	24.0	GA	M.O.	C	0	120.0	It St	RR	VR-11		_
S18811B	A F								120.0	It	OP	WD 11		
2100110	A-5	2	8	24.0	GA	M.O.	С	0	120.0	St	RR OP	VR-11		
SI8812A	C-4			-						It	RR	WD 11		
31001211	C-4	2	В	12.0	GA	M.O.	0	C	15.0	St	OP	VR-11	***	
S18812B	8-4	2		10.0						It	RR	VR-11		
0100120	0-4	2	В	12.0	GA	M.O.	0	С	15.0	St	OP	VN-11		-
C100600	No. of									It	RR	VR-11		
S18958A	C-4	2	C	12.0	CK	S.A.	C	0	N/A	Ct	CS	-10-11	Note 9	-
S18958B	B-4	2	0	10.0		-								
		2	С	12.0	CK	S.A.	C	0	N/A	Ct	CS		Note 9	Maria Control
SI8818A	F-7	1	AC	6.0	CK	е л								-
			110	0.0	CA	S.A.	C	0		Ct	CS		Note 9	
S18818B	0-7	1	AC	6.0	CK	0 0				Lt	RR		Note 6	
			110	0.0	CA	S.A.	C	0		Ct	CS		Note 9	
S18818C	D-7	1	AC	6.0	CK	e A				Lt	RR		Note 6	
			****	0.0	CN	S.A.	C	0		Ct	CS		Note 9	
S18818D	E-7	1	AC	6.0	CK	S 0	C	-		Lt	RR		Note 6	
		-	****	0.0	CAN.	S.A.	С	0		Ct	CS		Note 9	
				The second second						Lt	RR		Note 6	

SYSTEM	SI							P &] M-61-	The state of the s	N		PAGE 40 of 4	
VALVE NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME (SEC.)	TEST	TEST	RELIEF REQUEST	REMARKS
1518880	F-3	2	A	1.0	GL	A.O.	С	С	10.0	St Lt	OP RR	VR-1	Passive
ISI8956C	8-7	1	AC	10.0	CK	S.A.	С	0	N/A	It Lt	RR RR	VR-11	Note 6
IS18956D	8-4	1	AC	10.0	CK	S.A.	С	0	N/A	Ct Lt	CS RR	VR-5	Note 6
IS18948C	B-8	1	AC	10.0	СК	S.A.	C	()	N/A	Ct	CS CS	VR-5	
S18948D	8-5	1	AC	10.0	CK	S.A.	С			Lt	RR		Note 9 Note 6
							-	0		Ct Lt	CS RR		Note 9
S18871	A - 3	2	A	.75	GL	A.O.	С	С	The same of the sa	St Lt	OP RR	VR-1	Passive
\$18964	D-3	2	A	.75	CI				The same in the party of the pa	It St	RR OP	VR-11	
518968					GL	A.O.	С	С		Lt It	RR RR	VR-1	Passive
310368	F-4	2	A	1.0	CK	S.A.	С	С		Lt	RR	VR-11 VR-1	Passive

SYSTEM	SX							P & 1		N		PAGE 41 of 47	
VALVE NUMBER	COORD	CLASS	VALVE CATEGORY	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.		TEST	TEST	RELIEF	REMARKS
1SX112A	E-5	3	В	12.0	BTF	A.O.	0	C	(SEC.)				
									6.0	St	OP		
1041114		-								It	RR	VR-11	
ISX114A	E-3	3	В	12.0	BTF	A.O.	0	С		Ft	OP		
									6.0	St	OP		
										It	RR	VR-11	
1SX112B	C-5	3	В	12.0	BIF	A.O.	^			Ft	OP		
				7717		n.o.	0	С	6.0	St	OP		
										It	RR	VR-11	
1SX114B	C-5	3	В	12.0	BTF	A.O.				Ft	OP		
				**.0	D11	н.О.	0	C	6.0	St	OP		
										It	RR	VR-11	
1SX101A	E-3	3	В	1.5	GL.	6.0				Ft	OP		
				*	GL.	S.O.	С	0	N/A	St	OP	VR-7	
ISX173	C-3	3	8	6.0	GA	A.O.				Ft St	OP		
					Ciri	н.О.	С	0			OP		
ISX178	A-3	3	В	6.0	GA	A.O.		-		Ft ·	OP		
					SITT	H.U.	С	0		St	OP		
SX169A	F-8	3	В	10.0	BTF	A.O.				Ft	OP		
					011	H.U.	С	0	20.0	St	OP		
										It	RR	VR-11	
SX169B	D-8	3	В	10.0	DYC					Ft	OP		
		7	· ·	10.0	BTF	A.O.	C	0		St	OP		
										It	RR	VP 11	
										Ft	OP	VR-11	

	COPPON	COMPONAL ALTH EDISON	NOSIO		IS IS	NSERVICE I CLASS RON NUCL	INSERVICE LESTING PROGRAM IST CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION	ROGRAM VALVES STATION					UNIT 1
SYSTEM	SX							P & ID M-42-1	REVISION 4	NO		PAGE 42 of 47	
VALVE NUMBER	СООКО	CLASS	VALVE	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	E TEST METHOD	TEST	RELIEF	PEMARKS
15Х002н	F-6	3	C	36.0	ž	S.A.	3	0	N/N	13	90		
15X002B	9-0		C	36.0	CK	S.A.	3	0	N/A	5	do		
		The second second second second											
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			The state of the s	-	the second contract or make a second	-	STATE OF THE PERSON NAMED OF THE PERSON NAMED IN COLUMN NAMED	The second second second second					

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SYSTEM	XS							P & 1D M-42-5	ID REVISION	N		PRIGE 43 of 47	
NUMBER	COORD	CLASS	VE	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	E	METHOD	TEST	RELIEF REQUEST	REMARKS
наточе	8-3	2	8	0.91	ВТЕ	M.0.	3	0	15.0	St	90		Passive
15X027A	6-9	7	8	0.91	BTF	M.0.	3	0	15.0	It	88	VR-11	Dago
15X016B	E-1	2	8	0.91	BTF	M.0.	0	0	15.0	It	RR OP	VR-11	Date
15X027B	1-0	2	8	0.91	BTF	M.0.	0	0	15.0	It	RR OP	VR-11	Pacciuo
											-	The same of the sa	-

INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION

SYSTEM	VQ							P & I M-105		N		PAGE 44 of 4	7
NUMBER	COORD	CLASS	CATEGORY	VALVE SIZE (IN.)	VALVE TYPE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	TEST	TEST	RELIEF	REMARKS
1VQ001A	E-5	2	A	48.0	BTF	H.O.	-		(SEC.)			WE GOE 21	
						n.o.	С	C	5.0	Lt	RR	VR-1	Passive
11000010										St	CS		Note 11
1VQ001B	E-6	2	A	48.0	BTF	H.O.	6			It	RR	VR-1i	
						n.v.	С	C	5.0	Lt	RR	VR-1	Passive
HOODS										St	CS		Note 11
VQ002A	E-4	2	A	48.0	BTF	H.O.	С			It	RR	VR-11	
								С		11	RR	VR-1	Passive
VQ0028										St	CS		Note 11
VQ002B	E-3	2	A	48.0	BTF	H.O.	С	С		It	RR	VR-11	
						100000	C	C		Lt	RR	VR-1	Passive
VQ003	C-4	2								St	CS		Note 11
4003	C-4	2	A	8.0	BTF	A.O.	C	С		It	RR	VR-11	
										Lt St	RR	VR-1	Passive
VQ004A	0-5	2	^	0.0						It	OP RR		
			A	8.0	BTF	A.O.	С	C		Lt	RR	VR-11	
										St	OP	VR-1	Passive
VQ0048	0-6	2	A	0.0						It	RR	WD	
			н	8.0	BTF	A.O.	C	C		1	RR	VR-11	
										St	OP	VR-1	Passive
/Q005A	E-4	2	A	8.0	DTC					It	RR	WD ++	
				0.0	BTF	A.O.	C	C		t	RR	VR-11	
										it	OP	VR-1	Passive
/Q0058	E-4	2	A 8	3.0	BTF					t	RR	VR-11	
		17.0			DIF	A.O.	С	C		t	RR	The second secon	Dacatus
00000									5	it	OP	-11-1	Passive
Q005C	E-4	2	A 8	0.0	BTF	A.O.	С	-	1	t	RR	VR-11	
						H.U.	C	C	5.0	t	RR		Passive
										t	OP		
								-	I	t	RR	VR-11	

SYSTEM WITH STATE OF THE CORP. CLASS CAREGORY SIZE TITE THE PAGE AND STATE OF 43 AND STATE OF THE POSITION OF CLASS CAREGORY SIZE TITE TO CLASS CAREGORY SIZE TITE TO CLASS CAREGORY SIZE TO CLASS CAREGORY SI		CONTRON	COPPONIME AL TH EDISON	DISON		ISI	I CLASS RON NUCL	INSERVICE TESTING PROGRAM ISI CLASS 1, 2 and 3 VALVES TYRON NUCLEAR POWER STATION	ROGRAM VALVES STATION					UNIT 1
COORD CLASS CAREGORY SIZE TYPE TYPE POSITION DIRECT TIME METHOD MODE REQUEST C-2 A 2.0 CA M C C N/A Lt RR WE-1 C-2 A 2.0 CX S.A. C C N/A Lt RR WE-1 C-2 A WA 1 Lt RR WE-1	SYSTEM	5							P 6 1		2		1	
C-7 2 A 2.0 GR M C C C N/A Lt RR VR-1	VIN VE	COORD	CLASS	VALVE	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL	STROKE DIRECT.			TEST	RELIEF	REMARKS
C-7 2 A 2.0 OK S.A. C C N/A Lt RR VR-1	0616	9-0	2	Œ	2.0	G	ε	Э	3	N/A	11	88	VR-1	Passive
	MH191	6.7	2	ď	2.0	CK	S.A.	0	0	N/A	11	S S	VR-1	Passiv
									-					
										-				

	COPPICAL	COPPICALLE AL TH EDISON	DISON		- 8	I CLASS ROW NUCL	INSERVICE TESTING PROGRAM IST CLASS 1, 2 and 3 VALVES BYRON NUCLEAR POWER STATION	PROGRAM 3 VALVES STATION					UNIT 1
STUTE	9				i.			P & 10 M-118-5	REVISION 5 4	NO		PAGE 47	
VALVE NUMBER	COORD	CLASS	VALVE	VALVE SIZE (IN.)	VALVE	ACT. TYPE	NORMAL POSITION	STROKE DIRECT.	MAX.STROKE TIME	(E TEST METHOD	TEST	RELIEF REQUEST	REMARKS
140006A	£-5	2	٠	0.01	9	M. O.	o	5	50.0	St	RR OP	VR-1	Passive
89000MI	8-4	2	Œ	10.0	5	M.O.	2	3	50.0	St	% do a	VR-11	
1W00078	E-6	2	æ	10.0	×	S.A.	0	0	N/A	II II	2 0 0 0	VR-11	Passive
IM00200H	5-0	2	Œ	0.01	CA	0.5	J	0	50.0	St	9.8	1 90	Pass IVe
1W00208	8-4	7	Œ	0.01	5	M.0.	v	3	9	It St	88 0	VR-11	rassive
1W00078	8-4	2	B	10.0	CK	a s			2.0	It It	W W	VR-11	Passive
IMDOSen	9-0	2	e	10.0	3	M.O.	, ,	ي د	N/A	St Lt	OP PR	VR-1	Passive
10000							,	ر	0.00	It It	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	VR-11	Passive
восоомі	E-3	2	æ	10.0	8	A.O.	0	0	90.0	St Lt	90 88 88 88 88		Passive