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INSERVICE TESTING PROGRAM
ENRICO FERMI ATOMIC POWER PLANT
UNIT 2

Prepared for:

The Detroit Edison Company

Prepared by:

NUTECH Engineers Chicago

Prepared by:

J. M. Clauss, P.E.
Project Engineer

Issued by:

J. M. Clauss, P.E.
Project Manager

Approved by:

J. B. Martin, P.E.
Engineering Manager

Date: July 8, 1982

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Enrico Fermi Atomic Power Plant, Unit 2

J. M. Clauss, P.E.
Senior Engineer
NAME/TITLE

INITIAL

J. W. Kin, P.E.
Senior Engineer
NAME/TITLE

INITIAL

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1.0 INTRODUCTION

Revision 1 of the Enrico Fermi Atomic Power Plant, Unit 2 (EF2) ASME Inservice Testing Program for pumps and valves will be in effect for a 120 month period which commences with plant fuel load. The period of time this revision of the program is effective represents the first 120 month (10 year) inspection interval. This program will be updated prior to the start of the second 120 month interval in accordance with the requirements of 10CFR50.55a(g).

The program contained herein outlines the Inservice Testing (IST) requirements for the Enrico Fermi Atomic Power Plant, Unit 2 (EF2). This program is based on the requirements of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1980 Addenda. All references to IWP or IWV in this document correspond to Subsection IWP or IWV of ASME Section XI, 1980 Edition through the Winter 1980 Addenda unless otherwise noted.

This IST program was developed using the ISI classification boundaries and the following documents:

- Title 10, Code of Federal Regulations, Chapter 50
- Division 1 Regulatory Guides
- Standard Review Plan 3.9.6, "Inservice Testing of Pumps and Valves"

- Division 1 Draft Regulatory Guide and Value/Impact Statement, "Identification of Valves for Inclusion in Inservice Test Programs"
- "NRC Staff Guidance for Preparing Pump and Valve Testing Programs and Associated Relief Request", January 1978
- Final Safety Analysis Report, Enrico Fermi Atomic Power Plant, Unit 2.

The inservice tests identified in this program will verify the operational readiness of pumps and valves whose functions are required for safety. All pumps and valves which function to mitigate the consequences of an accident or to bring the reactor to a stable condition have been included in this program. The IST classification of each pump and valve matches the ISI classification indicated on the P&IDs with one exception, pumps and valves in the IST program which are not within the ISI classification boundaries are indicated as non-classed (NC).

2.0 INSERVICE TESTING PROGRAM FOR PUMPS

2.1 General Information

2.1.1 Applicable Code

This Inservice Testing Program for ISI Class 1,2,3 and NC Pumps meets the requirements of Subsection IWP of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1980 Addenda. Where these requirements are determined to be impractical, specific requests for relief have been written and included in Section 2.2.

2.1.2 Pump Program Tables

The tables in Section 2.3 list all pumps included in the Enrico Fermi Unit 2 IST Program. The data contained in these tables identifies all pumps subject to inservice testing, the inservice test quantities, the inservice testing interval, and any applicable remarks. The column headings in these tables are listed and explained below:

- PUMP NUMBER: The Plant Identification System (PIS) number
- PUMP NAME
- CLASS: The ISI classification as shown on the color coded classification boundary diagram.
- P&ID 6M721-: The DECo drawing number for the P&ID
- COOR: The coordinate location on the P&ID where the pump appears.
- SPEED, INLET PRES, DIFF PRES, FLOW RATE, VIBRATION and BEARING TEMP: Inservice Test Quantities to be measured in accordance with Table IWP-3100-1

- TEST INTERVAL: The frequency of IST as prescribed in IWP-3400
- REMARKS: The data in this column includes the Surveillance Operations Procedure (SOP) number for performing the specified tests and any general information pertaining to the pump.

2.1.3 "Inservice Test Quantities" Columns

When the word "YES" appears in a particular test quantity column, that quantity will be measured during inservice testing in accordance with Subsection IWP. If a modified test is planned or if the word "NO" appears in a particular test quantity column, a request for relief number will be referenced. Requests for relief are abbreviated PR- ___. The actual request for relief is attached to Section 2.2.

2.1.4 Measurement of Inservice Test Quantities

- Speed: Per IWP-4400, shaft speed measurements are not applicable (NA) for pumps coupled to synchronous or induction type drivers.
- Inlet Pressure: For pumps taking suction from a tank or the RHR Service Water Complex basin, inlet pressure will be calculated (using appropriate density corrections) from a measured tank or basin level. All other inlet pressure measurements will be taken using pressure instruments at or near the pump inlet.
- Differential Pressure: Most differential pressure measurements will be calculated from inlet and discharge pressure measurements. In some cases, a differential pressure gauge will be used.

- Flow Rate: Pump discharge flow rate shall be measured.
- Vibration: See Section 2.2, Relief Request No. PR-1, for a discussion of EF2's proposed vibration monitoring program.
- Bearing Temperature: In accordance with Section 2.2, Relief Request PR-1, EF2 will not measure bearing temperatures.

2.1.5 Allowable Ranges of Test Quantities

The allowable ranges specified in Table IWP-3100-2 will be used for differential pressure and flow measurements. Should the measured test quantity fall outside the allowable range, the possibility of defining an expanded allowable range, in accordance with the intent of ASME Code interpretation XI-1-79-19, will be investigated. In some cases, the performance of a pump may be adequate to fulfill its safety function even though there may be some degradation, as compared to the reference value.

2.1.6 Bearing Lubricant

As specified in Table IWP-3100-1, the pump bearing lubricant level, pressure, or flow will be observed during inservice testing.

2.1.7 Exempted Pumps

The reactor recirculation centrifugal pumps have been exempted from the IST program because they do not perform a safety function. The reactor recirculation jet pumps have been exempted from the IST program because Subsection

IWP is applicable to centrifugal and positive displacement pumps only. These pumps have been exempted in accordance with IWP-1100.

SECTION 2.2

RELIEF REQUESTS FOR INSERVICE PUMP TESTING PROGRAM

RELIEF REQUEST NO. PR-1

PUMP NUMBER: All pumps in this program.

SECTION XI REQUIREMENT: Pump vibration and bearing temperature measurements are used to detect changes in the mechanical characteristics of a pump. Regular testing should detect developing problems, thus repairs can be initiated prior to a pump becoming inoperable (i.e. unable to perform its function). ASME Section XI requires measurement of vibration amplitude displacement in mils (thousandths of an inch) every three months and bearing temperature once per year.

Enrico Fermi Atomic Power Plant proposes an alternate program which is believed to be more comprehensive than that required by Section XI. The proposed program is based on vibration readings measured in velocity units rather than vibration amplitude in mils displacement. This technique is an industry-accepted method which is more sensitive to small changes that are indicative of developing mechanical problems and hence more meaningful. Velocity measurements detect not only high amplitude vibrations that indicate a major mechanical problem, but also the equally harmful low amplitude, high frequency vibrations resulting from misalignment, imbalance, or bearing wear that usually go undetected by simple displacement measurements.

In addition, these readings go far beyond the capabilities of a bearing temperature monitoring program. A bearing will be seriously degraded prior to the detection of

increased heat at the bearing housing. Quarterly vibration velocity readings will achieve a much higher probability of detecting developing problems than annual bearing temperature readings.

Finally, IWP-3500 requires "three successive readings taken at ten minute intervals that do not vary more than three percent." Meeting this requirement for pumps having no recirculation test loop would be very difficult because the system water temperature, and consequently the lubricant temperaure, are expected to drift more than three pecent during 20 minutes. Also, the temperature of the lubricating fluid will vary with ambient conditions and make meaningful data trending impractical.

As described above, a program of bearing temperature trends and the evaluation of the results would in some cases be difficult to analyze. Improper interpretation of results could result in unnecessary pump maintenance. In addition, it is impractical to measure bearing temperatures on many of the pumps in the program. Some specific examples are as follows:

(1) Core Spray: The pump bearings are lubricated by emergency equipment cooling water flowage. Changes in emergency equipment cooling water system temperature would seriously affect the accuracy of trends.

(2) Residual Heat Removal (RHR): Same as (1) above.

(3) High Pressure Coolant Injection: This pump is driven by a steam turbine which exhausts steam into the pressure suppression chamber. Extended run times to stabilize bearing temperatures could heat the suppression pool water to a temperature exceeding the Technical Specification limit of 105°F.

(4) Diesel Fuel Oil Transfer: These pumps transfer diesel fuel oil from the diesel fuel oil storage tank to the diesel fuel day tank. There is no recirculation test loop for these pumps. The run time necessary to gather bearing temperature data would be too long based on the pump and diesel fuel oil day tank capacities.

In conclusion, the foregoing reasons demonstrate that the proposed program of vibration measurements is a more practical method of testing which meets the intent of the ASME Code requirements.

ALTERNATE TESTING: Pump vibration measurements will be taken in vibration velocity (in/sec). The evaulation of the readings will be per Table PR-1.

Table PR-1

ALLOWABLE RANGES OF VIBRATION VELOCITY[1]

QUANTITY		ACCEPTABLE RANGE	ALERT RANGE		REQUIRED ACTION RANGE	
			LOW VALUES	HIGH VALUES	LOW VALUES	HIGH VALUES
v	When 0 in/sec < v_r ≤ .15 in/sec	0 to 0.3 in/sec	None	0.3 in/sec to .45 in/sec	None	v > .45 in/sec
v	When .15 in/sec < v_r ≤ 0.3 in/sec	0 to .45 in/sec	None	.45 in/sec to .75 in/sec	None	v > .75 in/sec
v	When 0.3 in/sec < v_r ≤ 0.6 in/sec	0 to .90 in/sec	None	0.9 in/sec to 1.5 in/sec	None	v > 1.5 in/sec
v	When 0.6 in/sec < v_r ≤ 1.0 in/sec	0 to 1.1 in/sec	None	1.1 in/sec to 1.5 in/sec	None	v > 1.5 in/sec

Where: v = velocity measured in inches/second, peak.

v_r = reference velocity measurement (initial measurement after installation or rework).

1. See ASME Technical Paper 78-WA/NE-5, Table 2

RELIEF REQUEST PR-1 (Continued)

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SECTION 2.3

INSERVICE PUMP TESTING PROGRAM

PUMP NUMBER	PUMP NAME	CLASS	P&ID 6M721-	COOR	INSERVICE TEST QUANTITIES: SPEED	INLET PRES	DIFF PRES	FLOW RATE	VIBRATION	BEARING TEMP	TEST INTERVAL	REMARKS
C4103C001A	STANDBY LIQUID CONTROL	2	2082	J-7	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.139.01
C4103C001B	STANDBY LIQUID CONTROL	2	2082	K-7	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.139.01
E1102C002A	RESIDUAL HEAT REMOVAL	2	2084	L-4	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.204.01
E1102C002B	RESIDUAL HEAT REMOVAL	2	2083	K-9	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.204.01
E1102C002C	RESIDUAL HEAT REMOVAL	2	2084	L-2	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.204.01
E1102C002D	RESIDUAL HEAT REMOVAL	2	2083	K-11	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.204.01
E1151C001A	RESIDUAL HEAT REMOVAL SERVICE WATER	3	N2052	D-6	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.205.05
E1151C001B	RESIDUAL HEAT REMOVAL SERVICE WATER	3	N2053	D-2	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.205.05
E1151C001C	RESIDUAL HEAT REMOVAL SERVICE WATER	3	N2052	D-6	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.205.05
E1151C001D	RESIDUAL HEAT REMOVAL SERVICE WATER	3	N2053	D-2	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.205.05
E2101C001A	CORE SPRAY	2	2034	H-6	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.203.02
E2101C001B	CORE SPRAY	2	2034	H-9	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.203.02
E2101C001C	CORE SPRAY	2	2034	H-7	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.203.02
E2101C001D	CORE SPRAY	2	2034	H-11	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.203.02
E4101C001A	HIGH PRESSURE COOLANT INJECTION - BOOSTER	2	2043	E-9	YES	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.202.01/.02
E4101C001B	HIGH PRESSURE COOLANT INJECTION - MAIN	2	2043	E-7	*	*	*	*	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.202.01/.02

* THE HPCI MAIN AND BOOSTER PUMPS ARE TESTED SIMULTANEOUSLY

PUMP NUMBER	PUMP NAME	CLASS	P&ID 6M721-	COOR	INSERVICE TEST QUANTITIES: SPEED	INLET PRES	DIFF PRES	FLOW RATE	VIBRATION	BEARING TEMP	TEST INTERVAL	REMARKS
P4400C001A	EMERGENCY EQUIPMENT COOLING WATER	3	2027	C-5	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.207.03
P4400C001B	EMERGENCY EQUIPMENT COOLING WATER	3	2027	D-5	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.207.03
P4500C002A	EMERGENCY EQUIPMENT SERVICE WATER	3	N2052	D-5	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.208.02
P4500C002B	EMERGENCY EQUIPMENT SERVICE WATER	3	N2053	D-3	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.208.02
R3000C001	DIESEL FUEL OIL TRANSFER	NC	N2048	B-3	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	
R3000C002	DIESEL FUEL OIL TRANSFER	NC	N2048	B-6	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	
R3000C003	DIESEL FUEL OIL TRANSFER	NC	N2048	B-3	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	
R3000C004	DIESEL FUEL OIL TRANSFER	NC	N2048	B-6	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	
R3000C009	DIESEL FUEL OIL TRANSFER	NC	N2049	B-3	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	
R3000C010	DIESEL FUEL OIL TRANSFER	NC	N2049	B-6	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	
R3000C011	DIESEL FUEL OIL TRANSFER	NC	N2049	B-3	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	
R3000C012	DIESEL FUEL OIL TRANSFER	NC	N2049	B-6	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	

PUMP NUMBER	PUMP NAME	CLASS	P&ID 6M721-	COOR	INSERVICE TEST QUANTITIES: SPEED	INLET PRES	DIFF PRES	FLOW RATE	VIBRATION	BEARING TEMP	TEST INTERVAL	REMARKS
R3001C005	DIESEL GENERATOR SERVICE WATER	3	N2052	D-4	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.307.06
R3001C006	DIESEL GENERATOR SERVICE WATER	3	N2052	D-5	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.307.06
R3001C007	DIESEL GENERATOR SERVICE WATER	3	N2053	D-3	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.307.06
R3001C008	DIESEL GENERATOR SERVICE WATER	3	N2053	D-4	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.307.06
T4100C040	CHILLED WATER/CONTROL CENTER AC	NC	4325	D-3	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.413.01
T4100C041	CHILLED WATER/CONTROL CENTER AC	NC	4325	D-5	NA	YES	YES	YES	YES: PR-1	NO: PR-1	QUARTERLY	SOP 24.413.01

END OF DATA
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3.0 INSERVICE TESTING PROGRAM FOR VALVES

3.1 General Information

This Inservice Testing Program for ISI Class 1, 2, 3 and NC Valves meets the requirements of Subsection IWV of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1980 Addenda. Where these requirements are determined to be impractical, specific requests for relief have been written and included in Section 3.2

The tables in Section 3.3 list all ISI Class 1, 2, 3 and NC valves that have been assigned valve categories. Valves exempt per IWV-1200 are not listed. The following information is included for each valve:

- VALVE NUMBER: The valve identification numbers. Two identification numbers are shown for each valve: the first number utilizes a Plant Identification System (PIS) prefix; the second has a DECo procurement prefix. In most cases, both identification numbers are shown on the P&ID's.
- P&ID and COORDINATES: The coordinate location or the P&IL where the valve appears.
- CLASS: The ISI Classification of the valve.
- VALVE CATEGORY: The category(s) assigned to the valve based on the definitions of IWV-2200. Four (4) separate categories are defined in the Code: CATEGORY A - valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their safety function.

CATEGORY B - valves for which a specific amount of leakage in the closed position is not measured but which require stroke testing to verify their ability to fulfill their safety function.

CATEGORY C - valves which are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves).

CATEGORY D - valves which are actuated by an energy source capable of only one operation, such as rupture disks or explosive-actuated valves.

- VALVE SIZE: The nominal pipe size of the valve in inches.
- VALVE TYPE: The valve body design as indicated by the following abbreviations:

ANGLE	ANG
BALL	BAL
BUTTERFLY	BTF
CHECK	CK
EXCESS FLOW CHECK	XFC
GATE	GA
GLOBE	GL
MODULATING CONTROL	CV
NEEDLE	NDL
NOTCHED GLOBE	NGL
PLUG	PLG
RELIEF	RV
RUPTURE DIAPHRAGM	RPD
SAFETY/RELIEF	SRV
SHEAR	SH
SPECIAL CONTROL ASSEMBLY	SCA

STOP CHECK	SCK
3-WAY	3WY
4-WAY	4WY

- ACTUATOR TYPE: The type of valve actuator as indicated by the following abbreviations:

AIR OPERATOR	AO
AIR PILOT OPERATOR	AP
DIAPHRAGM OPERATOR	DO
EXPLOSIVE ACTUATOR	EXP
HYDRAULIC OPERATOR	HO
MANUAL	M
MOTOR OPERATOR	MO
SELF ACTUATED	SA
SELF ACTUATED & MOTOR OPERATED	SAM
SELF ACTUATED & PILOT OPERATED	SAP
SELF ACTUATED, SPRING ASSISTED, CHECK	SAS
SELF ACTUATED, TESTABLE CHECK	SAT
SPECIAL CONTROL ASSEMBLY	SCA
SOLENOID OPERATOR	SO
SELF ACTUATED, SPRING ASSISTED, TESTABLE CHECK	SST
MULTIVARIABLE	UA

- NORMAL POSITION: The normal position of the valve during plant operation. This is specified as follows:

OPEN	O
CLOSED	C
KEY LOCKED	KL
LOCKED OPEN	LO
LOCKED CLOSED	LC
NORMALLY ENERGIZED	NE
NORMALLY DE-ENERGIZED	ND

Valves with fail-safe positions are indicated as either FO-fail open or FC-fail closed.

- STROKE DIRECTION: The direction which an active valve must stroke to perform its safety function. This is the direction in which the valve will be stroked to satisfy the exercising requirements of IWV-3412 or IWV-3522. This may be specified as:
  - C - Close
  - D - De-energize
  - E - Energize
  - E&D - Energize & De-energize
  - O - Open
  - O&C - Open & Close

- TEST: The test(s) that will be performed to fulfill the requirements of Subsection IWV. The test definitions and abbreviations used are identified in Table 3.1-1.

- TEST FREQUENCY: The frequency at which the above mentioned tests will be performed. Test frequencies are defined in Table 3.1-2.

- MAXIMUM STROKE TIME: The limiting value of full stroke time, in seconds, for power operated valves in Category A or B.

- MAXIMUM LEAKAGE: The maximum leakage allowed during the specified leak test. The abbreviations for the units of measurement are:

  C Standard cubic centimeters per minute
  F Degrees Fahrenheit
  G Gallons per minute
  M Milliliters per hour
  W Inches of water per minute pressure decay

- RELIEF REQUEST: The reference to a relief request in Section 3.2 for valve testing that is considered impractical to implement. Relief requests are also provided to justify valve testing at a frequency other than what is specified in Section XI.

- REMARKS: The remarks column references the surveillance procedure used to perform the test, refers to Technical Specification requirements, or provides comments and clarification.

TABLE 3.1-1
INSERVICE VALVE TESTS

TEST	TEST NAME	TEST DESCRIPTION
AT-1	Type C Air Leak Test	The containment isolation valves on lines which connect directly to containment atmosphere and on lines which enter primary containment in the drywell or torus airspace (except lines which terminate below the torus minimum water level) will be seat leak tested with air in accordance with Technical Specification requirements and 10CFR50, Appendix J. The acceptance criteria for this test is defined in Relief Request No. VR-11.
AT-2	Type C Water Leak Test	The containment isolation valves on lines which connect directly to the torus below torus minimum water level and on lines which penetrate the torus in the airspace but terminate below the torus minimum water level will be seat leak tested with water in accordance with Technical Specification requirements and 10CFR50, Appendix J. The acceptance criteria for this test, a maximum leakage rate of 30D ml/hr, has been extracted from Article IWV-3426.
AT-3	Excess Flow Check Valve Test	Excess flow check valves will be tested in accordance with Technical Specification Paragraph 4.6.3.4.
AT-4	Bypass Leakage Valve Leak Test	Bypass leakage valves will be tested to verify that the total potential bypass leakage does not exceed 4% of the design primary containment leakage. For further information, see the SER, Supplement 2, Page 6-2 and DECo letter EF2-55,512.
AT-5	Safety/Relief Valve Leak Test	Safety/relief valve leakage is continuously monitored by the safety/relief valve discharge line (S/RVDL) tailpipe temperature monitor. An alarm at 200°F indicates safety/relief valve leakage. Refer to FSD B21-00-SD, Rev. 1A, Page 4-14.

TABLE 3.1-1
INSERVICE VALVE TESTS (continued)

TEST	TEST NAME	TEST DESCRIPTION
AT-6	Leak Tests for Additional Isolation Valves	Certain systems have valves which are not containment isolation valves but which provide additional containment isolation capability. The type of seat leak test for these valves will be identical to a Type C leak test. For further information, see Relief Request No. VR-29. There is no leakage criteria for these valves at this time.
AT-7	Vacuum Breaker Leak Test	The suppression chamber-drywell vacuum breakers will be leak tested in accordance with Technical Specification Paragraph 4.6.4.1.b.3.c.
AT-8	Purge/Vent Isolation Valve Leak Test	In addition to Type C tests for the purge/vent isolation valves, leakage integrity tests are required every 90 days by Branch Technical Position CSB 6-4 and NUREG-0798, Supplement 1, Page 6-3. For further information, see Relief Request No. VR-31.
AT-9	MSIV Leak Test	The main steam isolation valves (MSIV) are exempted from Type C tests because EF2 has a pressurized seal system, MSIV Leakage Control (Refer to 10CFR50, Appendix J, Section III.C.3). The allowable combined leak rate for all MSIV's and the third MSIV's is 100 SCFH as given in Technical Specification Paragraph 3.6.1.2.c.
AT-10	Pressure Isolation Valve Leak Test	Pressure isolation valves (PIVs) will receive periodic leakage tests in accordance with Technical Specification requirements. For further information, see Relief Request Nos. VR-7 and VR-8 and Technical Specification Paragraph 3.4.3.2.d.
BT	Full Stroke Exercise Test (IWV-3412 and 3413)	Exercise testing, verified by stroke time measurements, will be performed to confirm the full stroke capability of each valve. The stroke direction(s) tested and timed will be based on the direction the valve disk must travel to fulfill its safety function.

TABLE 3.1-1
INSERVICE VALVE TESTS (continued)

TEST	TEST NAME	TEST DESCRIPTION
BTE	Special Exercise Test	The main steam stop, main steam control, reheat stop, and reheat intercept valves must be exercised and observed once a week to fulfill Detroit Edison commitments. Refer to Detroit Edison letter EF2-5[illegible]07.
BTP	Partial Stroke Exercise Test (IWV-3412)	Partial stroke exercise tests will be performed, when possible, for valves that cannot be full stroke exercised during normal operation.
CT-1	Check Valve Exercise Test (IWV-3412)	Check valves will be exercised full open and/or full closed depending on the safety function of the valve. Verification of accepable system flow through a check valve shall be adequate demonstration that the valve is full open.
CT-2	Relief Valve Set Point Verification Test (IWV-3510)	Relief and safety/relief valve set points will be verified in accordance with IWV-3510.
DT	Rupture Disk and Explosive Valve Test (IWV-3610)	Explosive valves will be tested in accordance with IWV-3610. Rupture disks will be tested in accordance with manufacturer's instructions, if applicable.
FST	Fail-Safe Test (IWV-3415)	All valves with fail-safe actuators will be tested to verify proper fail-safe operation upon loss of actuator power.
PIT	Position Indication Check (IWV-3300)	All valves stroke timed with position indicators will be checked to verify that remote valve indicators accurately reflect valve operation.

TABLE 3.1-2
TEST FREQUENCY

TEST FREQUENCY	OPERATIONAL CONDITION (1)	FREQUENCY OF TESTING
OP	Power Operation	At least once per 92 days
CS	Cold Shutdown	See (2) Below
RR	Refueling	Not less than once every two years
SP	See applicable relief request	See applicable relief request
2Y	No operational condition limitations	Every two years (See Article IWV-3300)
5Y	No operational condition limitations	Every five years (See Article IWV-3511)
MR	No operational condition limitations	Per manufacturer's recommendation (See Article IWV-3620)

(1) Operational conditions are defined in the EF2 Technical Specifications, Table 1.2.

(2) Inservice valve testing at cold shutdown is valve testing which commences within two hours after the plant reaches a cold shutdown condition but in no case later than 48 hours after cold shutdown is reached. This testing continues until all valves are tested or the unit is ready for start-up. Completion of all testing is not a pre-requisite to plant start-up. Valve testing which is not completed during a cold shutdown shall be completed during subsequent cold shutdowns that may occur before refueling to meet the code specified testing frequency. In the case of frequent cold shutdowns, valve testing need not be performed more often than once every three months for Category A, B, and C valves.

In the case of longer planned cold shutdowns, the testing need not be started within the 48 hour limitation. However, in these instances, all valve testing must be completed prior to start-up.

NOTE: It is expected that the required testing will normally be completed in 96 hours following cold shutdown. However, completion of all valve testing during cold shutdown is not required if plant operating conditions will not permit the testing of specific valves.

SECTION 3.2

RELIEF REQUESTS FOR INSERVICE VALVE TESTING PROGRAM

RELIEF REQUEST NO. VR-1

SYSTEM: MAIN AND REHEAT STEAM and NUCLEAR BOILER

COMPONENT: N11-F607 (V17-2100) N11-F609 (V17-2101)
N11-F608 (V17-2102) N11-F610 (V17-2099)

CATEGORY: A

FUNCTION: These valves are blocking valves for the MSIV leakage control system. They need to seal properly to allow the MSIV leakage control system to function properly.

TEST REQUIREMENT: Exercise and time valves every three months (BT).

BASIS FOR RELIEF: Full stroke testing these valves during normal reactor operation requires isolating one of the four main steam lines. Isolation of these lines results in primary system pressure spikes, reactor power fluctuations, and increased flow in the unisolated steam lines. This unstable operation can lead to reactor scram. In addition, pressure transients resulting from stroke testing MSIVs increase the chances of actuating primary system safety/relief valves.

It is proposed that full stroke testing be performed at cold shutdowns. This request also contributes to a reduction of the relief valve challenge rate as recommended in NUREG-0626.

ALTERNATE TESTING: These valves will be full stroked excercised and timed during cold shutdown.

RELIEF REQUEST NO. VR-2

SYSTEM: FEEDWATER

COMPONENT: B21-F010A(V8-2008) B21-F032B(V8-2003)
B21-F010B(V8-2007) B21-F076A(V8-2002)
B21-F032A(V8-2004) B21-F076B(V8-2001)

CATEGORY: A/C

FUNCTION: Valves B21-F010A&B and B21-F076A&B close for containment isolation. Valve B21-F010A opens for HPCI injection. Valves B21-F032A&B are not containment isolation valves, however, they provide additional containment isolation capability.

TEST REQUIREMENTS: Exercise check valve in the close direction every three months (CT-1).

BASIS FOR RELIEF: These check valves cannot be tested for operability during reactor operation because the feedwater system is needed to maintain primary coolant inventory. If a feedwater isolation valve was closed during operation, the feedwater nozzle and spargers would undergo a severe thermal shock when feedwater was restored. This thermal shock could cause cracking and possible failure of the spargers and nozzles. Finally, the air operators on the testable check valves cannot close the valves against feedwater flow.

Although the air operated check valves can be tested during cold shutdown, the spring-to-close check valves must be tested during reactor refueling. There is no means of confirming valve position other than during the AT-1 test.

ALTERNATE TESTING: The testable check valves (B21-F032A&B, B21-F010A&B) will be exercised closed during cold shutdown. The non-exercisable, spring-to-close check valves (B21-F076A&B) will be exercised during reactor refueling.

RELIEF REQUEST NO. VR-3

SYSTEM: CLOSED COOLING WATER AND EMERGENCY EQUIPMENT COOLING WATER

COMPONENT: P44-F601A (V8-2323)
P44-F601B (V8-2314)
P44-F603A (V8-2324)
P44-F603B (V8-2315)

CATEGORY: B

FUNCTION: These valves must close to isolate the non-safety related Reactor Building Closed Cooling Water (RBCCW) from the safety related Emergency Cooling Water (EECW) System.

TEST REQUIREMENT: Exercise and time valves every three months (BT).

BASIS FOR RELIEF: During power operation the RBCCW system supplies cooling water to components inside the drywell, including the reactor recirculating pumps and motors. Closing the subject valves would interrupt cooling water flow to the reactor recirculating pump and motor bearing. These valves will not be exercised during normal operation because interruption of flow would cause damage to the pump and motor.

ALTERNATE TESTING: These valves will be exercised and timed during cold shutdown.

RELIEF REQUEST NO. VR-4

SYSTEM: CLOSED COOLING WATER AND EMERGENCY EQUIPMENT COOLING WATER

COMPONENT: P44-F182 (V8-2429)
P44-F604 (V8-2425)

CATEGORY: B; P44-F604 (V8-2425) and C; P44-F182 (V8-2429)

FUNCTION: These valves must close to isolate the non-safety related, non-seismic piping supplying cooling water to the CRD drive pumps from the EECW system.

TEST REQUIREMENT: Exercise and time valves every three months (BT). Exercise check valve in the close direction every three months (CT-1).

BASIS FOR RELIEF: During power operation the RBCCW system supplies cooling water to the CRD drive pumps. Closing the subject valves would interrupt cooling water flow to the CRD drive pumps. These valves will not be exercised during normal operation because interruption of flow would cause damage to the pump.

ALTERNATE TESTING: These valves will be exercised and timed during cold shutdown.

RELIEF REQUEST NO. VR-5

SYSTEM: CLOSED COOLING WATER AND EMERGENCY EQUIPMENT COOLING

COMPONENT:

P44-F606A (V8-2486)	P44-F282A(V8-3888)
P44-F606B (V8-2484)	P44-F282B(V8-3887)
P44-F607A (V8-2485)	P44-F615(V8-3889)
P44-F607B (V8-2483)	P44-F616(V8-3890)

CATEGORY: A/C; P44-F615, P44-F616 and A; all others

FUNCTION: These valves are primary containment isolation valves for the four EECW lines.

TEST REQUIREMENT: Exercise and time valves every three months (BT). Exercise check valve in the close direction every three months (CT-1).

BASIS FOR RELIEF: During power operation the RBCCW system supplies cooling water to components inside the drywell, including the reactor recirculating pumps and motors. Closing the subject valves would interrupt cooling water flow to the reactor recirculating pump and motor bearing. These valves will not be exercised during normal operation because interruption of flow would cause damage to the pump and motor.

ALTERNATE TESTING: These valves will be exercised and timed during cold shutdown except for P44-F282A and B which will be verified to close during the AT-1 test every reactor refueling cycle.

RELIEF REQUEST NO. VR-6

SYSTEM: ALL SYSTEMS

COMPONENT: All solenoid and air pilot operators.

CATEGORY: A and B

FUNCTION: Solenoid and air pilot operators are used as actuators on many 3-way, 4-way, and small valves.

TEST REQUIREMENT: Stroke time evaluation per IWV-3413(b).

BASIS FOR RELIEF: It is impractical to apply the requirements of IWV-3413(b) to valves with very short stroke times (i.e.< 5 seconds). Solenoid valves typically have full stroke times under one second. For these short stroke time valves, variances of 50 percent or more can occur in the measured times for reasons that are in no way related to valve performance, for example, operator reaction times. In these specific cases, verifying that the valve's stroke time does not exceed 5 seconds would be sufficient to evaluate valve performance.

Solenoid and air pilot valves which control the air supply to a main valve usually do not have indicator lights. However, the operation of the main valve within its stroke time limit implies that the solenoid and/or air pilot valve is performing satisfactorily.

ALTERNATE TESTING: For solenoid valves where position indication is provided, the measured stroke time shall not exceed 5 seconds. On 3-way solenoid operated and 4-way air pilot operated valves which control the air supply to air, diaphragm, and pilot solenoid opeated valves, verification that the main valve has stroked to the correct position within its stroke time limit will provide adequate evidence that the solenoid and/or air pilot operated valve has stroked to the proper position within the required time. When the letters "NA" appear in the stroke time column, the valve's stroke time is being verified indirectly by the stroke time measurement associated with the major valve.

RELIEF REQUEST NO. VR-7

SYSTEM: RESIDUAL HEAT REMOVAL, CORE SPRAY, HIGH PRESSURE COOLANT INJECTION, and REACTOR CORE ISOLATION COOLING

COMPONENT:

E11-F008 (V8-2092)	E11-F023 (V8-2171)
E11-F009 (V8-2091)	E11-F608 (V8-3407)
E11-F015A (V8-2161)	E21-F005A (V8-2021)
E11-F015B (V8-2162)	E21-F005B (V8-2022)
E11-F022 (V8-2172)	E41-F006 (V8-2194)
	E51-F013 (V8-2228)

CATEGORY: A

FUNCTION: These valves are designated as pressure isolation valves (PIVs). Pressure isolation valves are defined as valves which isolate the portions of a system designed for low pressure service from the portions of a system connected to the RCPB which are designed for high pressure service. For additional information, see NUREG-0677.

TEST REQUIREMENT: Exercise and time valves during normal operation (BT).

BASIS FOR RELIEF: Exercising these valves during normal operation would place the plant in a degraded or unsafe condition. The Safety Evaluation Report (SER), p. 3-30, and the FSAR, page E.5.110-15, state that full stroking these valves during cold shutdown is acceptable.

ALTERNATE TESTING: Exercising and timing tests will be performed during cold shutdown.

RELIEF REQUEST NO. VR-8

SYSTEM: RESIDUAL HEAT REMOVAL, CORE SPRAY, HIGH PRESSURE COOLANT INJECTION, and REACTOR CORE ISOLATION

COMPONENT:

E11-F050A	(V8-2163)	E21-F006B	(V8-2024)
E11-F050B	(V8-2164)	E41-F005	(V8-2195)
E21-F006A	(V8-2023)	E51-F009	(V8-2229)

CATEGORY: A/C

FUNCTION: These valves are designated as pressure isolation valves (PIVs). Pressure isolation valves are defined as valves which isolate the portions of a system designed for low pressure service from the portions of a system connected to the RCPB which are designed for high pressure service. For additional information, see NUREG-0677.

TEST REQUIREMENT: Exercise check valves E11-F050A&B and E21-F006A&B in the open and close direction every three months (CT-1). Exercise check valves E41-F005 and E51-F009 in the close direction every three months (CT-1).

BASIS FOR RELIEF: Exercising valves E11-F050A&B and E21-F006A&B during normal operation would place the plant in a degraded or unsafe condition. In addition, the air operator on these testable check valves cannot lift the valve disk when the reactor coolant system is at operating pressure. The SER, p. 3-30, and the FSAR, page E.5.110-15, state that full stroke exercising these valves during cold shutdown is acceptable.

Valves E41-F005 and E51-F009 are simple check valves. These valves will be exercised open during the HPCI and RCIC pump operability tests, however, since they are simple check valves they cannot be exercised closed.

ALTERNATE TESTING: Check valves E11-F050A&B and E21-F006A&B will be exercised during cold shutdown. Check valves E41-F005 and E51-F009 will be exercised closed during the AT-10 test which is performed at least once every two years.

RELIEF REQUEST NO. VR-9

SYSTEM: NUCLEAR BOILER, REACTOR RECIRCULATION, REACTOR CORE ISOLATION COOLING, CORE SPRAY, and HIGH PRESSURE COOLANT INJECTION

COMPONENT: Excess flow check valves

CATEGORY: A/C

FUNCTION: Excess flow check valves limit leakage from the RCPB due to instrumentation piping failures to 2.5 gpm and perform a containment isolation function.

TEST REQUIREMENT: Exercise check valve in the close direction every three months (CT-1).

BASIS FOR RELIEF: Excess flow check valves cannot be exercised without isolating instrumentation downstream of the excess flow check valve. Isolating instruments during normal operation would produce erroneous instrument readings which could lead to a degraded or unsafe plant condition.

ALTERNATE CONDITION: Excess flow check valves will be exercised in the close direction at the end of each refueling outage. The exercise test and seat leakage test (AT-3) for these valves will be performed simultaneously.

RELIEF REQUEST NO. VR-10

SYSTEM: HIGH PRESSURE COOLANT INJECTION

COMPONENT: E41-F045 (V8-2203)

CATEGORY: C

FUNCTION: This valve is designed to prevent backflow into the suppression pool in the event of pump suction shift from the contaminated condensate storage tank (CCST) to the suppression pool. The safety related stroke direction of this valve is in the open direction to provide suction flow to the HPCI pump.

TEST REQUIREMENT: Exercise check valve every three months (CT-1).

BASIS FOR RELIEF: There is no convenient method for verifying the ability of this valve to swing to the full open position. The system test circuits utilize the CCST for pump suction rather than the suppression pool. Taking suction from the suppression pool during testing is undesirable because torus water would be transferred to the condensate storage tank. Since torus water is not demineralized, the entire condensate storage tank inventory would have to be processed after the test.

In lieu of the Code required full stroke test, valve operability will be demonstrated by disassembling the valve and verifying that the valve disk swings freely to the full open position. Since this valve has no function during normal operation, no wear-induced degradation of the valve internals is expected.

Disassembly and inspection of this valve once every third refueling outage should be adequate to insure valve operational readiness.

ALTERNATE TESTING: This valve will be disassembled every third refueling outage to verify that the disk swings freely to the full open position.

RELIEF REQUEST NO. VR-11

SYSTEM: ALL SYSTEMS PENETRATING PRIMARY CONTAINMENT

COMPONENT: Valves subject to ASME Section XI, Category A, Containment Isolation Leakage Tests (AT-1).

CATEGORY: A and A/C

FUNCTION: The subject valves perform a containment isolation function as defined in 10CFR50, Appendix A, Criterions 55, 56, and 57.

TEST REQUIREMENT: Measure valve seat leakage and compare the measured leakage to a specific maximum leakage for each valve (IWV-3426).

BASIS FOR RELIEF: A specific maximum leakage per valve is not applicable to containment isolation valve leakage testing. As long as the sum of the 10CFR50, Appendix J, Type B and C leakage is less than 0.6La, the requirements of 10CFR50, Appendix J will be satisfied. See Technical Specification Paragraph 3.6.1.2.a for the definition of La.

ALTERNATE TESTING: The sum of the 10CFR50, Appendix J, Type B and C leakage shall be less than 0.6La.

RELIEF REQUEST NO. VR-12

SYSTEM: CONTROL ROD DRIVE

COMPONENT:

C11-114	C11-126
C11-115	C11-127
C11-117	C11-138
C11-118	

CATEGORY: B and C

FUNCTION: For a scram to occur, check valve C11-114 opens, check valves C11-115 and 138 close, diaphragm operated valves C11-126 and 127 open, and air supply solenoid valves C11-117 and 118 de-energize.

The valves listed above can be found on each CRD hydraulic control unit. There are 185 CRD hydraulic control units, one for each CRD.

TEST REQUIREMENT: Exercise and time valves every three months (BT). Exercise check valves every three months (CT-1).

BASIS FOR RELIEF: The proper operation of each of these valves is demonstrated during scram testing. During scram testing, each drive's scram insertion time is measured and a fail-safe actuator test is performed. The Technical Specifications limit individual CRD scram insertion times to specific values (Technical Specification paragraphs 3.1.3.3 and 3.1.3.4). If a particular CRD's scram insertion time is less than the specified limit, the above mentioned valves are functioning properly.

ALTERNATE TESTING: The frequency of individual scram insertion tests is: 1) 100% of control rod drives following core alterations or after a reactor shutdown greater than 120 days with reactor power equal to or less than 40% and 2) 10% of control rods at least once every 120 days of operations, per Technical Specification paragraph 4.1.3.2.

RELIEF REQUEST NO. VR-13

SYSTEM: CONTROL ROD DRIVE

COMPONENT: C11-120
C11-121
C11-122
C11-123

CATEGORY: B

FUNCTION: There are 185 sets of these valves; one for each control rod drive. Normal insertion and withdrawal of the CRDs is accomplished by opening and closing a particular set of valves (only one CRD can be moved at a time). These valves are not required to change position during a scram, but must be maintained in their normally closed position.

TEST REQUIREMENT: Exercise and time valves in the close direction every three months (BT).

BASIS FOR RELIEF: The proper operation of these valves is demonstrated continuously during normal operation. Malfunctioning valves would be evidenced by rod movement (drift). Therefore, an exercise and timing test for operability is not required for these valves.

ALTERNATE TESTING: The control rod drives will be continuously monitored for proper operation as required by the Technical Specifications. Periodic scram testing will demonstrate that the subject valves are in the closed position and operating properly.

RELIEF REQUEST NO. VR-14

SYSTEM: NUCLEAR BOILER

COMPONENT:	S/RV ADS Valves		Solenoid Valves
	PIS No	DECo No	PIC No
	B21-F013A	(V22-2071)	B21-F013A
	B21-F013B	(V22-2066)	B21-F013B
	B21-F013C	(V22-2060)	B21-F013C
	B21-F013G	(V22-2068)	B21-F013G
	B21-F013K	(V22-2062)	B21-F013K

CATEGORY: A/C for the S/RVs and B for the solenoids

FUNCTION: The functions of the S/RVs are: 1) act as a primary system safety valve which actuates on high system pressure, 2) open upon receipt of an auto depressurization signal to blowdown reactor, and 3) act as a primary system relief valve which can be manually actuated from the control room.

The function of the solenoid valve is to energize upon receipt of a manual or ADS signal.

TEST REQUIRMENTS: Exercise and time valves every three months (BT).

BASIS FOR RELIEF: Relief is requested from the Section XI required testing frequency of once every three months. These valves will be exercised once every eighteen (18) months as specified in Technical Specification paragraph 4.5.1.C.3.

In addition, relief is requested from the stroke timing requirements of Section XI. It is impractical to measure stroke times for S/RV and the solenoid since the stroke times are on the order of 100 mS. Steam flow measurements and/or turbine bypass valve position will verify that the S/RVs have performed their function in less than or equal to 5 seconds. Time "zero" for this stroke time measurement corresponds to the instant the hand switch is aligned in the "open" position.

NOTE: Stroke timing requirements for the solenoid valves are contained in Relief Request No. VR-6.

ALTERNATE TESTING: These valves will be exercised at least once per 18 months when the reactor is operating at sufficient power to bypass a quantity of steam through the turbine bypass valve(s) equal to or greater than the capacity of a S/RV. Since the turbine bypass valves respond automatically to RPV dome pressure, the actuation of a S/RV will result in rapid closure of the turbine bypass valves. Conversely, closing the S/RV will be accommodated by rapid opening of the turbine bypass valves. A change in turbine bypass valve position can be directly associated with a certain steam flow rate. This flow rate would be equal to the quantity of steam discharged by the S/RV.

No stroke time measurements will be performed. An abrupt change in turbine bypass valve position within 5 seconds will be adequate to demonstrate valve operability.

RELIEF REQUEST NO. VR-15

SYSTEM: NUCLEAR BOILER

COMPONENT:

B21-F022A	(V17-2003)	B21-IV22A	(E/V-IV22A)
B21-F022B	(V17-2001)	B21-IV22B	(E/V-IV22B)
B21-F022C	(V17-2002)	B21-IV22C	(E/V-IV22C)
B21-F022D	(V17-2004)	B21-IV22D	(E/V-IV22D)
B21-F028A	(V17-2007)	B21-IV28A	(E/V-IV28A)
B21-F028B	(V17-2005)	B21-IV28B	(E/V-IV28B)
B21-F028C	(V17-2006)	B21-IV28C	(E/V-IV28C)
B21-F028D	(V17-2008)	B21-IV28D	(E/V-IV28D)

CATEGORY: A and B

FUNCTION: These valves (MSIVs) are the primary containment isolation valves for the main steam lines and the special control assemblies consisting of electrical and air pilot solenoid valves which control the position of the MSIVs.

TEST REQUIREMENT: Exercise and time valves every three months (BT).

BASIS FOR RELIEF: Full stroke testing these valves during normal reactor operation requires isolating one of the four main steam lines. Isolation of these lines results in primary system pressure spikes, reactor power fluctuations, and increased flow in the unisolated steam lines. This unstable operation can lead to a reactor scram, and as discussed in NUREG-0626 pressure transients resulting from full stroke testing MSIVs increase the chances of actuating primary system safety/relief valves.

It is proposed that only partial stroke testing be performed during power operation and that full stroke testing be performed at cold shutdowns. These valves are provided with the circuitry to permit partial stroking to a 10% closed position. This partial stroke exercising provides an acceptable means of verifying valve performance during plant operation without affecting safety margins.

This request also contributes to a reduction of the relief valve challenge rate as recommended in NUREG-0626.

NOTE: Stroke time measurements for the solenoid valves are discussed in Relief Request No. VR-6.

ALTERNATE TESTING: These valves will be part stroke exercised every three months and full stroke exercised during cold shutdown.

RELIEF REQUEST NO. VR-16

SYSTEM: NUCLEAR BOILER

COMPONENT:

B21-F024A	(V4-2097)	B21-F029D	(V5-2059)
B21-F024B	(V4-2099)	B21-F036A	(V4-2101)
B21-F024C	(V4-2110)	B21-F036B	(V4-2102)
B21-F024D	(V4-2111)	B21-F036C	(V4-2098)
B21-F029A	(V5-2056)	B21-F036G	(V4-2103)
B21-F029B	(V5-2057)	B21-F036K	(V4-2100)
B21-F029C	(V5-2058)		

CATEGORY: C

FUNCTION: These valves must close upon loss of normal air or nitrogen supply to the S/RV ADS accumulators and the MSIV accumulators. These valves will open when the safety related control air system starts up after the loss of normal air or nitrogen supply.

TEST REQUIREMENT: Exercise valves in the open and close direction every three months (CT-1).

BASIS FOR RELIEF: The position of these simple check valves cannot be verified during normal operation or cold shutdown since special testing will be required. In addition, access to these valves is limited since they are inside the drywell.

ALTERNATE TESTING: These valves will be exercised during refueling.

RELIEF REQUEST NO. VR-17

SYSTEM: NUCLEAR BOILER

COMPONENT:

B21-F037A	(V22-2111)	B21-F037J	(V22-2102)
B21-F037B	(V22-2100)	B21-F037K	(V22-2103)
B21-F037C	(V22-2101)	B21-F037L	(V22-2105)
B21-F037D	(V22-2104)	B21-F037M	(V22-2097)
B21-F037E	(V22-2106)	B21-F037N	(V22-2108)
B21-F037F	(V22-2107)	B21-F037P	(V22-2110)
B21-F037G	(V22-2099)	B21-F037R	(V22-2109)
B21-F037H	(V22-2098)		

FUNCTION: During a S/RV discharge, these valves must be closed. After a S/RV discharge, the steam remaining in the S/RVDL will condense and try to draw a vacuum in the S/RVDL. These check valves (vacuum breakers) open and admit air to the S/RVDL thus relieving the vacuum condition.

TEST REQUIREMENT: Exercise check valve in the open and close direction every three months (CT-1).

BASIS FOR RELIEF: These check valves have no external means of actuation for exercising. The only practical method for exercising these valves open and closed is by manually pushing the disk from its seat. Since this requires access to the valves, which are located in the drywell, the test must be deferred to cold shutdowns when the primary containment is de-inerted.

ALTERNATE TESTING: These check valves will be verified to freely swing to their full open and closed positions during cold shutdowns when the drywell is de-inerted.

RELIEF REQUEST NO. VR-18

SYSTEM: REACTOR RECIRCULATION

COMPONENT:

B31-F014A	(V8-3710)	B31-F016A	(V8-3767)
B31-F014A	(E/V-F014A)	B31-F016A	(E/V-F016A)
B31-F014B	(V8-3590)	B31-F016B	(V8-3768)
B31-F014B	(E/V-F014B)	B31-F016B	(E/V-F016B)

CATEGORY: A and B

FUNCTION: The main valves are primary containment isolation valves on the CRD seal water injection lines to the reactor recirculation pumps. The solenoid valves control the position of the main valves.

TEST REQUIREMENT: Exercise and time valves every three months (BT).

BASIS FOR RELIEF: Exercising these valves during normal operation would require isolating the seal water flow to the reactor recirculation pumps. Isolating the seal water flow to these pumps could potentially damage the pump.

NOTE: Stroke timing requirements for the solenoid valves are contained in Relief Request No. VR-6.

ALTERNATE TESTING: These valves will be exercised and timed during cold shutdown.

RELIEF REQUEST NO. VR-19

SYSTEM: CORE SPRAY, RESIDUAL HEAT REMOVAL, and COMBUSTIBLE GAS CONTROL

COMPONENT:

E21-F017A	(V8-3182)	E11-F039A	(V8-3155)
E21-F017B	(V8-3181)	E11-F039B	(V8-3153)
E11-F035A	(V8-3244)	T48-F017A	(V4-2146)
E11-F035B	(V8-3245)	T48-F017B	(V4-2145)

CATEGORY: C

FUNCTION: These simple check valves must open when the relief valves upstream of the check valves discharge. In addition, these check valves provide additional containment isolation capability as described in Enrico Fermi's SER, p. 6-10 "Relief Valves as Isolation Valves".

TEST REQUIREMENT: Exercise valves every three months (CT).

BASIS FOR RELIEF: Relief is requested from the Section XI required testing frequency of once every three months. The only time these valves can be opened is when the upstream relief valve is discharged. These check valves will be stroked concurrent with the CT-2 test for the upstream relief valve.

ALTERNATE TESTING: These check valves will be exercised not less than once every five years.

RELIEF REQUEST NO. VR-20

SYSTEM: STANDBY LIQUID CONTROL

COMPONENT: C41-F006 (VR4-2011)
C41-F007 (VR4-2012)

CATEGORY: A/C

FUNCTION: The safety functions of these check valves are to open upon system injection and to close for containment isolation.

TEST REQUIREMENT: Exercise valve every three months (CT-1).

BASIS FOR RELIEF: The air operators on these testable check valves cannot move the valve disk to the full open position with the reactor containment system at 1000 psig.

ALTERNATE TESTING: These valves will be exercised during cold shutdown.

RELIEF REQUEST NO. VR-21

SYSTEM: REACTOR RECIRCULATION

COMPONENT: B31-F031A (V8-2203)
B31-F031B (V8-2004)

CATEGORY: B

FUNCTION: During a reactor recirculation loop pipe break loss of coolant accident, one of these valves will close depending on the location of the pipe break. LPCI loop selection logic determines which valve must close.

TEST REQUIREMENT: Exercise and time valves for operability every three months (BT).

BASIS FOR RELIEF: These valves cannot be full stroke tested during normal operation since isolation of a recirculation loop would cause a recirculation pump trip. One loop operation is restricted by Technical Specification paragraph 3.4.1.1.a.

ALTERNATE TESTING: These valves will be full stroke exercised during cold shutdown.

RELIEF REQUEST NO. VR-22

SYSTEM: NUCLEAR BOILER

COMPONENT:

B21-F013A	(V22-2071)	B21-F013J	(V22-2064)
B21-F013B	(V22-2066)	B21-F013K	(V22-2062)
B21-F013C	(V22-2060)	B21-F013L	(V22-2056)
B21-F013D	(V22-2054)	B21-F013M	(V22-2046)
B21-F013E	(V22-2052)	B21-F013N	(V22-2047)
B21-F013F	(V22-2050)	B21-F013P	(V22-2070)
B21-F013G	(V22-2068)	B21-F013R	(V22-2048)
B21-F013H	(V22-2058)		

CATEGORY: A/C

FUNCTIONS: The functions of the S/RVs are: 1) act as a primary system safety valve which actuates on high system pressure, 2) open upon receipt of an auto depressurization signal to blowdown reactor, and 3) act as a primary system relief valve which can be manually actuated from the control room.

There are two major concerns associated with S/RV seat leakage: 1) the sizing of the drywell cooling system is based on the amount of heat rejected to the containment atmosphere by the S/RVDLs and 2) the suppression pool temperature will increase slowly if the S/RVs leak.

TEST REQUIREMENT: Perform leak tests not less than once every two years (AT-5).

BASIS FOR RELIEF: Continuous seat leakage indication is provided on the safety/relief valves by the S/RVDL tailpipe

temperature monitors. Excessive leakage is indicated by a control room alarm when the S/RVDL tailpipe temperature monitor exceeds 200°F. No special test to measure seat leakage is planned.

ALTERNATE TESTING: The tailpipe temperature indicator will be used to confirm that the S/RV's are leaktight.

RELIEF REQUEST NO. VR-23

SYSTEM: ALL SYSTEMS

COMPONENT: Valves equipped to fail open or closed.

CATEGORY: A and B

FUNCTION: Upon loss of electrical power, the valve must stroke to its fail-safe position.

TEST REQUIREMENT: Solenoid valves which control the air supply to air operated valves and direct solenoid operated valves must stroke to their fail-safe position upon interruption of their electrical supply (FST).

BASIS FOR RELIEF: De-energizing the solenoid valve has the same effect as loss of electrical power. Therefore, stroking the valve from the control room (BT) to its fail-safe position constitutes a Fail-Safe Test (FST). No additional testing is necessary.

ALTERNATE TESTING: Normal stroking (BT), to the fail-safe position, of valves equipped to fail open or closed constitutes a Fail-Safe Test. No additional testing is necessary.

RELIEF REQUEST NO. VR-24

SYSTEM: NUCLEAR BOILER

COMPONENT:

B21-F022A	(V17-2003)	B21-F028C	(V17-2006)
B21-F022B	(V17-2001)	B21-F028D	(V17-2008)
B21-F022C	(V17-2002)	N11-F607	(V17-2100)
B21-F022D	(V17-2004)	N11-F608	(V17-2102)
B21-F028A	(V17-2007)	N11-F609	(V17-2101)
B21-F028B	(V17-2005)	N11-F610	(V17-2099)

CATEGORY: A

FUNCTION: These valves are the primary containment isolation valves or "third" containment isolation valves for the main steam lines.

TEST REQUIREMENT: Measure valve seat leakage and compare the measured leakage to a specific maximum leakage for each valve (IWV-3426).

BASIS FOR RELIEF: A specific maximum leakage per valve is not applicable for the MSIV seat leakage (AT-9) tests. As long as the combined leakage from the eight MSIV's is less than 100 scfh, then the requirements of Technical Specification Paragraph 3.6.1.2.c. are satisfied.

ALTERNATE TESTING: The combined leakage from all MSIV's shall be less than the maximum allowable combined leakage of 100 scfh.

RELIEF REQUEST NO. VR-25

SYSTEM: NUCLEAR BOILER

COMPONENT: B21-F003 (V17-2038) B21-F003 (E/V-F003)
B21-F004 (V17-2039) B21-F004 (E/V-F004)

CATEGORY: B

FUNCTION: These valves and the associated solenoid valves are used to vent the reactor vessel head and main steam line "A" during startup.

TEST REQUIREMENTS: Exercise and time valves for operability every three months (BT).

BASIS FOR RELIEF: Exercising one of these valves during normal operation leaves the other valve as the only barrier between the reactor vessel and the drywell sump. Any leakage through the closed valve could potentially pressurize the drywell which is an unnecessary risk for the sole purpose of testing a valve. Finally, operating procedures prohibit operation of these valves during power operation.

NOTE: Stroke time measurements for the solenoid valves are discussed in Relief Request No. VR-6.

ALTERNATE TESTING: These valves will be full stroke exercised during cold shutdown.

RELIEF REQUEST NO. VR-26

SYSTEM: MAIN AND REHEAT STEAM

COMPONENT:

N11-TCV1	N11-LPSV1	N11-LPSV5
N11-TSV1	N11-IV1	N11-IV5
N11-TCV2	N11-LPSV2	N11-LPSV6
N11-TSV2	N11-IV2	N11-IV6
N11-TCV3	N11-LPSV3	
N11-TSV3	N11-IV3	
N11-TCV4	N11-LPSV4	
N11-TSV4	N11-IV4	

CATEGORY: B

FUNCTION: These valves are the main steam stop, main steam control, reheat stop, and reheat intercept valves.

TEST REQUIREMENTS: Measure valve stroke time and compare the measured stroke time to a specific maximum stroke time (IWV-3413).

BASIS FOR RELIEF: As part of Detroit Edison's augmented test program (see EF2-53,907), these valves are to be exercised and observed (BTE) but not timed on a weekly basis.

ALTERNATE TESTING: None required.

RELIEF REQUEST NO. VR-27

SYSTEM: NUCLEAR BOILER, SUMP PUMP-RADWASTE, HIGH PRESSURE COOLANT INJECTION, and REACTOR CORE ISOLATION COOLING

COMPONENT: Valves subject to ASME Section XI, Category A, Bypass Leakage Tests (AT-4).

B21-F016(V17-2009)	E51-F022(V8-2232)
B21-F019(V17-2010)	E51-F007(V17-2030)
E41-F002(V17-2020)	E51-F008(V17-2031)
E41-F003(V17-2021)	G11-F003(V9-2005)
E41-F006(V8-2194)	G11-F004(V9-2044)
E41-F008(V8-2198)	G11-F018(V9-2022)
E41-F011(V8-2200)	G11-F019(V9-2023)
E41-F600(V17-2088)	

CATEGORY: A and A/C

FUNCTION: The subject valves perform a bypass leakage isolation function.

TEST REQUIREMENT: Measure valve seat leakage and compare the measured leakage to a specific maximum leakage for each valve (IWV-3426).

BASIS FOR RELIEF: A specific maximum leakage per valve is not applicable to bypass leakage isolation valve testing. As long as the sum of the leakage from all bypass leakage paths is less than 0.04La, the requirements of Branch Technical Position CSB 6-3 will be satisfied. This position has been reviewed and approved by the NRC

in Supplement 2 of Enrico Fermi's Safety Evaluation Report (NUREG-0798), pg. 6-1. See Technical Specification Paragraph 3.6.1.2.a for the definition of La.

Bypass leakage valves subject to Type C tests (AT-1) need not have an additional bypass leakage test (AT-4) performed. The results from the Type C test can be used to determine a particular valve's contribution to the total bypass leakage maximum of 0.04La.

ALTERNATE TESTING: The sum of the leakage from all bypass leakage paths shall be less than 0.04La.

RELIEF REQUEST NO. VR-28

SYSTEM: NUCLEAR BOILER

COMPONENT:

B21-F013A	(V22-2071)	B21-F013J	(V22-2064)
B21-F013B	(V22-2066)	B21-F013K	(V22-2062)
B21-F013C	(V22-2060)	B21-F013L	(V22-2056)
B21-F013D	(V22-2054)	B21-F013M	(V22-2046)
B21-F013E	(V22-2052)	B21-F013N	(V22-2047)
B21-F013F	(V22-2050)	B21-F013P	(V22-2070)
B21-F013G	(V22-2068)	B21-F013R	(V22-2048)
B21-F013H	(V22-2058)		

CATEGORY: A/C

FUNCTION: The functions of the S/RVs are: 1) act as a primary system safety valve which actuates on high system pressure, 2) open upon receipt of an auto depressurization signal to blowdown reactor, and 3) act as a primary system relief valve which can be manually actuated from the control room.

TEST REQUIREMENT: Safety valve and relief valve set points shall be tested (CT-2) every five (5) years.

BASIS FOR RELIEF: No relief is requested. This relief request has been written to document DECo's schedule for set point testing. (See ALTERNATE TESTING)

ALTERNATE TESTING: Per FSAR Section 5.2.2.4.1.3, 50 percent of the valves will be removed from service and bench tested at any given refueling outage, and the remaining 50 percent will be tested during the subsequent refueling outage.

RELIEF REQUEST NO. VR-29

SYSTEM: MAIN AND REHEAT STEAM, FEEDWATER, and REACTOR WATER CLEAN-UP

COMPONENT: B21-F032A (V12-2004)
B21-F032B (V12-2003)
G33-F121 (V8-2274)

CATEGORY: A and A/C

FUNCTION: The primary function of these valves is to protect against reverse flow on the feedwater and reactor water clean-up lines. Secondly, these valves serve as the "third" containment isolation valves as described in FSAR Section 6.2.4.2.2.2.1 which states, "A second check valve is located outside containment - between the air-operated isolation valve and the containment wall - for added isolation capability."

TEST REQUIREMENT: Measure valve seat leakage and compare the measured leakage to a specific maximum leakage for each valve (IWV-3426).

BASIS FOR RELIEF: Leakage will be measured for these valves in a manner similar to the Type C test. However, no maximum leakage requirements have been established at this time.

ALTERNATE TESTING: There is no maximum leakage assigned to these valves because there are no leakage requirements.

RELIEF REQUEST NO. VR-30

SYSTEM: TRAVERSING IN-CORE PROBE

COMPONENT:
C51-J004A (SHEAR)
C51-J004B (SHEAR)
C51-J004C (SHEAR)
C51-J004D (SHEAR)
C51-J004E (SHEAR)

CATEGORY: D

FUNCTION: The shear valves ensure that containment isolation of the TIP system can be accomplished even if one of the TIP drives is in operation. The shear valve will sever the TIP drive cable and provide containment isolation.

TEST REQUIREMENT: At least 20% of the charges in explosive actuated valves shall be removed, fired, and replaced every two years with charges from a fresh batch (DT).

BASIS FOR RELIEF: No relief is requested. This relief request has been written to document DECo's schedule for DT testing these valves (See ALTERNATE TESTING).

ALTERNATE TESTING: Per the Safety Evaluation Report (Supplement 2, pg 6-1), one of the explosive squib charges will be fired at least once every 18 months.

RELIEF REQUEST NO. VR-31

SYSTEM: NITROGEN INERTING and STANDBY GAS TREATMENT AND PRIMARY CONTAINMENT PURGE

COMPONENT: Valves subject to ASME Section XI, Category A, Purge and Vent Valve Leakage Test (AT-8).

T48-F400 (VR3-3015)	T48-F406 (V4-2060)
T46-F401 (VR3-3016)	T48-F407 (VR3-3012)
T46-F402 (VR3-3023)	T48-F409 (V4-2061)
T46-F411 (VR3-3026)	T48-F410 (V4-2063)
T46-F412 (VR3-3019)	T48-3F601 (VR3-3011)
T48-F404 (VR3-3013)	T48-3F602 (VR3-3024)
T48-F405 (VR3-3014)	

CATEGORY: A

FUNCTION: The subject valves perform a containment isolation function in the primary containment purge and vent system.

TEST REQUIREMENT: Measure valve seat leakage every two years (IWV-3422) and compare the measured leakage to a specific maximum leakage for each valve (IWV-3426).

BASIS FOR RELIEF: A specific maximum leakage per valve is not applicable to purge and vent valve leakage testing. The leakage criteria for purge and vent valve leakage testing specifies that seat leakage shall not be greater than 1.2 times the previous 10CFR50, Appendix J, Type C (AT-1) containment isolation valve leak test result. Since the containment isolation valve leakage test does not have a specific maximum leakage per valve (Relief

Request No. VR-11), the specific maximum leakage for an AT-8 test cannot be established until after the Type C (AT-1) test has been performed. This position has been reviewed and approved by the NRC in Supplement 1 of Enrico Fermi's Safety Evaluation Report (NUREG-0798), pg. 6-3.

ALTERNATE TESTING: Purge and vent valve seat leakage shall not be greater than 1.2 times the previous 10CFR50, Appendix J, Type C containment isolation valve leakage test result. The test shall be conducted every 90 days per SER, Supplement 1, page 6-3.

RELIEF REQUEST NO. VR-32

SYSTEM: CLOSED COOLING WATER AND EMERGENCY EQUIPMENT COOLING WATER

COMPONENT: P44-F246 (V8-3056)
P44-F274 (V8-2488)

CATEGORY: C

FUNCTION: These valves isolate the Quality Group D (non-class) penetration cooling jackets and the drywell sump heat exchanger from the balance of the system.

TEST REQUIREMENT: Exercise valves to the full closed position every quarter (CT-1).

BASIS FOR RELIEF: Because these valves are non-testable check valves inside primary containment, they can only be verified closed by a leak test. This test can only be performed during reactor refueling.

ALTERNATE TESTING: These valves will be leak tested during reactor refueling to confirm their close position.

RELIEF REQUEST NO. VR-33

SYSTEM: ALL SYSTEMS WITH CHECK VALVES

COMPONENT: Simple check valves

CATEGORY: C

FUNCTION: Check valves are used to prevent reverse flow.

TEST REQUIREMENT: Exercise check valve in the open and/or close direction every three months (CT-1).

BASIS FOR RELIEF: This relief request has not been applied to any valves in the program. This relief request has been prepared to serve as notice of intent to request relief in the future for the reasons outlined below.

Per IWV-3522, check valves shall be exercised to the position required to fulfill their function. Exercising (IWV-2300(a)) is defined as, "the demonstration based on direct or indirect visual or other positive indication that the moving parts of a valve function satisfactorily."

The current version, Revision 1, of this program contains relief requests for situations where it is impractical or a hardship to demonstrate that a valve is in its safety position. The program does not identify all cases where a valve cannot be exercised to its safety position. (e.g. If a pump discharge check valve is required to open, a flow measurement will provide indirect verification that the check valve is open. The

flow measurement will not verify that the valve was exercised from closed to open since the valve may have been stuck open.) These cases will be identified as the procedures to implement this IST program are completed.

ALTERNATE TESTING: Alternate testing will be identified in the individual relief requests.

RELIEF REQUEST NO. VR-34

SYSTEM: NITROGEN INERTING

COMPONENT:

T23-F400A(V21-2001)	T23-F400G(V21-2007)
T23-F400B(V21-2002)	T23-F400H(V21-2008)
T23-F400C(V21-2003)	T23-F400J(V21-2009)
T23-F400D(V21-2004)	T23-F400K(V21-2010)
T23-F400E(V21-2005)	T23-F400L(V21-2011)
T23-F400F(V21-2006)	T23-F400M(V21-2012)

CATEGORY: A/C

FUNCTION: These valves are the pressure suppression chamber to drywell vacuum breaker valves which equalize the pressure between the two volumes when the suppression chamber pressure exceeds the drywell pressure.

TEST REQUIREMENT: Measure valve seat leakage and compare the measured leakage to a specific maximum leakage for each valve (IWV-3426).

BASIS FOR RELIEF: A specific maximum leakage per valve is not applicable to the vacuum breaker valve testing. A pressure decay test is performed at least once per 18 months on the pressure suppression chamber atmosphere as specified in Technical Specification pargraph 4.6.4.1.b.3.c. This pressure decay test demonstrates the leak tightness of the vacuum breaker valves.

ALTERNATE TESTING: The leak tightness of the pressure suppression chamber to drywell vacuum breakers shall be demonstrated during the suppression chamber pressure decay tests.

SECTION 3.3

INSERVICE VALVE TESTING PROGRAM

TABLE 3.3-1

LIST OF SYSTEMS INCLUDED
IN FERMI UNIT 2
VALVE PROGRAM PRISIM OUTPUT

SYSTEM	REFERENCE P&ID	REV.	PAGE
Index & Legend of Abbreviations	6M721-2000	C	NA
Legend of Symbols & Instrument Identification for Plant System Diagram	6M721-2001	C	NA
Traversing In-Core Probe System	6I721-2145-66	A	1
Post Accident Sampling	6I721-2400-10	0	2
Primary Containment Monitoring System	6I721-2679-1	E	4
Main and Reheat Steam Systems	6M721-2002	R	9
Station and Control Air System	6M721-2015	I	10
Feedwater System	6M721-2023	I	13
Closed Cooling Water and Emergency Equipment Cooling Water Systems	6M721-2027	G	14
Sump Pump - Radwaste System	6M721-2032	L	18
Core Spray System	6M721-2034	G	19
High Pressure Coolant Injection System	6M721-2035	H	22
High Pressure Coolant Injection System (Barometric Condenser)	6M721-2043	E	25
Reactor Core Isolation Cooling System	6M721-2044	H	26

TABLE 3.3-1 (continued)

LIST OF SYSTEMS INCLUDED
IN FERMI UNIT 2
VALVE PROGRAM PRISIM OUTPUT

SYSTEM	REFERENCE P&ID	REV.	PAGE
Reactor Core Isolation Cooling (Barometric Condenser)	6M721-2045	G	28
Reactor Water Clean-Up	6M721-2046	K	29
Fuel Pool Cooling & Clean-Up System	6M721-2048	E	30
Control Rod Drive Hydraulic System	6M721-2081	I	31
Stand-By Liquid Control System	6M721-2082	G	33
Residual Heat Removal - Division II	6M721-2083	J	34
Residual Heat Removal - Division I	6M721-2084	I	39
Station Air Risers	6M721-2085	D	43
Combustible Gas Control System	6M721-2087	D	44
Nuclear Boiler System	6M721-2089	F	46
Nuclear Boiler System (Instrumentation)	6M721-2090	B	56
Demineralized Service Water Risers	6M721-2678	K	59
Reactor Recirculation System	6M721-2833	E	60
Main Steam Isolation Valve Leakage Control System	6M721-3045	C	64
Nitrogen Inerting System	6M721-3445	E	65
Torus Water Management System	6M721-4100	D	72

TABLE 3.3-1 (continued)

LIST OF SYSTEMS INCLUDED
IN FERMI UNIT 2
VALVE PROGRAM PRISIM OUTPUT

SYSTEM	REFERENCE P&ID	REV.	PAGE
Water Side Control Center A/C	6M721-4325	F	73
Interruptible and Non-Interruptible Control Air	6M721-4615	A	74
Diesel Generator System - Division I - R.H.R. Complex	6M721N-2046	I	75
Diesel Generator System - Division II - R.H.R. Complex	6M721N-2047	I	76
Diesel Fuel Oil System & Lube Oil System - Division I - R.H.R. Complex	6M721N-2048	N	77
Diesel Fuel Oil System & Lube Oil System - Division II - R.H.R. Complex	6M721N-2049	N	78
R.H.R. - Servive Water System - Division I - R.H.R. Complex	6M721N-2052	K	79
R.H.R. - Service Water System - Division II - R.H.R. Complex	6M721N-2053	L	80
Service Water, Make-Up, Decant, & Overflow Systems	6M721N-2054	I	81
Standby Gas Treatment and Primary Containment Purge System	7M721-2709	E	82

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6I721-2145-66
SYSTEM : TRANSVERSING IN-CORE PROBE

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
C51-J004A (BALL)	-	NC	A	-	BAL	SO	C	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11 VR-6	
C51-J004A (SHEAR)	-	NC	D	-	SH	EXP	O	C	DT	SP			VR-30	
C51-J004B (BALL)	-	NC	A	-	BAL	SO	C	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11 VR-6	
C51-J004B (SHEAR)	-	NC	D	-	SH	EXP	O	C	DT	SP			VR-30	
C51-J004C (BALL)	-	NC	A	-	BAL	SO	C	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11 VR-6	
C51-J004C (SHEAR)	-	NC	D	-	SH	EXP	O	C	DT	SP			VR-30	
C51-J004D (BALL)	-	NC	A	-	BAL	SO	C	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11 VR-6	
C51-J004D (SHEAR)	-	NC	D	-	SH	EXP	O	C	DT	SP			VR-30	
C51-J004E (BALL)	-	NC	A	-	BAL	SO	C	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11 VR-6	
C51-J004E (SHEAR)	-	NC	D	-	SH	EXP	O	C	DT	SP			VR-30	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6I721-2400-10
SYSTEM : POST ACCIDENT SAMPLING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P34-F401A (V13-7360)	E-6	1	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F401B (V13-7361)	D-6	1	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F402A (V13-7362)	C-6	2	B	.75	GA	SO	DE	D	BT PIT	OP 2Y	5		VR-6	
P34-F402B (V13-7363)	B-6	2	B	.75	GA	SO	DE	D	BT PIT	OP 2Y	5		VR-6	
P34-F403A (V13-7364)	E-4	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F403B (V13-7365)	E-4	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F404A (V13-7374)	E-3	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F404B (V13-7375)	E-3	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F405A (V13-7366)	D-4	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F405B (V13-7367)	D-3	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6I721-2400-10
SYSTEM : POST ACCIDENT SAMPLING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P34-F406A (V13-7376)	D-3	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F406B (V13-7377)	C-3	NC	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F407 (V13-7368)	C-3	2	A	.75	GL	SO	C	C	AT-2 BT PIT	RR OP 2Y	5	22 M	VR-6	
P34-F408 (V13-7369)	B-3	2	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	
P34-F409 (V13-7378)	C-4	2	A	.75	GL	SO	C	C	AT-2 BT PIT	RR OP 2Y	5	22 M	VR-6	
P34-F410 (V13-7379)	B-3	2	A	.75	GL	SO	C	C	AT-1 BT PIT	RR OP 2Y	5	NA	VR-11 VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6I721-2679-1
SYSTEM : PRIMARY CONTAINMENT MONITORING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E41-F400 (V5-2550)	B-3	NC	A	-	GL	SO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11 VR-6	
E41-F401 (V5-2551)	B-3	NC	A	-	GL	SO	O	C	AT-2 BT PIT	RR OP RR	5	-- M	VR-6	
E41-F402 (V5-2552)	B-3	NC	A	-	GL	SO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11 VR-6	
E41-F403 (V5-2553)	B-3	NC	A	-	GL	SO	O	C	AT-2 BT PIT	RR OP RR	5	-- M	VR-6	
T50-F401A (E/V-F401A)	F-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F401A (V5-2151)	F-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F401B (E/V-F401B)	F-3	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F401B (V5-2159)	F-3	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F402A (E/V-F402A)	F-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F402A (V5-2152)	F-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	

PREPARED BY : NUTECH
PROGRAM : FRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 61721-2679-1
SYSTEM : PRIMARY CONTAINMENT MONITORING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T50-F402B (E/V-F402B)	F-3	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F402B (V5-2160)	F-3	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F403A (E/V-F403A)	F-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F403A (V5-2153)	F-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F403B (E/V-F403B)	F-3	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F403B (V5-2161)	F-3	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F404A (E/V-F404A)	F-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F404A (V5-2154)	F-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F404B (E/V-F404B)	F-3	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F404B (V5-2162)	F-3	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6I721-2679-1
SYSTEM : PRIMARY CONTAINMENT MONITORING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T50-F405A (E/V-F405A)	E-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F405A (V5-2155)	E-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F405B (E/V-F405B)	E-3	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F405B (V5-2163)	E-3	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F406A (E/V-F406A)	E-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F406A (V5-2156)	E-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F406B (E/V-F406B)	E-3	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F406B (V5-2164)	E-3	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F407A (E/V-F407A)	D-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F407A (V5-2157)	D-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6I721-2679-1
SYSTEM : PRIMARY CONTAINMENT MONITORING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T50-F407B (E/V-F407B)	D-4	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F407B (V5-2165)	D-4	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F408A (E/V-F408A)	D-2	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F408A (V5-2158)	D-2	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F408B (E/V-F408B)	D-4	NC	B	-	3WY	SO	ND	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F408B (V5-2166)	D-4	NC	A	-	BAL	AO	C/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T50-F412A (V5-2555)	C-3	NC	A	-	GL	SO	O	C	AT-2 BT PIT	RR OP RR	5	-- M	VR-6	
T50-F412B (V5-2556)	C-3	NC	A	-	GL	SO	O	C	AT-2 BT PIT	RR OP RR	5	-- M	VR-6	
T50-F420A (E/V-F420A)	E-2	NC	B	-	3WY	SO	NE	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F420A (V5-2230)	E-2	NC	A	-	BAL	AO	O	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6I721-2679-1
SYSTEM : PRIMARY CONTAINMENT MONITORING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T50-F420B (E/V-F420B)	E-3	NC	B	-	3WY	SO	NE	D	BT FST	OP OP	NA		VR-6 VR-23	
T50-F420B (V5-2231)	E-3	NC	A	-	BAL	AO	O	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	

PREPARED BY : NUTECH
PROGRAM : FRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2002
SYSTEM : MAIN AND REHEAT STEAM

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
N11-F607 (V17-2100)	D-5	2	A	24	GA	MO	O	C	AT-9 BT PIT	RR CS RR		NA	VR-24 VR-1	
N11-F608 (V17-2102)	D-5	2	A	24	GA	MO	O	C	AT-9 BT PIT	RR CS RR		NA	VR-24 VR-1	
N11-F609 (V17-2101)	D-5	2	A	24	GA	MO	O	C	AT-9 BT PIT	RR CS RR		NA	VR-24 VR-1	
N11-F610 (V17-2099)	D-5	2	A	24	GA	MO	O	C	AT-9 BT PIT	RR CS RR		NA	VR-24 VR-1	
N11-IV1 (IV1)	D-3	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-IV2 (IV2)	E-3	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-IV3 (IV3)	D-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-IV4 (IV4)	E-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-IV5 (IV5)	D-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-IV6 (IV6)	E-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-LPSV1 (LPSV1)	D-3	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2002
SYSTEM : MAIN AND REHEAT STEAM

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
N11-LPSV2 (LPSV2)	E-3	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-LPSV3 (LPSV3)	D-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-LPSV4 (LPSV4)	E-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-LPSV5 (LPSV5)	D-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-LPSV6 (LPSV6)	E-2	NC	B	36	BTF	UA	O	NA	BTE	SP			VR-26	
N11-TCV1 (TCV1)	C-4	NC	B	24	CV	UA	O	NA	BTE	SP			VR-26	
N11-TCV2 (TCV2)	D-4	NC	B	24	CV	UA	O	NA	BTE	SP			VR-26	
N11-TCV3 (TCV3)	E-4	NC	B	24	CV	UA	O	NA	BTE	SP			VR-26	
N11-TCV4 (TCV4)	E-4	NC	B	24	CV	UA	O	NA	BTE	SP			VR-26	
N11-TSV1 (TSV1)	C-4	NC	B	24	GA	UA	O	NA	BTE	SP			VR-26	
N11-TSV2 (TSV2)	D-4	NC	B	24	GA	UA	O	NA	BTE	SP			VR-26	
N11-TSV3 (TSV3)	E-4	NC	B	24	GA	UA	O	NA	BTE	SP			VR-26	
N11-TSV4 (TSV4)	E-4	NC	B	24	GA	UA	O	NA	BTE	SP			VR-26	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND MC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2015
SYSTEM : STATION AND CONTROL AIR SYSTEM

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P50-F207A (V22-2561)	A-10	NC	C	.75	RV	SA	C	NA	CT-2	5Y				
P50-F207B (V22-2560)	A-8	NC	C	.75	RV	SA	C	NA	CT-2	5Y				
P50-F208A (V5-2537)	C-10	NC	C	3	CK	SA	C	O	CT-1	OP				
P50-F208B (V5-2536)	C-7	NC	C	3	CK	SA	C	O	CT-1	OP				
P50-F219A (V5-2528)	D-12	NC	C	3	CK	SA	C	O	CT-1	OP				
P50-F219B (V5-2527)	D-11	NC	C	3	CK	SA	C	O	CT-1	OP				
P50-F223A (V22-2517)	E-12	NC	C	-	RV	SA	C	NA	CT-2	5Y				
P50-F223B (V22-2516)	E-10	NC	C	-	RV	SA	C	NA	CT-2	5Y				
P50-F402 (E/V-F402)	D-7	NC	B	-	3WY	SO	NE	D	BT	OP	NA		VR-6	
P50-F402 (V5-2523)	D-7	NC	B	3	GL	AO	O/FC	C	BT FST PIT	OP OP RR			VR-23	
P50-F440 (E/V-F440)	D-8	NC	B	-	3WY	SO	NE	D	BT	OP	NA		VR-6	
P50-F440 (V5-2540)	D-8	NC	B	3	GA	AO	O/FC	C	BT FST PIT	OP OP RR			VR-23	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P50-F441 (E/V-F441)	D-8	MC	B	-	3WY	SO	NE	D	BT	OP	NA		VR-6	
P50-F441 (V5-2541)	D-8	NC	B	3	GA	AO	O/FC	C	BT FST PIT	OP OP RR			VR-23	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

REVISION : 1 , 07/07/82

P&ID : 6M721-2023
SYSTEM : FEEDWATER

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F010A (V12-2008)	D-3	1	A/C	20	CK	SST	O	O&C	AT-1 CT-1 PIT	RR CS RR		NA	VR-11 VR-2	
B21-F010B (V12-2007)	D-2	1	A/C	20	CK	SST	O	C	AT-1 CT-1 PIT	RR CS RR		NA	VR-11 VR-2	
B21-F032A (V12-2004)	D-3	1	A/C	20	CK	SAT	O	C	AT-6 CT-1 PIT	RR CS RR		NA	VR-29 VR-2	
B21-F032B (V12-2003)	D-2	1	A/C	20	CK	SAT	O	C	AT-6 CT-1 PIT	RR CS RR		NA	VR-29 VR-2	
B21-F076A (V12-2002)	D-3	1	A/C	20	CK	SAS	O	C	AT-1 CT-1 PIT	RR RR RR		NA	VR-11 VR-2	
B21-F076B (V12-2001)	D-2	1	A/C	20	CK	SAS	O	C	AT-1 CT-1 PIT	RR RR RR		NA	VR-11 VR-2	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P44-F003A (V8-2335)	D-5	3	C	8	CK	SA	C	O	CT-1	OP				
P44-F003B (V8-2333)	C-4	3	C	8	CK	SA	C	O	CT-1	OP				
P44-F021A (V8-2336)	F-5	3	C	8	CK	SA	C	O	CT-1	OP				
P44-F021B (V8-2334)	B-5	3	C	8	CK	SA	C	O	CT-1	OP				
P44-F038 (V8-3055)	B-6	3	C	1.5	CK	SA	O	C	CT-1	OP				
P44-F051 (V8-2431)	F-5	3	C	6	CK	SA	O	O	CT-1	OP				
P44-F111A (V8-2433)	E-2	3	C	2	CK	SA	O	C	CT-1	OP				
P44-F111B (V8-2430)	B-3	3	C	1.5	CK	SA	O	C	CT-1	OP				
P44-F116A (V8-2432)	F-5	3	C	6	CK	SA	O	O	CT-1	OP				
P44-F116B (V8-2332)	A-4	3	C	8	CK	SA	O	O	CT-1	OP				
P44-F125A (V22-2074)	E-5	3	C	1	RV	SA	C	NA	CT-2	5Y				
P44-F125B (V22-2077)	C-5	3	C	1	RV	SA	C	NA	CT-2	5Y				
P44-F126A (V22-2075)	E-5	3	C	1	RV	SA	C	NA	CT-2	5Y				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2027
SYSTEM : RBCCW AND EECW

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P44-F126B (V22-2076)	C-5	3	C	1	RV	SA	C	NA	CT-2	5Y				
P44-F165 (V8-2428)	A-5	3	C	6	CK	SA	O	O	CT-1	OP				
P44-F182 (V8-2429)	B-4	3	C	2	CK	SA	O	C	CT-1	CS			VR-4	
P44-F246 (V8-3056)	F-1	3	C	2	CK	SA	O	C	CT-1	RR			VR-32	
P44-F274 (V8-2488)	D-1	3	C	2.5	CK	SA	O	C	CT-1	RR			VR-32	
P44-F282A (V8-3888)	F-2	3	A/C	8	CK	SA	O	C	AT-1 CT-1	RR RR		NA	VR-11 VR-5	
P44-F282B (V8-3887)	E-2	3	A/C	6	CK	SA	O	C	AT-1 CT-1	RR RR		NA	VR-11 VR-5	
P44-F601A (V8-2323)	F-5	3	B	8	GA	MO	O	C	BT PIT	CS RR			VR-3	
P44-F601B (V8-2314)	A-5	3	B	10	GA	MO	O	C	BT PIT	CS RR			VR-3	
P44-F602A (V8-2325)	F-5	3	B	8	GA	MO	C	O	BT PIT	OP RR				
P44-F602B (V8-2322)	B-5	3	B	8	GA	MO	C	O	BT PIT	OP RR				
P44-F603A (V8-2324)	D-5	3	B	8	GA	MO	O	C	BT PIT	CS RR			VR-3	
P44-F603B (V8-2315)	C-5	3	B	10	GA	MO	O	C	BT PIT	CS RR			VR-3	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2027
SYSTEM : RBCCW AND EECW

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P44-F604 (V8-2425)	C-4	3	B	2	GL	MO	O	C	BT PIT	CS RR			VR-4	
P44-F605A (V8-2427)	E-2	3	B	2	GL	MO	O	C	BT PIT	OP RR				
P44-F605B (V8-2426)	C-3	3	B	1.5	GL	MO	O	C	BT PIT	OP RR				
P44-F606A (V8-2486)	F-2	3	A	6	GA	MO	O	C	AT-1 BT PIT	RR CS RR	30	NA	VR-11 VR-5	
P44-F606B (V8-2484)	E-2	3	A	6	GA	MO	O	C	AT-1 BT PIT	RR CS RR	30	NA	VR-11 VR-5	
P44-F607A (V8-2485)	F-2	3	A	6	GA	MO	O	C	AT-1 BT PIT	RR CS RR	30	NA	VR-11 VR-5	
P44-F607B (V8-2483)	D-2	3	A	6	GA	MO	O	C	AT-1 BT PIT	RR CS RR	30	NA	VR-11 VR-5	
P44-F608 (V8-2487)	D-2	3	B	2.5	GA	MO	O	C	BT PIT	OP RR				
P44-F613 (V8-3057)	B-6	3	B	1.5	GL	MO	O	C	BT PIT	OP RR				
P44-F614 (V8-3058)	E-2	3	B	2	GL	MO	O	C	BT PIT	OP RR				
P44-F615 (V8-3889)	E-2	3	A	6	GA	MO	O/FL	C	AT-1 BT PIT	RR CS RR		NA	VR-11 VR-5	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND MC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON
COMPANY

P&ID : 6M721-2027
SYSTEM : RBCCW AND EECW

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P44-F616 (V8-3890)	F-2	3	A	6	GA	MO	O/KL	C	AT-1 BT PIT	RR CS RR		NA	VR-11 VR-5	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

PMID : 6M721-2032
SYSTEM : SUMP PUMP-RADWASTE

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
G11-F003 (E/V-F003)	B-4	NC	B	---	3WY	SO	ND	D	BT	OP	NA		VR-6	
G11-F003 (V9-2005)	B-4	NC	A	3	GA	AO	C	C	AT-1	CR		NA	VR-11	
									AT-4	RR		NA	VR-27	
									BT	OP	15			
									FST	OP			VR-23	
									PIT	RR				
G11-F018 (V9-2022)	F-4	NC	A	3	GA	MO	O	C	AT-1	RR		NA	VR-11	
									AT-4	RR		NA	VR-27	
									BT	OP	15			
									PIT	RR				
G11-F019 (E/V-F019)	H-4	NC	B	---	3WY	SO	ND	D	BT	OP	NA		VR-6	
G11-F019 (V9-2023)	F-4	NC	A	3	GA	AO	C	C	AT-1	RR		NA	VR-11	
									AT-4	RR		NA	VR-27	
									BT	OP	15			
									FST	OP			VR-23	
									PIT	RR				
G11-F600 (V9-2044)	B-3	NC	A	3	GA	MO	O	C	AT-1	RR		NA	VR-11	
									AT-4	RR		NA	VR-27	
									BT	OP	15			
									PIT	RR				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND MC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2034
SYSTEM : CORE SPRAY

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E21-F003A (V8-2015)	F-6	2	C	12	CK	SA	C	O&C	CT-1	OP				
E21-F003B (V8-2018)	D-9	2	C	12	CK	SA	C	O&C	CT-1	OP				
E21-F003C (V8-2017)	F-7	2	C	12	CK	SA	C	O&C	CT-1	OP				
E21-F003D (V8-2016)	D-11	2	C	12	CK	SA	C	O&C	CT-1	OP				
E21-F004A (V8-2019)	E-5	2	B	12	GA	MO	O	O	BT	OP				
									PIT	RR				
E21-F004B (V8-2020)	C-5	2	B	12	GA	MO	O	O	BT	OP				
									PIT	RR				
E21-F005A (V8-2021)	E-5	1	A	12	GA	MO	C	O&C	AT-1	RR		NA	VR-11	
									AT-10	RR		1.0 G		
									BT	CS	12		VR-7	
									PIT	RR				
E21-F005B (V8-2022)	C-4	1	A	12	GA	MO	C	O&C	AT-1	RR		NA	VR-11	
									AT-10	RR		1.0 G		
									BT	CS	12		VR-7	
									PIT	RR				
E21-F006A (V8-2023)	D-3	1	A/C	12	CK	SAT	C	O&C	AT-1	RR		NA	VR-11	
									AT-10	RR		1.0 G		
									CT-1	CS			VR-8	
									PIT	RR				
E21-F006B (V8-2024)	C-3	1	A/C	12	CK	SAT	C	O&C	AT-1	RR		NA	VR-11	
									AT-10	RR		1.0 G		
									CT-1	CS			VR-8	
									PIT	RR				

PREPARED BY : NUTECH
PROG M : FRISIM

INSERVICE TESTING PROGRAM
ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2034
SYSTEM : CORE SPRAY

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E21-F011A (V22-2120)	E-7	2	A/C	2	RV	SA	C	NA	AT-2 CT-2	RR 5Y		60 M		
E21-F011B (V22-2119)	C-7	2	A/C	2	RV	SA	C	NA	AT-2 CT-2	RR 5Y		60 M		
E21-F012A (V22-2016)	E-7	2	A/C	2	RV	SA	C	NA	AT-2 CT-2	RR 5Y		60 M		
E21-F012B (V22-2017)	B-8	2	A/C	2	RV	SA	C	NA	AT-2 CT-2	RR 5Y		60 M		
E21-F015A (V8-2033)	F-5	2	A	10	GL	MO	C	C	AT-2 BT PIT	RR OP RR	150	300 M		
E21-F015B (V8-2034)	D-5	2	A	10	GL	MO	C	C	AT-2 BT PIT	RR OP RR	150	300 M		
E21-F017A (V8-3182)	H-4	2	C	3	CK	SA	C	O	CT-1	5Y			VR-19	
E21-F017B (V8-3181)	D-4	2	C	3	CK	SA	C	O	CT-1	5Y			VR-19	
E21-F030A (V8-2051)	D-6	2	C	3	CK	SA	C	C	CT-1	OP				
E21-F030B (V8-2055)	B-6	2	C	3	CK	SA	C	C	CT-1	OP				
E21-F031A (V8-2031)	H-6	2	A	3	GA	MO	O	O&C	AT-2 BT PIT	RR OP RR	15	90 M		
E21-F031B (V8-2032)	F-8	2	A	3	GA	MO	O	O&C	AT-2 BT PIT	RR OP RR	15	90 M		

PREPARED BY : NUTECH
PROGRAM : FRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2034
SYSTEM : CORE SPRAY

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E21-F032A (V22-2019)	J-6	2	A	1	RV	SA	C	NA	AT-2	RR		30 M		
E21-F032B (V22-2004)	J-10	2	A	1	RV	SA	C	NA	AT-2	RR		30 M		
E21-F036A (V8-2007)	K-4	2	A	20	GA	MO	LO	C	AT-2 BT PIT	RR OP RR	50	600 M		
E21-F036B (V8-2008)	L-4	2	A	20	GA	MO	LO	C	AT-2 BT PIT	RR OP RR	50	600 M		
E21-F038A (V8-2044)	F-6	2	C	3	CK	SA	C	O&C	CT-1	OP				
E21-F038B (V8-2041)	E-9	2	C	3	CK	SA	C	O&C	CT-1	OP				
E21-F038C (V8-2045)	F-7	2	C	3	CK	SA	C	O&C	CT-1	OP				
E21-F038D (V8-2040)	E-10	2	C	3	CK	SA	C	O&C	CT-1	OP				
E21-F500A (V13-2377)	B-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR		2.5 G	VR-9	
E21-F500B (V13-2378)	B-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR PX		2.5 G	VR-9	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E41-F001 (V17-2022)	H-11	2	B	10	GA	MO	C	O	BT PIT	OP RR				
E41-F002 (V17-2020)	E-4	1	A	10	GA	MO	O	O&C	AT-1 AT-4 BT PIT	RR RR OP RR	13	NA NA	VR-11 VR-27	
E41-F003 (V17-2021)	E-5	1	A	10	GA	MO	C	O&C	AT-1 AT-4 BT PIT	RR RR OP RR	13	NA NA	VR-11 VR-27	
E41-F004 (V8-2191)	E-9	2	B	16	GA	MO	O	C	BT PIT	OP RR				
E41-F005 (V8-2195)	H-6	2	A/C	14	CK	SA	C	O&C	AT-10 CT-1	RR RR		1.0 G	 VR-8	
E41-F006 (V8-2194)	H-5	1	A	14	GA	MO	C	O&C	AT-1 AT-10 AT-4 BT PIT	RR RR RR CS RR		NA 1.0 G NA	VR-11 VR-27 VR-7	
E41-F007 (V8-2193)	H-6	2	B	14	GA	MO	O	O	BT PIT	OP RR				
E41-F008 (V8-2198)	F-7	2	B	10	GL	MO	C	C	AT-4 BT PIT	RR OP RR		NA	VR-27	
E41-F011 (V8-2200)	D-7	NC	A	10	GA	MO	C	C	AT-4 BT PIT	RR OP RR		NA	VR-27	
E41-F012 (V8-2196)	J-7	2	A	4	GL	MO	C	O&C	AT-2 BT PIT	RR OP RR	10	120 M		

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E41-F019 (V8-2192)	F-9	2	C	16	CK	SA	C	O	CT-1	OP				
E41-F021 (V11-2006)	K-4	2	A/C	16	SCK	SAM	C/LO	O&C	AT-2 BT CT-1 PIT	RR OP OP RR	240	480 M		
E41-F022 (V11-2008)	K-5	2	A/C	2	SCK	SAM	C/LO	O&C	AT-2 BT CT-1 PIT	RR OP OP RR	30	60 M		
E41-F023 (V8-3705)	H-6	2	A	1.5	GL	M	C	C	AT-10	RR		1.0 G	VR-9	
E41-F040 (V11-2007)	K-5	2	C	2	CK	SA	C	O	CT-1	OP				
E41-F041 (V9-2204)	F-8	2	B	16	GA	MO	C	O	BT PIT	OP RR				
E41-F042 (V8-2202)	L-6	2	A	16	GA	MO	C	O&C	AT-2 BT PIT	RR OP RR	20	480 M		
E41-F045 (V8-2203)	L-7	2	C	16	CK	SA	C	O	CT-1	SP			VR-10	
E41-F046 (V8-2197)	J-8	2	C	4	CK	SA	C	O	CT-1	OP				
E41-F049 (V11-2005)	K-5	2	C	20	CK	SA	C	O	CT-1	OP				
E41-F054 (E/V-F054)	H-12	NC	B	.25	3WY	SO	NE	D	BT	OP	NA		VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2035
SYSTEM : HIGH PRESSURE COOLANT INJECTION

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E41-F054 (V17-2033)	J-12	2	B	1	GL	DO	C/FC	C	BT FST PIT	OP OP RR			VR-23	
E41-F075 (V11-2013)	K-3	2	A	4	GA	MO	O	C	AT-1 BT PIT	RR OP RR	24	NA	VR-11	
E41-F076 (V11-2015)	K-3	2	C	4	CK	SA	C	O	CT-1	OP				
E41-F077 (V11-2016)	K-2	2	C	4	CK	SA	C	O	CT-1	OP				
E41-F079 (V11-2019)	K-2	2	A	4	GA	MO	O	C	AT-1 BT PIT	RR OP RR	24	NA	VR-11	
E41-F500 (V13-2379)	D-5	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
E41-F501 (V13-2380)	C-5	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
E41-F502 (V13-2381)	E-5	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
E41-F503 (V13-2382)	F-5	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
E41-F600 (V17-2088)	E-5	1	A	1	GL	MO	O	C	AT-1 AT-4 BT PIT	RR RR OP RR	15	NA NA	VR-11 VR-27	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2043
SYSTEM : HPCI BAROMETRIC CONDENSER

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E41-D003 ( )	E-10	2	D	16	RPD	SA	C	NA	DT	MR				
E41-F020 (V22-2044)	E-6	2	C	1.5	RV	SA	C	NA	CT-2	5Y				
E41-F026 (E/V-F026)	L-9	NC	B	.25	3WY	SO	ND	D	BT	QP	NA		VR-6	
E41-F026 (V8-2214)	L-9	2	B	1	GL	DO	C/FC	C	BT FST PIT	QP QP RR			VR-23	
E41-F048 (V8-2208)	K-9	2	C	2	CK	SA	C	O	CT-1	QP				
E41-F050 (V22-2586)	K-8	2	C	3	RV	SA	C	NA	CT-2	5Y				
E41-F052 (V8-2238)	K-10	2	C	2	CK	SA	C	C	CT-1	QP				
E41-F053 (E/V-F053)	J-9	NC	B	.25	3WY	SO	ND	D	BT	QP	NA		VR-6	
E41-F053 (V8-2212)	H-10	2	B	1	GL	AO	C/FC	C	BT FST PIT	QP QP RR			VR-23	
E41-F057 (V8-2236)	K-10	2	C	2	CK	SA	C	O	CT-1	QP				
E41-F059 (V8-2218)	J-8	2	B	2	GL	MO	C	O	BT PIT	QP RR				
E41-F067 (V17-2026)	D-11	2	B	10	GA	MO	C	O	BT PIT	QP RR				

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E51-F001 (V11-2002)	K-6	NC	A/C	10	SCK	SAM	C	C	AT-2 BT PIT	RR OP RR	150	300 M		
E51-F002 (V8-2235)	K-6	NC	A/C	2	SCK	SAM	C	C	AT-2 BT PIT	RR OP RR	30	60 M		
E51-F007 (V17-2030)	D-6	1	A	4	GA	MO	O	C	AT-1 AT-4 BT PIT	RR RR OP RR	20	NA NA	VR-11 VR-27	
E51-F008 (V17-2031)	D-7	1	A	4	GA	MO	O	C	AT-1 AT-4 BT PIT	RR RR OP RR	20	NA NA	VR-11 VR-27	
E51-F009 (V8-2229)	F-8	NC	A	6	CK	SA	C	C	AT-10 CT-1	RR RR		1.0 G	 VR-8	
E51-F013 (V8-2228)	H-7	1	A	6	GA	MO	C	C	AT-1 AT-10 BT PIT	RR RR CS RR		NA 1.0 G	VR-11 VR-7	
E51-F019 (V8-2230)	H-8	2	A	2	GL	MO	C	C	AT-2 BT PIT	RR OP RR	30	60 M		
E51-F022 (V8-2232)	E-7	2	A	4	GL	MO	C	C	AT-4 BT PIT	RR OP RR		NA	VR-27	
E51-F031 (V8-2225)	L-7	NC	A	6	GA	MO	C	C	AT-2 BT PIT	RR OP RR	30	180 M		

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2044
SYSTEM : REACTOR CORE ISOLATION COOLING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E51-F062 (V11-2020)	J-5	NC	A	3	GA	MO	O	C	AT-1 BT PIT	RR OP RR	18	NA	VR-11	
E51-F084 (V11-2026)	J-5	2	A	3	GA	MO	O	C	AT-1 BT PIT	RR OP RR	18	NA	VR-11	
E51-F503 (V13-2383)	B-4	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
E51-F504 (V13-2384)	C-4	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
E51-F505 (V13-2385)	B-6	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
E51-F506 (V13-2386)	C-6	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM
ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2045
SYSTEM : REACTOR CORE ISOLATION COOLING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E51-F017 (V22-2002)	B-7	NC	C	1	RV	SA	C	NA	CT-2	5Y				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2046
SYSTEM : REACTOR WATER CLEAN-UP

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
G33-F001 (V8-2252)	C-4	1	A	6	GA	MO	O	C	AT 1 BT PIT	RR OP RR	10	NA	VR-11	
G33-F004 (V8-2253)	C-5	1	A	6	GA	MO	O	C	AT-1 BT PIT	RR OP RR	10	NA	VR-11	
G33-F120 (V8-2268)	A-7	1	A/C	4	CK	SAS	O	C	AT-1 CT-1 PIT	RR OP RR		NA	VR-11	
G33-F121 (V8-2274)	A-6	1	A/C	4	CK	SAT	O	C	AT-6 CT-1 PIT	RR OP RR		NA	VR-29	
G33-F583 (V13-2367)	H-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2048
SYSTEM : FUEL POOL COOLING AND CLEAN-UP

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
G41-F067A (V8-2275)	C-6	NC	C	.75	CK	SA	C	O	CT-1	QP				
G41-F067B (V8-2261)	C-6	NC	C	.75	CK	SA	C	O	CT-1	QP				
G41-F068A (V8-2248)	C-6	NC	C	.75	CK	SA	C	O	CT-1	QP				
G41-F068B (V8-2220)	C-6	NC	C	.75	CK	SA	C	O	CT-1	QP				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2081
SYSTEM : CONTROL ROD DRIVE HYDRAULIC

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
C11-F009A (E/V-F009A)	F-5	NC	B	.5	3WY	SO	NE	D	BT FST	QP QP	NA		VR-6 VR-23	
C11-F009B (E/V-F009B)	F-5	NC	B	.5	3WY	SO	NE	D	BT FST	QP QP	NA		VR-6 VR-23	
C11-F010 (V8-2073)	B-3	2	B	.75	GL	DO	C/FC	O&C	BT FST PIT	QP QP RR			VR-23	
C11-F011 (V8-2086)	E-2	2	B	2	GL	DO	C/FC	O&C	BT FST PIT	QP QP RR			VR-23	
C11-F012 (V22-2027)	D-3	2	C	.75	RV	SA	C	NA	CT-2	5Y				
C11-114 (V-1*)	B-10	2	C	.75	CK	SA	C	O	CT-1	SP			VR-12	
C11-115 (V-2*)	D-10	2	C	.5	CK	SA	C	C	CT-1	SP			VR-12	
C11-117 (V-3*)	D-9	NC	B	.5	3WY	SO	NE	D	BT FST	SP SP			VR-12 VR-23	
C11-118 (V-4*)	D-9	NC	B	.5	3WY	SO	NE	D	BT FST	SP SP			VR-12 VR-23	
C11-120 (V-5*)	C-10	2	B	.5	GA	SO	C/FC	C	BT FST	SP SP			VR-13 VR-23	
C11-121 (V-6*)	B-10	2	B	.75	GA	SO	C/FC	C	BT FST	SP SP			VR-13 VR-23	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
C11-122 (V-7*)	B-9	2	B	.75	GA	SO	C/FC	C	BT FST	SP SP			VR-13 VR-23	
C11-123 (V-8*)	C-9	2	B	.5	GA	SO	C/FC	C	BT FST	SP SP			VR-13 VR-23	
C11-126 (V-9*)	C-9	2	B	.5	GL	DO	C/FO	O	BT FST	SP SP			VR-12 VR-23	
C11-127 (V-10*)	B-9	2	B	.75	GL	DO	C/FO	O	BT FST	SP SP			VR-12 VR-23	
C11-138 (V-11*)	D-8	2	C	.5	CK	SA	C	C	T-1	SP			VR-12	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2082
SYSTEM : STANDBY LIQUID CONTROL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
C41-F004A (VR4-2008)	H-4	2	D	1.5	GA	EXP	C	O	DT	RR				
C41-F004B (VR4-2009)	J-4	2	D	1.5	GA	EXP	C	O	DT	RR				
C41-F006 (VR4-2011)	H-3	1	A/C	1.5	CK	SAT	C	O&C	AT-1 CT-1 PIT	RR CS RR		NA	VR-11 VR-20	
C41-F007 (VR4-2012)	J-3	1	A/C	1.5	CK	SAT	C	O&C	AT-1 CT-1 PIT	RR CS RR		NA	VR-11 VR-20	
C41-F029A (V22-2029)	F-7	2	C	1	RV	SA	C	NA	CT-2	5Y				
C41-F029B (V22-2030)	L-7	2	C	1	RV	SA	C	NA	CT-2	5Y				
C41-F033A (VR4-2004)	J-6	2	C	2	CK	SA	C	O&C	CT-1	OP				
C41-F033B (VR4-2005)	K-6	2	C	2	CK	SA	C	O&C	CT-1	OP				

PREPARED BY : MUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2083
SYSTEM : RESIDUAL HEAT REMOVAL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F001B (V22-2024)	H-5	2	A	.5	RV	SA	C	C	AT-2	RR		15 M		
E11-F003B (V8-2142)	E-4	2	B	20	GA	MO	O	O	BT PIT	OP RR				
E11-F004B (V8-2102)	F-10	2	A	24	GA	MO	O	O&C	AT-1 BT PIT	RR OP RR	 60	NA	VR-11	
E11-F004D (V8-2100)	F-10	2	A	24	GA	MO	O	O&C	AT-2 BT PIT	RR OP RR	 60	720 M		
E11-F006B (V8-2098)	J-9	2	B	20	GA	MO	C	C	BT PIT	OP RR				
E11-F006D (V8-2096)	J-11	2	B	20	GA	MO	C	C	BT PIT	OP RR				
E11-F007B (V8-2134)	F-7	2	A	4	GA	MO	O	O&C	AT-2 BT PIT	RR OP RR	 20	120 M		
E11-F008 (V8-2092)	E-11	1	A	20	GA	MO	C	C	AT-1 AT-10 BT PIT	RR RR CS RR	 52	NA 1.0 G	VR-11 VR-7	
E11-F009 (V8-2091)	E-11	1	A	20	GA	MO	C	C	AT-1 AT-10 BT PIT	RR RR CS RR	 52	NA 1.0 G	VR-11 VR-7	
E11-F011B (V8-2154)	D-4	2	A	4	GA	MO	C	C	AT-2 BT PIT	RR OP RR	 20	120 M		

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F015B (V8-2162)	E-8	1	A	24	GA	MO	C	O&C	AT-1 AT-10 BT PIT	RR RR CS RR	24	NA 1.0 G	VR-11 VR-7	
E11-F016B (V8-2168)	C-8	2	A	12	GL	MO	C	C	AT-1 BT PIT	RR OP RR	180	NA	VR-11	
E11-F017B (V8-2160)	E-8	2	B	24	GL	MO	O	O	BT PIT	OP RR				
E11-F020B (V15-2020)	L-6	3	C	24	CK	SA	C	O	CT-1	OP				
E11-F021B (V8-2170)	C-10	NC	A	12	GA	MO	C	C	AT-1 BT PIT	RR OP RR	60	NA	VR-11	
E11-F022 (V8-2172)	B-11	1	A	6	GA	MO	C	C	AT-1 AT-10 BT PIT	RR RR CS RR	30	NA 1.0 G	VR-11 VR-7	
E11-F023 (V8-2171)	B-10	1	A	6	GL	MO	C	C	AT-1 AT-10 BT PIT	RR RR CS RR	30	NA 1.0 G	VR-11 VR-7	
E11-F024B (V8-2136)	D-7	2	A	18	GL	MO	C	O&C	AT-2 BT PIT	RR OP RR	24	540 M		
E11-F025B (V22-2041)	D-4	2	A/C	1.5	RV	SA	C	NA	AT-2 CT-2	RR 5Y		45 M		
E11-F026B (V8-2152)	E-3	2	B	4	GA	MO	C	C	BT PIT	OP RR				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2083
SYSTEM : RESIDUAL HEAT REMOVAL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F027B (V8-2158)	D-7	2	A	6	GL	MO	C	C	AT-1 BT PIT	RR OP RR	90	NA	VR-11	
E11-F028B (V8-2156)	C-7	2	A	18	GA	MO	C	O&C	AT-1 BT PIT	RR OP RR	24	NA	VR-11	
E11-F029 (V22-2033)	F-11	2	A	1	RV	SA	C	NA	AT-1	RR		NA	VR-11	
E11-F030B (V22-2037)	H-9	2	A/C	1	RV	SA	C	NA	AT-2 CT-2	RR 5Y		30 M		
E11-F030D (V22-2035)	H-11	2	A/C	1	RV	SA	C	NA	AT-2 CT-2	RR 5Y		30 M		
E11-F031B (V8-2104)	K-7	2	C	20	CK	SA	C	O&C	CT-1	OP				
E11-F031D (V8-2106)	K-10	2	C	20	CK	SA	C	O&C	CT-1	OP				
E11-F035B (V8-3245)	F-7	2	C	6	CK	SA	C	O	CT-1	5Y			VR-19	
E11-F039B (V8-3153)	E-7	2	C	2.5	CK	SA	C	O	CT-1	5Y			VR-19	
E11-F046B (V8-2126)	K-7	2	C	3	CK	SA	C	O&C	CT-1	OP				
E11-F046D (V8-2128)	K-11	2	C	3	CK	SA	C	O&C	CT-1	OP				
E11-F047B (V8-2138)	F-6	2	B	20	GA	MO	O	O&C	BT PIT	OP RR				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

REVISION : 1 , 07/07/82

P&ID : 6M721-2083
SYSTEM : RESIDUAL HEAT REMOVAL

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F048B (V8-2140)	E-6	2	B	24	GL	MO	O	O&C	BT PIT	OP RR				
E11-F049 (V8-2119)	D-6	2	B	4	GA	MO	C	C	BT PIT	OP RR				
E11-F050B (V8-2164)	E-10	1	A/C	24	CK	SAT	C	O&C	AT-1 AT-10 CT-1 PIT	RR RR CS RR		NA 1.0 G	VR-11 VR-8	
E11-F052B (V17-2016)	F-3	2	B	8	GA	MO	C	C	BT PIT	OP RR				
E11-F055B (V22-2575)	H-5	2	A/C	4	RV	SA	C	NA	AT-2 CT-2	RR 5Y		120 M		
E11-F073 (V15-2015)	K-4	3	B	12	GA	MO	C	C	BT PIT	OP RR				
E11-F078 (V15-2017)	E-4	2	C	12	CK	SAT	C	C	CT-1 PIT	OP RR				
E11-F079B (E/V-F079B)	H-4	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
E11-F079B (V8-3193)	H-3	2	B	.75	GL	AO	C	C	BT PIT	OP RR				
E11-F090 (V8-2180)	B-9	2	C	4	CK	SA	C	C	CT-1	OP				
E11-F097 (V22-2585)	E-2	2	A	3	RV	SA	C	NA	AT-2	RR		90 M		
E11 F103B (V8-2144)	F-5	2	A	1	GL	MO	C	C	AT-2 BT PIT	RR OP RR	15	30 M		

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F104B (V8-2146)	F-5	2	A	1	GL	MO	C	C	AT-2 BT PIT	RR OP RR	15	30 M		
E11-F412 (V5-2546)	E-9	NC	A	-	GA	SO	O	C	AT-1 BT PIT	RR OP 2Y		NA	VR-11	
E11-F413 (V5-2547)	C-9	NC	A	-	GA	SO	O	C	AT-1 BT PIT	RR OP 2Y		NA	VR-11	
E11-F606 (V17-2084)	H-1	2	B	10	GL	MO	C	C	BT PIT	OP RR				
E11-F607 (V17-2085)	H-1	2	B	1	GL	MO	C	C	BT PIT	OP RR				
E11-F608 (V8-3407)	E-11	1	A	20	GA	MO	C	C	AT-1 AT-10 BT PIT	RR RR CS RR	30	NA 1.0 G	VR-11 VR-7	

PREPARED BY : NUTECH
PROGRAM : FRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2084
SYSTEM : RESIDUAL HEAT REMOVAL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F001A (V22-2026)	J-8	2	A	1	RV	SA	C	NA	AT-2	RR		30 M		
E11-F003A (V8-2141)	F-9	2	B	20	GA	MO	O	O	BT PIT	OP RR				
E11-F004A (V8-2099)	H-3	2	A	24	GA	MO	O	O&C	AT-2 BT PIT	RR OP RR	60	720 M		
E11-F004C (V8-2101)	H-3	2	A	24	GA	MO	O	O&C	AT-2 BT PIT	RR OP RR	60	720 M		
E11-F006A (V8-2095)	J-4	2	B	20	GA	MO	C	C	BT PIT	OP RR				
E11-F006C (V8-2097)	J-2	2	B	20	GA	MO	C	C	BT PIT	OP RR				
E11-F007A (V8-2133)	H-6	2	A	4	GA	MO	O	O&C	AT-2 BT PIT	RR OP RR	20	120 M		
E11-F010 (V8-2187)	F-5	2	B	24	GA	MO	O	O&C	BT PIT	OP RR				
E11-F011A (V8-2153)	E-9	2	A	4	GA	MO	C	C	AT-2 BT PIT	RR OP RR	20	120M		
E11-F015A (V8-2161)	D-5	1	A	24	GA	MO	C	O&C	AT-1 AT-10 BT PIT	RR RR CS RR	24	NA 1.0 G	VR-11 VR-7	
E11-F016A (V8-2167)	B-5	2	A	12	GL	MO	C	C	AT-1 BT PIT	RR OP RR	180	NA	VR-11	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F017A (V8-2159)	D-5	2	B	24	GL	MO	O	O	BT PIT	OP RR				
E11-F020A (V15-2021)	L-7	3	C	24	CK	SA	C	O	CT-1	OP				
E11-F021A (V8-2169)	C-3	NC	A	12	GA	MO	C	C	AT-1 BT PIT	RR OP RR	60	NA	VR-11	
E11-F024A (V8-2135)	C-6	2	A	18	GL	MO	C	O&C	AT-2 BT PIT	RR OP RR	24	540 M		
E11-F025A (V22-2025)	E-9	2	A/C	1.5	RV	SA	C	NA	AT-2 CT-2	RR 5Y		45 M		
E11-F026A (V8-2151)	F-10	2	B	4	GA	MO	C	C	BT PIT	OP RR				
E11-F027A (V8-2157)	C-5	2	A	6	GL	MO	C	C	AT-1 BT PIT	RR OP RR	90	NA	VR-11	
E11-F028A (V8-2155)	C-5	2	A	18	GA	MO	C	O&C	AT-1 BT PIT	RR OP RR	24	NA	VR-11	
E11-F030A (V22-2034)	H-5	2	A/C	1	RV	SA	C	NA	AT-2 CT-2	RR 5Y		30 M		
E11-F030C (V22-2036)	H-2	2	A/C	1	RV	SA	C	NA	AT-2 CT-2	RR 5Y		30 M		
E11-F031A (V8-2103)	L-6	2	C	20	CK	SA	C	O&C	CT-1	OP				

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F031C (V8-2105)	L-4	2	C	20	CK	SA	C	O&C	CT-1	OP				
E11-F035A (V8-3244)	F-6	2	C	6	CK	SA	C	O	CT-1	5Y			VR-19	
E11-F039A (V8-3155)	E-7	2	C	2.5	CK	SA	C	O	CT-1	5Y			VR-19	
E11-F046A (V8-2125)	L-5	2	C	3	CK	SA	C	O&C	CT-1	OP				
E11-F046C (V8-2127)	K-3	2	C	3	CK	SA	C	O&C	CT-1	OP				
E11-F047A (V8-2137)	H-7	2	B	20	GA	MO	O	O&C	BT PIT	OP RR				
E11-F048A (V8-2139)	F-7	2	B	24	GL	MO	O	O&C	BT PIT	OP RR				
E11-F050A (V8-2163)	D-3	1	A/C	24	CK	SAT	C	O&C	AT-10 AT-1 CT-1 PIT	RR RR CS RR		1.0 G NA	 VR-11 VR-8	
E11-F052A (V17-2015)	H-10	2	B	8	GA	MO	C	C	BT PIT	OP RR				
E11-F055A (V22-2574)	H-9	2	A/C	4	RV	SA	C	NA	AT-2 CT-2	RR 5Y		120 M		
E11-F079A (E/V-F079A)	J-9	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
E11-F079A (V8-3206)	J-10	2	B	.75	GL	AO	C	C	BT PIT	OP RR				

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F103A (V8-2143)	H-8	2	A	1	GL	MO	C	C	AT-2 BT PIT	RR OP RR	15	30 M		
E11-F104A (V8-2145)	H-8	2	A	1	GL	MO	C	C	AT-2 BT PIT	RR OP RR	15	30 M		
E11-F185 (V8-2492)	C-4	2	C	2	CK	SA	C	C	CT-1	OP				
E11-F414 (V5-2548)	E-2	NC	A	-	GA	SO	O	C	AT-1 BT PIT	RR OP 2Y		NA	VR-11	
E11-F415 (V5-2549)	E-2	NC	A	-	GA	SO	O	C	AT-1 BT PIT	RR OP 2Y		NA	VR-11	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2085
SYSTEM : STATION AIR RISERS

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P50-F603 (V5-2006)	C-4	NC	A	1	GA	MO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
P50-F604 (V5-2007)	C-4	NC	A	1	GA	MO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	

PREPARED BY : MUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2087
SYSTEM : COMBUSTIBLE GAS CONTROL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-F001A (FV8-2002)	E-5	2	B	.75	GA	MO	C	C	BT PIT	OP RR				
T48-F001B (FV8-2001)	E-5	2	B	.75	GA	MO	C	C	BT PIT	OP RR				
T48-F601A (V4-2140)	D-7	2	A	8	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F601B (V4-2139)	D-7	2	A	8	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F602A (V4-2142)	B-7	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F602B (V4-2141)	B-7	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F603A (V4-2144)	B-7	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F603B (V4-2143)	B-7	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F604A (V4-2148)	D-6	2	A	8	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F604B (V4-2149)	D-6	2	A	8	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2087
SYSTEM : COMBUSTIBLE GAS CONTROL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-F605A (V4-2154)	B-6	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F605B (V4-2153)	B-6	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F606A (V4-2156)	B-7	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	
T48-F606B (V4-2155)	B-7	2	A	4	BTF	MO	C	O&C	AT-1 BT PIT	RR OP RR	30	NA	VR-11	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F003 (E/V-F003)	B-5	NC	B	.25	3WY	SO	ND	D	BT	CS	NA		VR-25	
B21-F003 (V17-2656)	B-5	1	B	.5	GL	AO	C	C	BT PIT	CS RR			VR-25	
B21-F004 (E/V-F004)	B-4	NC	B	.25	3WY	SO	ND	D	BT	CS	NA		VR-25	
B21-F004 (V17-2657)	B-4	1	B	.5	GL	AO	C	C	BT PIT	CS RR			VR-25	
B21-F013A (E/V-F013A)	M-3	NC	B	---	3WY	SO	ND	E	BT	SP	NA		VR-14	
B21-F013A (V22-2071)	L-6	1	A/C	6	SRV	SAP	C	O	AT-5 BT CT-2	OP SP SP		200 F	VR-22 VR-14 VR-28	
B21-F013B (E/V-F013B)	M-3	NC	B	---	3WY	SO	ND	E	BT	SP	NA		VR-14	
B21-F013B (V22-2066)	J-7	1	A/C	6	SRV	SAP	C	O	AT-5 BT CT-2	OP SP SP		200 F	VR-22 VR-14 VR-28	
B21-F013C (E/V-F013C)	J-7	NC	B	---	3WY	SO	ND	E	BT	SP	NA		VR-14	
B21-F013C (V22-2060)	J-6	1	A/C	6	SRV	SAP	C	O	AT-5 BT CT-2	OP SP SP		200 F	VR-22 VR-14 VR-28	
B21-F013D (V22-2054)	H-7	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013E (V22-2056)	H-6	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2089
SYSTEM : NUCLEAR BOILER

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F013F (V22-2050)	H-6	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013G (E/V-F013G)	M-3	NC	B	---	3WY	SO	ND	E	BT	SP	NA		VR-14	
B21-F013G (V22-2068)	J-7	1	A/C	6	SRV	SAP	C	O	AT-5 BT CT-2	OP SP SP		200 F	VR-22 VR-14 VR-28	
B21-F013H (V22-2058)	H-7	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013J (V22-2064)	J-7	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013K (E/V-F013K)	M-3	NC	B	---	3WY	SO	ND	E	BT	SP	NA		VR-14	
B21-F013K (V22-2062)	J-6	1	A/C	6	SRV	SAP	C	O	AT-5 BT CT-2	OP SP SP		200 F	VR-22 VR-14 VR-28	
B21-F013L (V22-2052)	H-7	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013M (V22-2046)	D-7	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013N (V22-2047)	D-7	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013P (V22-2070)	L-7	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	
B21-F013R (V22-2048)	D-8	1	A/C	6	SRV	SAP	C	NA	AT-5 CT-2	OP SP		200 F	VR-22 VR-28	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F015A (V22-2138)	B-9	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F015B (V22-2140)	M-8	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F015C (V22-2124)	M-10	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F015D (V22-2131)	M-11	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F016 (V17-2009)	E-9	1	A	3	GL	MO	C	C	AT-1 AT-4 BT PIT	RR RR OP RR	45	NA NA	VR-11 VR-27	
B21-F019 (V17-2010)	E-10	1	A	3	GL	MO	C	C	AT-1 AT-4 BT PIT	RR RR OP RR	45	NA NA	VR-11 VR-27	
B21-F022A (V17-2003)	D-9	1	A	26	GL	AO	0	C	AT-9 BT BTP FST PIT	RR CS OP CS RR	5	NA	VR-24 VR-15 VR-23	
B21-F022B (V17-2001)	H-9	1	A	26	GL	AO	0	C	AT-9 BT BTP FST PIT	RR CS OP CS RR	5	NA	VR-24 VR-15 VR-23	
B21-F022C (V17-2002)	K-9	1	A	26	GL	AO	0	C	AT-9 BT BTP FST PIT	RR CS OP CS RR	5	NA	VR-24 VR-15 VR-23	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F022D (V17-2004)	L-9	1	A	26	GL	AO	O	C	AT-9	RR		NA	VR-24	
									BT	CS	5		VR-15	
									BTP	OP				
									FST	CS			VR-23	
									PIT	RR				
B21-F024A (V4-2097)	A-9	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F024B (V4-2099)	M-8	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F024C (V4-2110)	M-10	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F024D (V4-2111)	M-11	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F028A (V17-2007)	D-11	1	A	26	GL	AO	O	C	AT-9	RR		NA	VR-24	
									BT	CS	5		VR-15	
									BTP	OP				
									FST	CS			VR-23	
									PIT	RR				
B21-F028B (V17-2005)	H-10	1	A	26	GL	AO	O	C	AT-9	RR		NA	VR-24	
									BT	CS	5		VR-15	
									BTP	OP				
									FST	CS			VR-23	
									PIT	RR				
B21-F028C (V17-2006)	J-10	1	A	26	GL	AO	O	C	AT-9	RR		NA	VR-24	
									BT	CS	5		VR-15	
									BTP	OP				
									FST	CS			VR-23	
									PIT	RR				
B21-F028D (V17-2008)	L-10	1	A	26	GL	AO	O	C	AT-9	RR		NA	VR-24	
									BT	CS	5		VR-15	
									BTP	OP				
									FST	CS			VR-23	
									PIT	RR				

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F029A (V5-2056)	A-11	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F029B (V5-2057)	M-8	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F029C (V5-2058)	M-10	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F029D (V5-2059)	M-11	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F031A (V22-2125)	B-11	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F031B (V22-2132)	M-8	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F031C (V22-2139)	M-11	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F031D (V22-2141)	M-12	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F036A (V4-2101)	M-11	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F036B (V4-2102)	M-11	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F036C (V4-2098)	J-8	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F036E (V4-2100)	M-11	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	
B21-F036G (V4-2103)	M-11	NC	C	---	CK	SA	C	O&C	CT-1	RR			VR-16	

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INSERVICE TESTING PROGRAM

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ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2089
SYSTEM : NUCLEAR BOILER

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F037A (V22-2111)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037B (V22-2100)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037C (V22-2101)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037D (V22-2104)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037E (V22-2105)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037F (V22-2107)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037G (V22-2099)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037H (V22-2098)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037J (V22-2102)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037K (V22-2103)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037L (V22-2106)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037M (V22-2097)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037N (V22-2108)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	

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VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F037P (V22-2110)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F037R (V22-2109)	M-3	2	C	10	CK	SA	C	O&C	CT-1	CS			VR-17	
B21-F039A (V22-2127)	M-12	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F039B (V22-2128)	M-10	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F039C (V22-2123)	J-8	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F039G (V22-2129)	M-10	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F039K (V22-2126)	M-11	NC	C	---	RV	SA	C	NA	CT-2	5Y				
B21-F080A (V10-2006)	E-11	2	B	2	GL	AO	O	C	BT PIT	OP RR				
B21-F080B (V10-2007)	F-11	2	B	2	GL	AO	O	C	BT PIT	OP RR				
B21-F080C (V10-2008)	J-11	2	B	2	GL	AO	O	C	BT PIT	OP RR				
B21-F080D (V10-2009)	K-11	2	B	2	GL	AO	O	C	BT PIT	OP RR				
B21-F480A (E/V-F480A)	E-11	NC	B	.25	3WY	SO	NE	D	BT	OP	NA		VR-6	
B21-F480B (E/V-F480B)	F-11	NC	B	.25	3WY	SO	NE	D	BT	OP	NA		VR-6	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F480C (E/V-F480C)	J-10	NC	B	.25	3WY	SO	NE	D	BT	OP	NA		VR-6	
B21-F480D (E/V-F480D)	K-11	NC	B	.25	3WY	SO	NE	D	BT	OP	NA		VR-6	
B21-F501A (V13-2301)	D-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F501B (V13-2302)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F501C (V13-2303)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F501D (V13-2304)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F502A (V13-2305)	E-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F502B (V13-2306)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F502C (V13-2307)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F502D (V13-2308)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F503A (V13-2309)	D-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F503B (V13-2310)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F503C (V13-2311)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	

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B21-F503D (V13-2312)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F504A (V13-2313)	D-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F504B (V13-2314)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F504C (V13-2315)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F504D (V13-2316)	F-13	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-IV22A (E/V-IV22A)	E-9	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	
B21-IV22B (E/V-IV22B)	-	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	
B21-IV22C (E/V-IV22C)	-	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	
B21-IV22D (E/V-IV22D)	-	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	
B21-IV28A (E/V-IV28A)	E-11	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	
B21-IV28B (E/V-IV28B)	-	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	
B21-IV28C (E/V-IV28C)	-	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	
B21-IV28D (E/V-IV28D)	-	NC	B	-	SCA	SCA	NE	D	BT	CS	NA		VR-15	

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INSERVICE TESTING PROGRAM

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THE DETROIT EDISON COMPANY

P&ID : 6M721-2090
SYSTEM : NUCLEAR BOILER

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F506 (V13-2317)	C-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F507 (V13-2318)	E-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F508 (V13-2319)	C-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F509 (V13-2320)	E-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F510 (V13-2321)	D-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F511 (V13-2322)	D-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F512 (V13-2323)	C-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F513A (V13-2324)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F513B (V13-2325)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F513C (V13-2326)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F513D (V13-2327)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F514A (V13-2328)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F514B (V13-2329)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	

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INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND MC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

PAID : AM721-2090
SYSTEM : NUCLEAR BOILER

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F514C (V13-2330)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F514D (V13-2331)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515A (V13-2332)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515B (V13-2333)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515C (V13-2334)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515D (V13-2335)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515E (V13-2336)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515F (V13-2337)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515G (V13-2338)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515H (V13-2339)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515L (V13-2340)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515M (V13-2341)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515N (V13-2342)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	

PREPARED BY : NUTECH
PROGRAM : FRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2090
SYSTEM : NUCLEAR BOILER

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F515P (V13-2343)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515R (V13-2344)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515S (V13-2345)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515T (V13-2346)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F515U (V13-2347)	H-7	1	A/C	.75	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F516A (V13-2348)	J-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F516B (V13-2349)	J-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F516C (V13-2388)	K-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F517A (V13-2350)	J-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F517B (V13-2389)	J-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F517C (V13-2390)	J-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B21-F517D (V13-2391)	J-10	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-2678
SYSTEM : DEMINERALIZED SERVICE WATER RISERS

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P11-F126 (V8-3120)	C-2	NC	A	6	GA	M	LC	NA	AT-1	RR		NA	VR-11	
P11-F616 (V8-2790)	C-2	NC	A	6	GA	MO	LC	NA	AT-1 BT PIT	RR OP RR	30	NA	VR-11	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B31-F014A (E/V-F014A)	C-5	NC	B	.25	3WY	SO	NE	D	BT	CS	NA		VR-18	
B31-F014A (V8-3710)	B-5	NC	A	.75	GA	AO	O	C	AT-1 BT PIT	RR CS RR	5	NA	VR-11 VR-18	
B31-F014B (E/V-F014B)	A-4	NC	B	.25	3WY	SO	NE	D	BT	CS	NA		VR-18	
B31-F014B (V8-3590)	A-4	NC	A	.75	GA	AO	O	C	AT-1 BT PIT	RR CS RR	5	NA	VR-11 VR-18	
B31-F016A (E/V-F016A)	B-7	NC	B	.25	3WY	SO	NE	D	BT	CS	NA		VR-18	
B31-F016A (V8-3767)	B-6	NC	A	.75	GA	AO	O	C	AT-1 BT PIT	RR CS RR	5	NA	VR-11 VR-18	
B31-F016B (E/V-F016B)	A-4	NC	B	.25	3WY	SO	NE	D	BT	CS	NA		VR-18	
B31-F016B (V8-3768)	A-4	NC	A	.75	GA	AO	O	C	AT-1 BT PIT	RR CS RR	5	NA	VR-11 VR-18	
B31-F019 (E/V-F019)	D-5	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
B31-F019 (V17-2077)	D-5	1	A	.75	GL	DO	C	C	AT-1 BT PIT	RR OP RR	11	NA	VR-11	
B31-F020 (E/V-F020)	D-7	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B31-F020 (V17-2078)	D-7	1	A	.75	GL	DO	C	C	AT-1 BT PIT	RR OP RR		NA	VR-11	
B31-F031A (V8-2003)	B-3	1	B	28	GA	MO	O	C	BT PIT	CS RR			VR-21	
B31-F031B (V8-2004)	A-4	1	B	28	GA	MO	O	C	BT PIT	CS RR			VR-21	
B31-F501A (V13-2351)	F-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F501B (V13-2353)	F-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F501C (V13-2352)	F-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F501D (V13-2354)	F-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F502A (V13-2355)	E-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F502B (V13-2356)	E-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F502C (V13-2357)	E-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F502D (V13-2358)	E-5	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	
B31-F503A (V13-2359)	D-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	VR-9	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B31-F503B (V13-2360)	C-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F504A (V13-2361)	D-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F504B (V13-2362)	C-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F505A (V13-2363)	E-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F505B (V13-2364)	C-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F506A (V13-2365)	D-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F506B (V13-2366)	C-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F510A (V13-2367)	B-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F510B (V13-2368)	A-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F511A (V13-2369)	B-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F511B (V13-2370)	A-3	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F512A (V13-2371)	C-6	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F512B (V13-2372)	C-6	1	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B31-F515A (V13-2373)	C-7	NC	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F515B (V13-2374)	A-3	NC	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F516A (V13-2375)	C-7	NC	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	
B31-F516B (V13-2376)	A-3	NC	A/C	1	XFC	SA	O	C	AT-3 CT-1	RR RR		2.5 G	 VR-9	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-3045
SYSTEM : MSIV LEAKAGE CONTROL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
B21-F079B (V5-2264)	E-2	3	B	1	GL	SO	C/FC	O&C	BT FST PIT	OP OP RR	5		VR-6 VR-23	
B21-F097A (V5-2292)	D-5	3	B	1	GL	SO	O/FO	C	BT FST PIT	OP OP RR	5		VR-6 VR-23	
B21-F097B (V5-2263)	D-3	3	B	1	GL	SO	O/FO	C	BT FST PIT	OP OP RR	5		VR-6 VR-23	
B21-F099A (V5-2293)	D-5	3	B	1	GL	SO	C/FC	O&C	BT FST PIT	OP OP RR	5		VR-6 VR-23	
B21-F099B (V5-2298)	D-3	3	B	1	GL	SO	C/FC	O&C	BT FST PIT	OP OP RR	5		VR-6 VR-23	
B21-F100A (V5-2294)	D-5	2	A	1	GL	SO	C/FC	O&C	AT-1 BT FST PIT	RR OP OP RR	5	NA	VR-11 VR-6 VR-23	
B21-F100B (V5-2297)	D-3	2	B	1	GL	SO	C/FC	O&C	BT FST PIT	OP OP RR	5		VR-6 VR-23	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-3445
SYSTEM : NITROGEN INERTING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T23-F400A (V21-2001)	C-2	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR	NA		VR-34	
T23-F400B (V21-2002)	B-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400C (V21-2003)	B-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400D (V21-2004)	B-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400E (V21-2005)	B-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400F (V21-2006)	B-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400G (V21-2007)	A-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400H (V21-2008)	A-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400J (V21-2009)	A-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400K (V21-2010)	A-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-3445
SYSTEM : NITROGEN INERTING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T23-F400L (V21-2011)	A-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F400M (V21-2012)	A-4	NC	A/C	18	CK	SAT	C	O&C	AT-7 CT-1 PIT	RR OP RR		NA	VR-34	
T23-F409 (E/V-F409)	C-4	NC	B	.38	3WY	SO	NE	D	BT	OP	NA		VR-6	
T23-F409 (V21-2015)	C-4	NC	A	20	BTF	AO	C/FO	O&C	AT-1 BT FST PIT	RR OP OP RR	8	NA	VR-11 VR-23	
T23-F410 (E/V-F410)	C-3	NC	B	.38	3WY	SO	NE	D	BT	OP	NA		VR-6	
T23-F410 (V21-2016)	C-3	NC	A	20	BTF	AO	C/FO	O&C	AT-1 BT FST PIT	RR OP OP RR	8	NA	VR-11 VR-23	
T23-F450A (V21-2013)	C-3	NC	A/C	20	CK	SAT	C	O&C	AT-1 CT-1 PIT	RR OP RR		NA	VR-11	
T23-F450B (V21-2014)	C-3	NC	A/C	20	CK	SAT	C	O&C	AT-1 CT-1 PIT	RR OP RR		NA	VR-11	
T48- (V4-2080)	F-3	NC	A	1.5	GL	MO	O	C	AT-1 BT PIT	RR OP RR	18	NA	VR-11	
T48- (V4-2167)	F-4	NC	C	1.5	CK	SA	O	C	CT-1	OP				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND MC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-3445
SYSTEM : NITROGEN INERTING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-(V4-2172)	E-4	MC	A	1.5	GL	M	LC	C	AT-1	RR		NA	VR-11	
T48-(V4-2188)	F-3	MC	A	1.5	GL	MO	O	C	AT-1 BT PIT	RR OP RR		NA	VR-11	
T48-(V4-2228)	F-4	MC	C	1	CK	SA	C	C	CT-1	OP				
T48-(V8-4140)	E-2	MC	A	1.5	GL	M	LC	C	AT-1	RR		NA	VR-11	
T48-F408 (E/V-F408)	D-4	MC	B	---	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F408 (V4-2060)	D-4	MC	A	10	BTF	AO	C/FC	C	AT-1 AT-8 BT FST PIT	RR SP OP OP RR	 2 	NA NA 	VR-11 VR-31 VR-23 	
T48-F409 (E/V-F409)	D-4	MC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F409 (V4-2061)	D-4	MC	A	6	BTF	AO	C/FC	C	AT-1 AT-8 BT FST PIT	RR SP OP OP RR	 5 	NA NA 	VR-11 VR-31 VR-23 	
T48-F410 (E/V-F410)	D-2	MC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F410 (V4-2063)	D-2	MC	A/C	6	BTF	AO	C/FC	C	AT-1 AT-8 BT FST PIT	RR SP OP OP RR	 5 	NA NA 	VR-11 VR-31 VR-23 	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-F416 (E/V-F416)	C-2	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F416 (V4-2036)	C-2	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F417 (E/V-F417)	B-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F417 (V4-2065)	B-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F418 (E/V-F418)	B-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F418 (V4-2075)	B-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F419 (E/V-F419)	B-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F419 (V4-2077)	B-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F420 (E/V-F420)	B-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F420 (V4-2082)	B-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F421 (E/V-F421)	B-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-3445
SYSTEM : NITROGEN INERTING

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-F421 (V4-2084)	B-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F422 (E/V-F422)	B-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F422 (V4-2086)	B-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F423 (E/V-F423)	B-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F423 (V4-2088)	A-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F424 (E/V-F424)	A-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F424 (V4-2090)	A-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F425 (E/V-F425)	A-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F425 (V4-2092)	A-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F426 (E/V-F426)	A-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F426 (V4-2094)	A-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-F427 (E/V-F427)	A-3	NC	B	.25	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F427 (V4-2096)	A-3	NC	A	1	GL	AO	C	C	AT-1 BT PIT	RR OP RR	15	NA	VR-11	
T48-F428 (E/V-F428)	F-4	NC	B	.25	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F428 (V4-2079)	F-4	NC	A	1.5	GL	AO	O/FC	C	AT-1 BT FST PIT	RR OP OP RR	8	NA	VR-11 VR-23	
T48-F451 (E/V-F451)	E-2	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F451 (V4-2185)	E-2	NC	A	1	GA	AO	O/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	
T48-F453 (E/V-F453)	D-4	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F453 (VR3-2823)	D-4	NC	A	1	GL	AO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11	
T48-F454 (E/V-F454)	D-4	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F454 (VR3-2824)	D-4	NC	A	1	GL	AO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-F455 (E/V-F455)	D-3	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F455 (VR3-2825)	D-4	NC	A	1	GL	AO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11	
T48-F456 (E/V-F456)	D-2	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F456 (VR3-2826)	D-2	NC	A	1	GL	AO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11	
T48-F457 (E/V-F457)	D-2	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F457 (VR3-2827)	D-2	NC	A	1	GL	AO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11	
T48-F458 (E/V-F458)	D-2	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F458 (VR3-2828)	D-2	NC	A	1	GL	AO	O	C	AT-1 BT PIT	RR OP RR	5	NA	VR-11	
T48-F462 (E/V-F462)	F-2	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T48-F462 (V4-2187)	F-2	NC	A	1.5	GL	AO	O/FC	C	AT-1 BT FST PIT	RR OP OP RR		NA	VR-11 VR-23	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721-4100
SYSTEM : TORUS WATER MANAGEMENT

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
G51-F600 (V8-3832)	E-6	NC	A	6	GA	MO	O	C	AT-2 BT PIT	RR OP RR	30	180 M		
G51-F601 (V8-3834)	E-6	NC	A	6	GA	MO	O	C	AT-2 BT PIT	RR OP RR	30	180 M		
G51-F602 (V8-3831)	C-5	NC	A	6	GA	MO	O	C	AT-2 BT PIT	RR OP RR	30	180 M		
G51-F603 (V8-3833)	C-5	NC	A	6	GA	MO	O	C	AT-2 BT PIT	RR OP RR	30	180 M		
G51-F604 (V8-3849)	E-5	2	A	4	GA	MO	O	C	AT-2 BT PIT	RR OP RR	20	120 M		
G51-F605 (V8-3847)	E-5	NC	A	4	GA	MO	O	C	AT-2 BT PIT	RR OP RR	20	120 M		
G51-F606 (V8-3850)	C-7	2	A	4	GA	MO	O	C	AT-2 BT PIT	RR OP RR	20	120 M		
G51-F607 (V8-3848)	C-7	NC	A	4	GA	MO	O	C	AT-2 BT PIT	RR OP RR	20	120 M		

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
(VB9-2594)	D-6	NC	C	4	CK	SA	O	O	CT-1	OP				
(VB9-2597)	D-3	NC	C	4	CK	SA	O	O	CT-1	OP				

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
P50-F403 (E/V-F403)	D-4	NC	B	-	3WY	SO	ND	D	BT	OP	NA		VR-6	
P50-F403 (V5-2033)	D-4	NC	B	2	GL	AO	C/FC	C	BT FST PIT	OP OP RR			VR-23	

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
R30-F031A (V5-2086)	B-2	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F031C (V5-2098)	B-5	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F032A (V5-2090)	B-2	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F032C (V5-2102)	B-4	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F035A (V5-2088)	C-2	NC	C	.75	RV	SA	C	NA	CT-2	SY				
R30-F035C (V5-2100)	C-5	NC	C	.75	RV	SA	C	NA	CT-2	SY				
R30-F036A (V5-2092)	C-2	NC	C	.75	RV	SA	C	NA	CT-2	SY				
R30-F036C (V5-2104)	C-4	NC	C	.75	RV	SA	C	NA	CT-2	SY				
R30-F050A (V-1)	D-2	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	
R30-F050C (V-2)	D-5	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	
R30-F051A (V-3)	D-2	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	
R30-F051C (V-4)	D-4	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721N-2047
SYSTEM : DIESEL GENERATOR

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
R30-F031B (V5-2062)	B-2	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F031D (V5-2074)	B-5	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F032B (V5-2066)	B-2	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F032D (V5-2078)	B-4	NC	C	.75	CK	SA	C	C	CT-1	OP				
R30-F035B (V5-2064)	C-2	NC	C	.75	RV	SA	C	NA	CT-2	5Y				
R30-F035D (V5-2076)	C-5	NC	C	.75	RV	SA	C	NA	CT-2	5Y				
R30-F036B (V5-2068)	C-2	NC	C	.75	RV	SA	C	NA	CT-2	5Y				
R30-F036D (V5-2080)	C-4	NC	C	.75	RV	SA	C	NA	CT-2	5Y				
R30-F050B (V-1)	D-2	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	
R30-F050D (V-2)	D-5	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	
R30-F051B (V-3)	D-2	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	
R30-F051D (V-4)	D-4	NC	B	1.5	3WY	SO	NE	D	BT PIT	OP RR	NA		VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM
ISI CLASS 1, 2, 3, AND MC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

PAID : 6M72IN-2048
SYSTEM : DIESEL FUEL & LUBE OIL

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACT.	POS.	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
R30-F083A (V14-202A)	C-3	MC	C	1.5	CK	SA	C	OBC	CT-1	OP				
R30-F083C (V14-2037)	C-6	MC	C	1.5	CK	SA	C	OBC	CT-1	OP				
R30-F085A (V14-202D)	B-3	MC	C	1.5	CK	SA	C	OBC	CT-1	OP				
R30-F085C	B-6	MC	C	1.5	CK	SA	C	OBC	CT-1	OP				

PMID : 6N721N-2049
SYSTEM : DIESEL FUEL & LUBE OIL

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
R30-F083B (V14-2004)	C-3	NC	C	1.5	CK	SA	C	O&C	CT-1	OP				
R30-F083D (V14-2015)	C-6	NC	C	1.5	CK	SA	C	O&C	CT-1	OP				
R30-F084B (V14-2007)	B-3	NC	C	1.5	CK	SA	C	O&C	CT-1	OP				
R30-F084D (V14-2018)	B-6	NC	C	1.5	CK	SA	C	O&C	CT-1	OP				

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F148A (V15-2004)	C-6	3	C	16	CK	SA	C	O&C	CT-1	OP				
E11-F148C (V15-2003)	C-6	3	C	16	CK	SA	C	O&C	CT-1	OP				
E11-F603A (V15-2108)	E-5	3	B	6	GA	MO	C	O&C	BT PIT	OP RR				
E11-F604A (V15-2109)	E-5	3	B	18	GA	MO	O	O&C	BT PIT	OP RR				
E11-F605A (V15-2110)	F-5	3	B	18	GA	MO	O	O&C	BT PIT	OP RR				
P45-F002A (V15-2092)	C-5	3	C	10	CK	SA	C	O	CT-1	OP				
R30-F142A (V15-2096)	C-4	3	C	8	CK	SA	C	O	CT-1	OP				
R30-F142C (V15-2102)	C-4	3	C	8	CK	SA	C	O	CT-1	OP				

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F148B (V15-2001)	C-2	3	C	16	CK	SA	C	O&C	CT-1	OP				
E11-F148D (V15-2002)	C-2	3	C	16	CK	SA	C	O&C	CT-1	OP				
E11-F603B (V15-2083)	[illegible]	3	B	16	GA	MO	C	O&C	BT PIT	OP RR				
E11-F604 (V15-2084)	[illegible]	3	B	18	GA	MO	O	O&C	BT PIT	OP RR				
E11-F605B (V15-2085)	E-2	3	B	18	GA	MO	O	O&C	BT PIT	OP RR				
P45-F002B (V15-2067)	C-3	3	C	10	CK	SA	C	O	CT-1	OP				
R30-F142B (V15-2071)	C-3	3	C	8	CK	SA	C	O	CT-1	OP				
R30-F142D (V15-2078)	C-4	3	C	8	CK	SA	C	O	CT-1	OP				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 6M721N-2054
SYSTEM : RHR SERVICE WATER

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
E11-F601A (V15-2127)	C-4	3	B	10	BAL	MO	O	O	BT PIT	OP RR				
E11-F601B (V15-2125)	C-4	3	B	10	BAL	MO	C	O	BT PIT	OP RR				
E11-F602A (V15-2128)	C-4	3	B	10	BAL	MO	C	O	BT PIT	OP RR				
E11-F602B (V15-2126)	C-4	3	B	10	BAL	MO	O	O	BT PIT	OP RR				

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM
ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 7M721-2709
SYSTEM : STANDBY GAS AND CONTAINMENT PURGE

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T46-F400 (E/V-F400)	C-5	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T46-F400 (VR3-3015)	C-5	NC	A	20	BTF	AO	C/FC	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									FST	OP			VR-23	
									PIT	RR				
T46-F401 (E/V-F401)	C-5	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T46-F401 (VR3-3016)	C-5	NC	A	20	BTF	AO	C/FC	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									FST	OP			VR-23	
									PIT	RR				
T46-F402 (E/V-F402)	E-6	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T46-F402 (VR3-3023)	E-6	NC	A	24	BTF	AO	C/FC	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									FST	OP			VR-23	
									PIT	RR				
T46-F407 (E/V-F407)	E-4	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T46-F407 (VR3-3022)	E-4	NC	B	24	BTF	AO	C/FO	O	BT	OP				
									FST	OP			VR-23	
									PIT	RR				
T46-F408 (E/V-F408)	F-4	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 7M721-2709
SYSTEM : STANDBY GAS AND CONTAINMENT PURGE

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T46-F408 (VR3-3002)	F-4	NC	B	24	BTF	AO	C/FO	O	BT FST PIT	OP OP RR			 VR-23	
T46-F409 (E/V-F409)	G-4	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T46-F409 (VR3-3001)	G-4	NC	B	24	BTF	AO	C/FO	O	BT FST PIT	OP OP RR			 VR-23	
T46-F410 (E/V-F410)	F-4	NC	B	---	3WY	SO	NE	D	BT	OP	NA		VR-6	
T46-F410 (VR3-3003)	F-4	NC	B	24	BTF	AO	C/FO	O	BT FST PIT	OP OP RR			 VR-23	
T46-F411 (E/V-F411)	E-6	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T46-F411 (VR3-3026)	E-6	NC	A	6	BTF	AO	C/FC	C	AT-1 AT-8 BT FST PIT	RR SP OP OP RR	 5 	NA NA 	VR-11 VR-31 VR-23 	
T46-F412 (E/V-F412)	C-5	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T46-F412 (VR3-3019)	C-5	NC	A	6	BTF	AO	C/FC	C	AT-1 AT-8 BT FST PIT	RR SP OP OP RR	 5 	NA NA 	VR-11 VR-31 VR-23 	
T48-F404 (E/V-F404)	B-7	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	

PREPARED BY : NUTECH
PROGRAM : PRISIM

INSERVICE TESTING PROGRAM

ISI CLASS 1, 2, 3, AND NC VALVES
ENRICO FERMI ATOMIC POWER PLANT UNIT 2

THE DETROIT EDISON COMPANY

P&ID : 7M721-2709
SYSTEM : STANDBY GAS AND CONTAINMENT PURGE

REVISION : 1 , 07/07/82

VALVE NUMBER	COORDINATE	CLASS	VALVE CATEGORY	VALVE SIZE	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	STROKE DIRECTION	TEST	TEST FREQUENCY	MAXIMUM STROKE TIME	MAXIMUM LEAKAGE	RELIEF REQUEST	REMARKS
T48-F404 (VR3-3013)	B-7	NC	A	20	BTF	AO	C/FC	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									FST	OP			VR-23	
									PIT	RR				
T48-F405 (E/V-F405)	C-7	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F405 (VR3-3014)	C-7	NC	A	20	BTF	AO	C/FC	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									FST	OP			VR-23	
									PIT	RR				
T48-F407 (E/V-F407)	C-7	NC	B	.38	3WY	SO	ND	D	BT	OP	NA		VR-6	
T48-F407 (VR3-3012)	C-7	NC	A	24	BTF	AO	C/FC	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									FST	OP			VR-23	
									PIT	RR				
T48-3F601 (VR3-3011)	C-7	NC	A	24	BTF	MO	C	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									PIT	RR				
T48-3F602 (VR3-3024)	E-6	NC	A	24	BTF	MO	C	C	AT-1	RR		NA	VR-11	
									AT-8	SP		NA	VR-31	
									BT	OP	5			
									PIT	RR				