

Indian Point 2

Revision 0

PROGRAM SECTION NO. **SEP-IP2-IST-2**  
Revision No. 0  
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**INDIAN POINT 2 FOURTH TEN-YEAR INTERVAL**  
**INSERVICE TESTING PROGRAM PLAN**  
**ENTERGY NUCLEAR ENGINEERING PROGRAMS**

**APPLICABLE SITES**

All Sites: ☐

Specific Sites: ANO ☐ GGNS ☐ IPEC ☒ JAF ☐ PLP ☐ PNPS ☐ RBS ☐ VY ☐ W3 ☐ HQN ☐

Safety Related: ☒ Yes  
☐ No

Program Section Revision Summary	
Current Revision	Description of Change
0	This Site Engineering Program (SEP) supercedes the previous IST Program Plan, IP-RPT-07-00018

**REVIEW AND CONCURRENCE SHEET**

Program Section No.: SEP-IP2-IST-2

Revision No.: 0

Program Section Title: Indian Point 2 Fourth Ten-Year Interval Inservice Testing Program Plan

Prepared By: [Signature]

Date 7/5/11

Checked By: [Signature]

Date 7-5-11

Reviewed By: NA

Date \_\_\_\_\_

(Optional)

**(Additional 'Reviewed By' lines may be added as needed)**

ANII NA

Date \_\_\_\_\_

Reviewed By (or N/A)

Concurred: [Signature]

Date 7/5/11

Responsible Supervisor

## SECTION 1

### Inservice Testing Program

#### Introduction

The Inservice Testing Program described herein has been developed as required by Section 50.55a of 10 CFR Part 50 to implement the requirements of ASME OM CODE-2001 (Revision of ASME OM Code-1998) through 2003 Addenda. The safe shutdown condition for IP2 is Hot Shutdown.

#### Applicability

Consistent with Section 50.55a of 10 CFR Part 50, this program is applicable to the inservice testing of in-scope ASME Code Class 1, 2 and 3 components for the unit's fourth ten-year interval. An Inservice Testing Program for ASME Code Class 1, 2 and 3 components is identified in IP2 Technical Specification 5.5.6 and IP2 Technical Requirements Manual 5.5.F. An inservice testing program for non-ASME Code Class 1, 2 and 3 pumps and valves has been updated concurrently, is not a part of this required submittal, and is available for review at the plant site or upon request.

#### Applicable Codes

In accordance with Section 50.55a of 10 CFR Part 50, the applicable code is 1995 Edition through the 2003 Addenda. For IP2 this is specifically ASME OM CODE-2001 (Revision of ASME OM Code-1998) with the following Addenda: ASME OMa Code-2002 and ASME OMb Code-2003. This is referred to as the Code in the remaining text.

#### Program Description

The list on the following page identifies the Indian Point Unit No. 2 ASME Code Class 1, 2 and 3 plant specific systems subject to the inservice testing requirements of the Code. The subject systems are derived from the latest IP2 Code Boundary drawings.

Sections 2 and 3 identify the ASME Code Class 1, 2 and 3 pumps and valves to be tested in accordance with the Code. The pumps and valves are listed followed by both general and specific relief requests where it has been found that the testing requirements for that pump or valve are impractical, as applicable. In such instances, appropriate alternative testing provisions have been identified. General relief requests are used when the impracticality of a particular test requirement applies to more than one pump or more than one valve. Specific relief requests are unique to a particular pump or valves.

The testing program outlined in Sections 2 and 3 has been developed following a design review. Should certain Code requirements prove to be impractical due to unforeseen circumstances, subsequent relief from that requirement will be requested.

#### Justifications

Cold shutdown/refueling justifications are provided for those components where test frequency varies within Code allowances. NUREG-1482 "Guidelines for Inservice Testing at Nuclear Power Plants", was used in developing these justifications.

#### Relief Requests

Relief requests are written in accordance with 10CFR50.55a when specific requirements for inservice testing are considered impractical or pose an undue burden on the licensee. The enclosed relief requests, if any, are subject to change throughout the inspection interval. If requirements are determined to be impractical, or result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, during the course of the interval, additional or modified relief requests will be submitted in accordance with 10CFR50.55a. NUREG-1482 "Guidelines for Inservice Testing at Nuclear Power Plants", is used in developing justification for the basis of the relief requests.

### **List of Systems Subject to Inservice Testing**

1. The following list relates specific plant systems and drawings to a list of typical systems and components for pressurized water reactors patterned after Table 2.1 of NUREG-1482 "Guidelines for Inservice Testing at Nuclear Power Plants".
2. Drawings are listed once and only against the most applicable system characteristic.

<b><u>SYSTEM</u></b>	<b><u>TYPICAL COMPONENTS</u></b>	<b><u>IP2 DRAWINGS</u></b>
Reactor coolant system and flowpaths for establishing natural circulation	Power-operated relief valves and associated block valves Reactor high point and head vents Primary system safety and relief valves (pressurizer Code safety valves) Pressure boundary isolation valves Valves in lines to pressurizer relief/quench tank	9321-2738 208168
Main steam system	Main steam isolation valves (MSIV's) Main steam non-return valves (if applicable) Secondary system safety and relief valves Atmospheric dump valves Auxiliary feedwater turbine steam supply valves Steam generator blowdown isolation valves	9321-2017 9321-2041 9321-2729
High pressure safety injection and containment spray systems	High-pressure injection pumps and discharge check valves Injection valves in injection flow path Isolation Valves Valves for the refueling water storage tank (RWST) Containment spray pumps and suction/discharge check valves Valves in flow path to spray header	9321-F-2735 235296
Chemical and volume control system	Charging or makeup pumps and suction/discharge check valves Injection valves in charging/makeup flow path Boric acid transfer pumps and suction/discharge check valves Valves in emergency boration flow paths Relief valves	9321-2736
Low pressure safety injection system and shutdown cooling/residual heat removal system	Low pressure injection pumps and suction/discharge check valves Valves associated with safety injection accumulators Recirculation flow path valves, including containment sump isolation valves Isolation valves (high-low pressure interface) Relief valves	251783
Main and auxiliary feedwater system	Main feedwater check valves Auxiliary feedwater pumps and suction/discharge check valves Valves in auxiliary path to steam generator Valves in auxiliary suction lines Relief and isolation valves	9321-2019 9321-2018

<b><u>SYSTEM</u></b>	<b><u>TYPICAL COMPONENTS</u></b>	<b><u>IP2 DRAWINGS</u></b>
Primary containment system	Containment isolation valves (various systems) Sampling lines penetrating containment Containment isolation seal water system Penetration protection relief valves (GL 96-06)	(Various) 9321-2745 9321-2746
Component cooling water system	Component cooling water pumps and suction/discharge check valves Auxiliary component cooling water pumps and suction/discharge check valves Relief Valves	9321-F-2720 227781
Service water system including cooling to containment and emergency diesel generators	Service water pumps and discharge check valves Valves in flow path to containment cooling Valves in flow path to emergency diesel cooling Valves in flow path to component cooling heat removal Isolation and cross-tie valves	9321-F-2722 209762

## SECTION 2

## Inservice Test Program – ASME Code Class 1, 2 and 3 Pumps

## 1.0 ASME CODE CLASS 1, 2 AND 3 PUMPS SUBJECT TO THE TESTING REQUIREMENTS OF SUBSECTION ISTB:

Safety Injection Pumps 21, 22, and 23  
Containment Spray Pumps 21 and 22  
Recirculation Pumps 21 and 22  
Service Water Pumps 21, 22, 23, 24, 25 and 26  
Residual Heat Removal Pumps 21 and 22  
Component Cooling Pumps 21, 22, and 23  
Auxiliary Feedwater Pumps 21, 22, and 23  
Boric Acid Transfer Pumps 21 and 22  
Charging Pumps 21, 22, and 23  
Safety Injection Circulating Water Pumps 21, 22, and 23  
Auxiliary Component Cooling Water Pumps 21 and 22

## 2.0 PROGRAM DESCRIPTION

The following tabulation lists the pump identification, diagram number, quality group, parameters required to be measured or observed, pump group, and the test frequency. Requests for relief (R-R) numbers have been noted in the appropriate parameter columns, if applicable.

The detailed description of the requests for relief, containing the basis for a relief and alternate testing, follows the program tabulation, if applicable.