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FEB 28 2011

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop OP1-17
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION UNIT 2
EXTENDED POWER UPRATE
MASTER TEST PROCEDURE TP-299-010
RENEWED OPERATING LICENSE NO. NPF-22
LICENSE CONDITION 2.C.(20)(c)
PLA-6697 **Docket No. 50-388**

Reference: *PLA-6506, Mr. W. H. Spence (PPL) to Document Control Desk (USNRC), "Unit 2 Operating License No. NPF-22 License Conditions 2.C.(20)(b)8 and 2.C.(20)(c)," dated May 14, 2009.*

The purpose of this letter is to submit the information required by the Susquehanna Steam Electric Station (SSES) Unit 2 License Condition 2.C.(20)(c). The reference, PLA-6506, previously identified that this information would be provided for future operation of Unit 2 at the EPU full licensed power level of 3952 MWt.

Attached is the Unit 2 Extended Power Uprate (EPU) Master Test Procedure (TP-299-010, Revision 1), which contains the information required by License Condition 2.C.(20)(c). This procedure will serve to guide the overall SSES Unit 2, Phase 2, EPU test program from start up to the EPU full licensed power level.

If you have any questions or require additional information, please contact Mr. Duane L. Filchner at (610) 774-7819.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 2/28/11

T. S. Rausch

Attachment: TP-299-010, Rev. 1, Unit 2 EPU Master Test Procedure

A001
NRR

Copy: NRC Region I
Mr. P. W. Finney, NRC Sr. Resident Inspector
Mr. R. R. Janati, DEP/BRP
Mr. B. K. Vaidya, NRC Project Manager

Attachment to PLA-6697

TP-299-010, Rev. 1, Unit 2 EPU Master Test Procedure

PROCEDURE COVER SHEET

PPL SUSQUEHANNA, LLC PROCEDURE	
EXTENDED POWER UPRATE MASTER TEST PROCEDURE SPECIAL, INFREQUENT OR COMPLEX TEST/EVOLUTION (SICT/E) ADHERENCE LEVEL: STEP-BY-STEP	TP-299-010 Revision 1 Page 1 of 72

QUALITY CLASSIFICATION:	APPROVAL CLASSIFICATION:
(X) QA Program ( ) Non-QA Program	(X) Plant ( ) Non-Plant ( ) Instruction

EFFECTIVE DATE: 2/11/2011

PERIODIC REVIEW FREQUENCY: N/A

PERIODIC REVIEW DUE DATE: N/A

RECOMMENDED REVIEWS:

Operations, Reactor Engineering, Station Engineering, PORC

Procedure Owner: Fred Graber

Responsible Supervisor: SE Supervisor-Mechanical

Responsible FUM: Manager-Station Engineering

Responsible Approver: Vice President-Nuclear Operations

PROCEDURE REVISION SUMMARY

TITLE: EXTENDED POWER UPRATE MASTER TEST PROCEDURE SPECIAL, INFREQUENT OR COMPLEX TEST/EVOLUTION (SICT/E)

1) Revised to reflect EPU Phase 2 requirements IAW EPU Startup Specification M-1563.

2) Incorporated lessons learned from performance of equivalent Unit 1 procedure TP-199-013.

3) Revised vibration data recording due to revised TP-262-033.

4) Re-arranged and added references previously omitted to Reference Section.

5) Added notes and changed applicable steps to allow for a maximum core flow other than 108 Mlb/hr if vessel internal examination reveals issues that would limit core flow without requiring need to revise this procedure.

6) Changed Attachment D from a copy of the Power to Flow Map with Test Conditions defined to a table defining Test Conditions.

7) No revision bars are used due to extent of revision.

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ATTACHMENTS

ATTACHMENTS

1. PURPOSE/SCOPE

The purpose of this procedure is to provide a centralized mechanism for documenting completion of all items necessary to perform a successful Unit 2 Phase 1 Extended Power Uprate Test Program. Specifically, this procedure provides a method of:

1.1 Ensuring that requirements for commencing testing in each Test Condition are met. (Refer to Section 2 for a definition of Test Condition.)

1.2 Specifying testing to be completed during each Test Condition.

1.3 Tracking status of test implementation.

1.4 Controlling escalation of Test Conditions.

2. DISCUSSION

2.1 This procedure does not supersede or replace any existing plant procedure, process or program.

2.2 This procedure performs no active testing. It is used as a master checklist and guide for the overall Unit 2 Phase 2 Extended Power Uprate Test Program.

2.3 In compliance and in conjunction with NDAP-QA-0406, this procedure imposes Administrative Controls throughout the EPU Test Program to direct reactor startup, power escalation and the establishment of Test Conditions.

2.4 A Test Condition (TC) is a defined range of reactor power and core flow conditions at which testing is conducted. The Test Condition also includes the startup path to those ranges. The Test Conditions for the Unit 2 Phase 2 EPU Test Program are as follows:

2.4.1 TC A - Reactor power less than 3733 MWt (94.4%) with any core flow within the safe operating region of the Power/Flow Map. (Percent reactor power is specified in percent of 3952 MWt throughout this procedure.) This definition is from EPU Startup Specification M-1563. Per Station Startup Schedule, TC A is from Mode 5 through 3302 MWt (83.3% ± .25%)

2.4.2 TC B - Reactor power between 3293 and 3360 MWt (83.3% and 85.0%) with any core flow within the safe operating region of the Power/Flow Map.

2.4.3 TC C - Reactor power between 3658 and 3733 MWt (92.6% and 94.4%) with any core flow within the safe operating region of the Power/Flow Map.

2.4.4 TC D - Reactor power between 3779 and 3855 MWt (95.6% and 97.5%) with any core flow within the safe operating region of the Power/Flow Map.

2.4.5 TC E - Reactor power between 3873 and 3952 MWt (98.0% and 100%) with any core flow within the safe operating region of the *Power/Flow Map*.

2.5 A Test Plateau is an administrative grouping of one or more Test Conditions and/or plant conditions to support efficient control of test scheduling, results review and power escalation. The Test Plateaus for the Unit 2 Phase 2 EPU Test Program are as follows:

2.5.1 94.4% Power Test Plateau - Includes startup and operation up to and including 94.4% power (3733 MWt) which includes TC A, TC B, and TC C.

2.5.2 97.5% Power Test Plateau - Includes startup and operation up to and including 97.5% power (3855 MWt) which includes TC D.

2.5.3 100% Power Test Plateau - Includes startup and operation up to and including 100% power (3952 MWt) which includes TC E.

2.6 Attachments C, E, F, I and K specify the minimum tests that are required to be completed in TC A, TC B, TC C, TC D and TC E, respectively. The EPU Subtest number specified in these attachments has the format of *xy.z* where:

2.6.1 *xy* is the "Test Number" specified in the test specification. *x* is a one to three digit number and is always present. *y* is an alphabetical character and is optional.

2.6.2 *z* is an arbitrary number used to distinguish specific partial implementations of the test *xy* when the test as specified in the test specification is not fully implemented in a Test Condition, or when more than one implementing procedure is required.

2.7 M-1563 test specifications for Test 33, Piping Steady State Vibration, and Test 100, Main Steam and Feedwater Piping Vibration, overlap with each other. To clarify pipe vibration testing, Test 100 contains all testing required in M-1563 for both Tests 33 and 100.

2.8 This procedure is not intended to control the sequence of EPU testing activities within a Test Condition unless otherwise noted. It does, however, provide a method for ensuring that all testing within each Test Condition is completed and ensures that all required reviews and prerequisites are satisfied during the transition from one Test Condition to the next.

2.9 Those sections of this procedure that provide direction to initially increase power beyond 3733 MWt are classified as Special, Infrequent or Complex Test/Evolutions (SICT/E's) as these sections represent an expansion of station operation beyond current bounds of existing procedures or training and intensified test and evolution controls are required. Those sections contain SICT/E in their heading.

2.10 The maximum core flow limit is 108 Mlb/hr. Unit 1 vessel internal examination revealed an issue that required limiting maximum core flow to less than 108 Mlb/hr for the current operating cycle until the in-vessel condition is corrected. If similar examinations performed on Unit 2 vessel internals reveal that the maximum core flow will be limited to a value less than 108 Mlb/hr, then every place in this procedure that identifies 108 Mlb/hr value should be replaced with maximum core flow achievable. A revision of this procedure is not necessary if the only change is to identify a change limiting maximum core flow.

3. REFERENCES

3.1 CH-SY-026, Moisture Carryover

3.2 GO-200-002, Plant Startup, Heatup, and Power Operation

3.3 GO-200-004, Plant Shutdown to Minimum Power

3.4 HP-TP-522, Radiological Survey Program in Support of the Unit 2 Extended Power Uprate Modification

3.5 NDAP-QA-0008, Procedure Writers Guide

3.6 NDAP-QA-0320, Special, Infrequent or Complex Test/Evolutions

3.7 NDAP-QA-0406, Extended Power Uprate Test Program

3.8 NSEP-QA-0004, Station Engineering Surveillance and Technical Procedures Preparation and Performance Guidelines

3.9 OI-TA-008, Shift Technical Advisor Responsibilities

3.10 OP-AD-338, Reactivity Manipulations Standards and Communication Requirements

3.11 RE-081-036, Core Fuel Pool Verification

3.12 RE-0TP-201, TIP Uncertainty

3.13 RE-2TP-026, Validation of Core Thermal Power Heat Balance

3.14 SC-233-101, U2 TB Vent Weekly Iodine & Particulate Activity

3.15 SC-233-102, U2 TB Vent Monthly Tritium & Grab Sample Analysis

3.16 SC-243-101, U2 Main Condenser Air Ejector Monthly Noble Gas

3.17 SC-276-101, U2 Rx Coolant Conductivity Determination

3.18 SC-276-102, U2 Primary Coolant Specific Activity Dose Equivalent I-131

3.19 SC-276-106, U2 Rx Coolant Chloride and pH Determination

3.20 SE-264-305, Recirc MG Set Positioners High Speed Stops

3.21 SE-278-001, APRM 21 Drive Flow Calibration

3.22 SE-278-002, APRM 22 Drive Flow Calibration

3.23 SE-278-003, APRM 23 Drive Flow Calibration

3.24 SE-278-004, APRM 24 Drive Flow Calibration

3.25 SI-278-301A, Semi Annual Calibration IRM Channel 2A

3.26 SI-278-301B, Semi Annual Calibration IRM Channel 2B

3.27 SI-278-301C, Semi Annual Calibration IRM Channel 2C

3.28 SI-278-301D, Semi Annual Calibration IRM Channel 2D

3.29 SI-278-301E, Semi Annual Calibration IRM Channel 2E

3.30 SI-278-301F, Semi Annual Calibration IRM Channel 2F

3.31 SI-278-301G, Semi Annual Calibration IRM Channel 2G

3.32 SI-278-301H, Semi Annual Calibration IRM Channel 2H

3.33 SI-279-360, Setpoint Calibration Check of Main Steam Line (MSL) Radiation Monitor Channels RIS-D12-2K603A, B, C, D

3.34 SI-283-304, 24 Month Calibration of Main Steam Line A Flow Channels FIS-B21-2N006A&B and Main Steam Line B Flow Channels FIS-B21-2N007A&B

3.35 SI-283-305, 24 Month Calibration of Main Steam Line A Flow Channels FIS-B21-2N006C&D and Main Steam Line B Flow Channels FIS-B21-2N007C&D

3.36 SI-283-306, 24 Month Calibration of Main Steam Line C Flow Channels FIS-B21-2N008C&D and Main Steam Line D Flow Channels FIS-B21-2N009C&D

3.37 SI-283-307, 24 Month Calibration of Main Steam Line C Flow Channels FIS-B21-2N008A&B and Main Steam Line D Flow Channels FIS-B21-2N009A&B

3.38 SO-200-007, Daily Surveillance Operating Log

3.39 SO-278-004, Weekly APRM Calibration

3.40 SR-200-008, In Sequence Critical and Shutdown Margin Demo

3.41 SR-255-004, Scram Time Measurements of Control Rods

3.42 SR-278-012, LPRM Calibration Validation

3.43 TP-055-001, CRD Stroke Time and Friction Measurement

3.44 TP-200-013, EPU Data Collection and Extrapolation

3.45 TP-245-029, Feedwater Master Water Level Controller MWLC Tuneup (SICT/E)

3.46 TP-262-033, Steam Dryer Vibration Testing

3.47 TP-264-032, Core Flow Calibration

3.48 TP-293-041, EPU EHC Pressure Regulator Testing

3.49 TP-299-011, Cooling Water Systems Start-Up Test for EPU

3.50 EC 690276, EPU Implementation Engineering Change Unit 2

3.51 EC-PUPC-2070, EPU Flow Induced Vibration Testing and Walkdown Criteria

3.52 EC-PUPC-2097, Revised Susquehanna Replacement Steam Dryer Limit Curves Main Steam Line Mounted Instrumentation

3.53 M-1563, Nuclear Engineering Specification for Extended Power Uprate Startup Testing

3.54 PLA-6076, Proposed License Amendment Numbers 285 for Unit 1 Operating License No. NPF-14 and 253 for Unit 2 Operating License No. NPF-22, Constant Pressure Power Uprate.

3.55 PLA-6242, "Susquehanna Steam Electric Station Proposed License Amendment No. 285 for Unit 1 Operating License No. NPF-14 and Proposed License Amendment No. 253 for Unit 2 Operating License No. NPF-22 Extended Power Uprate Application Regarding Steam Dryer and Flow Effects Request For Additional Information Responses."

3.56 SSES Unit 2 Operating License NPF-22 Amendment 253

4. TEST EQUIPMENT

No specific M&TE equipment is necessary to perform this procedure.

5. PRECAUTIONS/NOTES

5.1 Sections and steps within sections must be completed in the order listed unless otherwise specified.

5.2 Tests identified in the Test Condition Review Summary Attachments may be completed in any order unless otherwise specified. Not all Startup Tests have a specific procedure that covers the required testing. Some startup test requirements require multiple procedures to capture all required testing and acceptance criteria. Existing procedures are utilized where possible with specific acceptance criteria unique to the Startup Test Program captured in the form of attachments to this procedure.

5.3 Per Unit 2 Operating License Condition 2.C. (20) (d), the following key attributes of the PATP (Power Ascension Test Program) shall not be made less restrictive without prior NRC approval.

5.3.1 During initial power ascension testing above 3733 MWt, each test plateau increment shall be approximately 3.5% of 3489 MWt (122 MWt);

5.3.2 Level 1 performance criteria; and

5.3.3 The methodology for establishing the stress criteria used for the Level 1 and Level 2 performance criteria

Changes to other aspects of the PATP may be made in accordance with the guidance of Nuclear Energy Institute (NEI) 99-04, "Guidelines for Managing NRC Commitments," issued July 1999.

5.4 Per Unit 2 Operating License Condition 2.C.(20) (a) 3, PPL shall hold the facility at each 3.5% ascension step to collect data from License Condition 2.C.(20)(a) and conduct plant inspections and walk-downs, and evaluate steam dryer performance based on the data; shall provide the evaluation to the NRC staff by facsimile or electronic transmission to the NRC project manager upon completion of the evaluation; and shall not increase power above each hold point until 96 hours after the NRC project manager confirms receipt of transmission.

5.5 Per Unit 2 Operating License Condition 2.C (20) (a) 4, "if any frequency peak from the MSL strain gauge data exceeds the Level 1 limit curve for dryer strains above 3489 MWt, PPL shall return the facility to a power level at which the acceptance criterion is not exceeded. PPL shall resolve the discrepancy, document the continued structural integrity of the steam dryer, and provide that documentation to the NRC Staff by facsimile or electronic transmission to the NRC project manager prior to further increases in reactor power."

5.6 Per Unit 2 Operating License Condition 2.C (20) (a) 5, In addition to evaluating the dryer instrumentation data and MSL strain gauge data, PPL shall monitor reactor pressure vessel water level instrumentation and MSL piping accelerometers during power ascension above 3489 MWt. If resonance frequencies are identified as increasing above nominal levels in proportion to instrumentation data, PPL shall stop power ascension, document the continued structural integrity of the steam dryer, and provide that documentation to the NRC staff by facsimile or electronic transmission to the NRC project manager prior to further increases in reactor power.

6. PREREQUISITES

☐ 6.1 A SICT/E Analysis, Form NDAP-QA-0320-1, has been completed by the Test Director/Evolution Coordinator and attached to this procedure prior to procedure implementation.

_____ / _____
Confirmed By Date

☐ 6.2 *Partial Closure 1 and 2 of EC 690276, Extended Power Uprate Implementation,* are closed.

_____ / _____
Confirmed By Date

6.3 Administrative Hold Condition for restricting entry into Mode 2 has been initiated as follows:

☐ 6.3.1 ZWO document specifying Administrative Hold Condition has been issued.

ZWO number: _____

☐ 6.3.2 Unit 2 Shift Supervision has been informed of Administrative Hold Condition and to include the hold condition in the Unit Supervisor Turnover Sheet.

☐ 6.3.3 Work Week Management has been informed to add the Administrative Hold Condition and associated ZWO number as a Log Line to the appropriate activity in the station schedule.

_____ / _____
Confirmed By Date

6.4 Administrative Hold Condition for reactor power not to exceed 3733 MWt (94.4%) has been initiated as follows:

☐ 6.4.1 ZWO document specifying Administrative Hold Condition has been issued.

ZWO number: _____

☐ 6.4.2 Unit 2 Shift Supervision has been informed of Administrative Hold Condition and to include the hold condition in the Unit Supervisor Turnover Sheet.

☐ 6.4.3 Work Week Management has been informed to add the Administrative Hold Condition and associated ZWO number as a Log Line to the appropriate activity in the station schedule.

_____ / _____
Confirmed By Date

6.5 Administrative Hold Condition for reactor power not to exceed 3855 MWt (97.5%) has been initiated as follows:

☐ 6.5.1 ZWO document specifying Administrative Hold Condition has been issued.

ZWO number: _____

☐ 6.5.2 Unit 2 Shift Supervision has been informed of Administrative Hold Condition and to include the hold condition in the Unit Supervisor Turnover Sheet.

☐ 6.5.3 Work Week Management has been informed to add the Administrative Hold Condition and associated ZWO number as a Log Line to the appropriate activity in the station schedule.

_____ / _____
Confirmed By Date

7. PROCEDURE

NOTE (1):	Sections and steps within sections must be completed in the order listed unless otherwise specified.
NOTE (2):	Tests identified in an attachment may be completed in any order unless otherwise specified.

7.1 Mode 5 / Mode 4 Testing

☐ 7.1.1 **Confirm** that Shift Supervision is aware that testing identified in Attachment C, Test Condition A Review Summary for Mode 5 or Mode 4 may commence.

_____ / _____
Confirmed By Date
(Shift Supervision)

☐ 7.1.2 **Perform** tests listed in Attachment C, Test Condition A Review Summary that that are specified for Mode 5 and Mode 4.

7.2 Preparations for entering Mode 2

NOTE:	Steps 7.2.1 through 7.2.3 may be completed in any order.

7.2.1 **Confirm** the following:

NOTE:	ST 5.2, performed IAW SR-255-004, normally commences during the vessel leak check (Mode 4) with any control rod scram timing not completed at that time to be completed in Mode 1 prior to exceeding 40% power.

☐ a. All testing listed in Attachment C, Test Condition A Review Summary that with additional plant condition requirements of Mode 4 or Mode 5 with the exception of ST 5.2 has been successfully completed **OR** Test Exception Reports have been written.

☐ b. All EPU Test Results Summaries for completed Startup Tests listed in Attachment C have been reviewed by the TP-299-010 Test Director or EPU Test Program Director.

☐ c. Test Exception Reports have been written for any test listed in Attachment A that was not successfully completed.

☐ d. All Test Exception Reports, if any, have been dispositioned.

☐ e. There are no open Test Exceptions or Subsequent Action items related to Test Exceptions that are required to be completed and closed prior to entering Mode 2.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

☐ 7.2.2 **Confirm** that all items in GO-200-002 Attachment A "Unit 2 Station Verification of Activities for Entering Mode 2" have been signed off.

_____ / _____
Confirmed By (Shift Supervision) Date

7.2.3 **Obtain** permission from the Plant Manager to perform following:

NOTE:	If 108 Mlb/hr core flow is not achievable, identify maximum core flow allowable on Attachment A, Test Control Documentation.

☐ a. **Enter** Mode 2.

☐ b. **Increase** reactor thermal power with plant conditions not to exceed 3733 MWt (94.4%) or 108 Mlbm/Hr core flow.

☐ c. **Perform** all remaining tests listed in Attachment C, Test Condition A Review Summary.

☐ d. **Perform** all tests listed in Attachment E, Test Condition B Review Summary.

☐ e. **Perform** all tests listed in Attachment F, Test Condition C Review Summary.

_____ / _____
Plant Manager Date

7.2.4 **Inform** Unit 2 Shift Supervision that the Administrative Hold Condition for entering Mode 2 (Prerequisite 6.3) has been lifted **AND** to **Perform** following:

☐ a. **Close** ZWO issued in prerequisite 6.3.

☐ b. **Remove** Administrative Hold Condition from the Unit Supervisor Turnover Sheet.

_____ / _____
Confirmed By Date
(Shift Supervision)

7.3 Startup to 83% Power and Test Condition A Testing

☐ 7.3.1 **Confirm** Shift Supervision is cognizant of the Administrative Hold Condition that Reactor power may not exceed 3733 MWt (94.4%) initiated in prerequisite 6.3 until this Administrative Hold Condition is lifted by this Test Procedure or as otherwise notified by the Plant Manager. Reactor thermal power may briefly exceed 3733 MWt during minor power transients inherent to approved test procedures.

_____ / _____
Confirmed By Date

☐ 7.3.2 **Confirm** that Shift Supervision is aware that all tests listed in Attachment C, Test Condition A Review Summary, can be performed in any order at reactor power levels not to exceed 3302 MWt (83.3%) or at lower power levels as specified in Attachment C. Reactor thermal power may briefly exceed 3302 MWt during minor power transients inherent to approved test procedures.

_____ / _____
Confirmed By Date
(Shift Supervision)

☐ 7.3.3 **Enter** Mode 2

_____ time _____ date

☐ 7.3.4 **DURING** approach to Initial Criticality, **Perform** ST-4, *In-Sequence Critical and Shutdown Margin Demonstration.*

☐ 7.3.5 **Commence** collection of Pressure Regulator Incremental Regulation data per TP-293-041 (satisfies ST-22.1) at Generator Sync. This data should be collected at intervals not to exceed 3% (of scale) reactor power.

NOTE:	**IF** Reactor Power is ever reduced below 16%, **AND** the Reactor Mode is changed from Mode 1 to Mode 2, **THEN** ST-10.2 IRM/APRM overlap is required to be performed. This overlap check is only valid if an APRM calibration was performed while in Mode 1 prior to entering Mode 2. ST 10.2 is satisfied by performance of GO-200-004, following removal of Main Generator and shutdown of Main Turbine.

☐ 7.3.6 **Perform** ST-22.2, Scram Bypass Setpoint Verification (TP-293-041), during power ascension. This should occur prior to exceeding 26% power (1027MWt)

☐ 7.3.7 **Continue** power ascension **AND Complete** ST 5.2, Control Rod Scram Time Measurement (SR-255-004) for any required remaining control rods not previously tested prior to exceeding 40% power (1580 MWt).

☐ 7.3.8 **Continue** power ascension to 60% power.

7.3.9 **Perform** 60% Pressure Regulator testing.

☐ a. **Complete** TP-299-010 Attachment V, ST-22 Pressure Regulator, to satisfy requirements for monitoring Pressure Regulator Incremental Regulation performance up to and including 60% power.

☐ b. **Perform** ST-22.2, Pressure Regulator Step Changes and Pressure Regulator Failure in accordance with TP-293-041.

☐ c. **Complete** TP-299-010 Attachment V, ST-22 Pressure Regulator, to capture 60% power pressure regulator response acceptance criteria.

☐ 7.3.10 **Continue** power ascension to 65% power.

7.3.11 At approximately 65% power, **Perform** following vibration testing in accordance with TP-262-033.

☐ a. **Maintain** reactor power within a tolerance of ± 12 MWt as displayed on PICSY point NBA01.

☐ b. **Record** two 3 minute segment datasets of MSL Strain Gauges.

☐ c. **AFTER** the MSL Strain Gauge datasets are recorded, **Evaluate** the measured data to ensure the instrumentation is operating properly. Correct and repeat the data recording if necessary.

☐ d. **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ e. **Inform** Operations that the tolerance of ± 12 MWt on reactor power is no longer in effect.

☐ f. **Evaluate** dataset **AND Confirm** that results are within the Level 1 and Level 2 Acceptance Criteria.

_____ / _____
Confirmed By (EPU Engineering) Date

☐ 7.3.12 **Inform** Operations that vibration test results are acceptable and that reactor power level may be increased per station schedule to 83.3% (3293 MWt) ± .25% (3283 – 3302 MWt).

☐ 7.3.13 **Continue** power ascension to approximately 83.3% power.

☐ 7.3.14 **Perform** remaining tests listed in Attachment C, Test Condition A Review Summary.

7.3.15 **Perform** following 83.3% vibration testing in accordance with TP-262-033:

☐ a. **Maintain** reactor power between 3283 MWt and 3302 MWt (83.3% ± .25%) as displayed on PICSY point NBA01.

b. **Perform** MSL Strain Gauge dataset recordings:

☐ (1) **Record** two 3-minute segment datasets of MSL Strain Gauges.

☐ (2) **AFTER** the dataset is recorded, evaluate the measured data to ensure the instrumentation is operating properly. Correct and repeat the data recording if necessary.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ c. **Record** a dataset of MSL and FW accelerometers.

☐ d. **Record** a dataset of Recirculation and RHR accelerometers.

☐ e. **Record** a dataset of vibrations as required to be taken with *Local Vibration Monitoring Instrumentation.*

☐ f. **Perform** walkdown of accessible areas.

☐ g. **Perform** walkdown of inaccessible areas.

☐ h. **Inform** Operations that the minimum power level of 3283 MWt is no longer in effect.

☐ i. **Evaluate** datasets **AND** **Confirm** that results are within the Level 1 and Level 2 Acceptance Criteria.

_____ / _____
Confirmed By (EPU Engineering) Date

7.3.16 **Confirm** the following:

☐ a. All testing listed in Attachment C has been successfully completed **OR** Test Exception Reports have been written.

☐ b. All EPU Test Results Summaries for completed Startup Tests listed in Attachment C have been reviewed by the TP-299-010 Test Director or EPU Test Program Director.

☐ c. Test Exception Reports have been written for any test listed in Attachment C that was not successfully completed.

☐ d. All Test Exception Reports, if any, have been dispositioned.

☐ e. There are no open Test Exceptions or Subsequent Action items related to Test Exceptions that are required to be completed and closed prior to entering Test Condition B.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

7.4 Test Condition B Testing

☐ 7.4.1 **Inform** Shift Supervision to **Establish** reactor conditions within those defined as EPU Test Condition B in Attachment D EPU Test Condition Definitions.

☐ 7.4.2 **Confirm** that Shift Supervision is aware that all tests listed in Attachment E, Test Condition B Review Summary, can be performed in any order at reactor power levels in the range of 3293 to 3360 MWt (83.3% to 85.0%). Reactor thermal power may briefly exceed 3360 MWt during minor power transients inherent to approved test procedures.

_____ / _____
Confirmed By (Shift Supervision) Date

☐ 7.4.3 **Perform** tests listed in Attachment E Test Condition B Review Summary.

7.4.4 **Confirm** the following:

☐ a. All testing listed in Attachment E, Test Condition B Review Summary, has been successfully completed **OR** Test Exception Reports have been written.

☐ b. All EPU Test Results Summaries for completed Startup Tests listed in Attachment E have been reviewed by the TP-299-010 Test Director or EPU Test Program Director.

☐ c. Test Exception Reports have been written for any test listed in Attachment E that was not successfully completed.

☐ d. All Test Exception Reports, if any, have been dispositioned.

☐ e. There are no open Test Exceptions or Correct Condition action items related to Test Exceptions that are required to be completed and closed prior to entering Test Condition C.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

7.5 Test Condition C Testing

☐ 7.5.1 **Inform** Shift Supervision to **Establish** reactor conditions within those defined as EPU Test Condition C in Attachment D, EPU Test Condition Definitions.

☐ 7.5.2 **Confirm** that Shift Supervision is aware that all tests listed in Attachment F, Test Condition C Review Summary, can be performed in any order at reactor power levels in the range of 3658 to 3733 MWt (92.6% to 94.4%) as specified in Attachment F. Reactor thermal power may briefly exceed 3733 MWt during minor power transients inherent to approved test procedures.

_____ / _____
Confirmed By (Shift Supervision) Date

CAUTION

RPV Level Instrumentation and MSL Piping accelerometers shall be monitored during power ascension above 3489 MWt. If resonance frequencies are identified as increasing above nominal levels in proportion to instrumentation data, power ascension shall be stopped and the issue evaluated and conveyed to the NRC prior to further power ascension. (Operating License Condition 2.C (20)(a) 5).

7.5.3 **Perform** following 94.4% vibration testing in accordance with TP-262-033:

☐ a. **Maintain** reactor power between 3715 MWt and 3733 MWt (94.0% - 94.4%) as displayed on PICSY point NBA01.

b. **Perform** MSL Strain Gauge dataset recordings:

☐ (1) **Record** two 3-minute segment datasets of MSL Strain Gauges.

☐ (2) **AFTER** the datasets are recorded, **Evaluate** the measured data to ensure the instrumentation is operating properly. Correct and repeat the data recording if necessary.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ c. **Record** a dataset of MSL and FW accelerometers.

☐ d. **Record** a dataset of Recirculation and RHR accelerometers.

☐ e. **Record** a dataset of vibrations as required to be taken with Local Vibration Monitoring Instrumentation.

☐ f. **Perform** Walkdown of accessible areas.

☐ g. **Perform** Remote Walkdown of inaccessible areas.

☐ h. **Inform** Operations that the minimum power level of 3715 MWt is no longer in effect.

☐ i. **Evaluate** dataset **AND Confirm** that results are within the Level 1 and Level 2 Acceptance Criteria.

_____ / _____
Confirmed By (EPU Engineering) Date

7.5.4 LPRM Calibration ST 11

☐ a. **Request** Reactor Engineering to determine if an LPRM Calibration is required during Test Condition C.

☐ b. **IF** yes, **THEN Perform** ST 11 as listed in Attachment F.

☐ c. **IF** not required, **THEN Document** justification for not performing ST 11 in a Test Exception Report.

☐ 7.5.5 **Perform** remaining tests listed in Attachment F.

7.5.6 **Confirm** the following:

☐ a. All testing listed in Attachment F has been successfully completed **OR** Test Exception Reports have been written.

☐ b. All EPU Test Results Summaries for completed Startup Tests listed in Attachment F have been reviewed by the TP-299-010 Test Director or EPU Test Program Director.

☐ c. Test Exception Reports have been written for any test listed in Attachment E that was not successfully completed.

☐ d. All Test Exception Reports have been dispositioned.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

☐ 7.5.7 **Prepare** a Test Plateau Review Record, Attachment O, to the extent practical for submittal to the TRC, PORC and Plant Manager for review and approval.

7.6 Preparation for Power Ascension Above 3733 MWt (94.4%)

NOTE:	Steps 7.6.1 through 7.6.8 may be completed in any order.

☐ 7.6.1 **Confirm** that all CRs and CRAs necessary for power ascension above 3733 MWt (94.4%) up to a maximum of 3855 MWt (97.5%) are resolved and Responsible Supervisor certifies that all required work is completed.

_____ / _____
Confirmed By Supervisor-Corrective Action and Assessment Date

7.6.2 **Confirm** the following:

☐ a. There are no open Test Exceptions or Correct Condition action items related to Test Exceptions that are required to be completed and closed prior to increasing power above 3733 MWt (94.4%) to a maximum of 3855 MWt (97.5%).

☐ b. There are no open Test Exceptions or Subsequent Action items related to Test Exceptions that are required to be completed and closed prior to entering Test Condition D.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

☐ 7.6.3 **Confirm** Test Plateau Review Record for the 94.4% Plateau has been approved by TRC, PORC and Plant Manager with recommendation and approval to continue power ascension to the next plateau as documented on Attachment O.

_____ / _____
Confirmed By Date

☐ 7.6.4 **Complete** Attachment H, Unit 2 Station Verification of Activities for power ascension.

☐ 7.6.5 **Confirm** that Reactor Engineering is aware that the initial power increase from 3733 MWt to 3855 MWt shall be made using recirculation flow along a constant rod line at an average power ascension rate not to exceed 1%/hr.

_____ / _____
Confirmed By Date
(Reactor Engineering)

7.6.6 **Obtain** permission from the Plant Manager to perform following:

NOTE:	If 108 Mlb/hr core flow is not achievable, identify maximum core flow allowable on Attachment A, Test Control Documentation.

☐ a. **Increase** reactor thermal power with plant conditions not to exceed 3855 MWt (97.5%) or 108 Mlbm/Hr core flow.

☐ b. **Perform** all tests listed in Attachment I, Test Condition D Review Summary.

_____ / _____
Plant Manager Date

7.7 **(Start of SICT/E Section)** Initial Power Ascension Above 3733 MWt (94.4%).

NOTE (1):	The initial power ascension above 3733 MWt will be from 3733 MWt (94.4%) to 3855 MWt (97.5%) using recirculation flow along a constant rod line at an average power ascension rate not to exceed 1%/hr.
NOTE (2):	BOP parameters such as main generator gross electrical output and main condenser pressure may limit reactor thermal power to a level less than 3855 MWt (97.5%).
NOTE (3):	If 3855 MWt is not achieved during the initial power ascension above 3733 MWt, subsequent power ascensions above the previous maximum power level achieved may be desired and are permissible.
NOTE (4):	Subsequent power ascensions above previous maximum power levels attained shall be done using reactor recirculation flow along a constant rod line at an average power ascension rate not to exceed 1%/hr. It is not necessary to use the same rod line that was used in the initial or subsequent previous power ascensions.
NOTE (5):	All testing performed during Test Condition D must be done within the range of 3779 MWt to 3855 MWt (95.6% to 97.5%) or at lower power levels as specified in Attachment I. Reactor thermal power may briefly exceed 3855 MWt during minor transients inherent to approved test procedures.
NOTE (6):	In the event acoustic signals are identified that challenge the limit curve during power ascension above 3733 MWt, dryer loads shall be evaluated and acceptance criteria be re-established based on the new data. An assessment of ACM uncertainty at the acoustic signal frequency shall be performed. (License Condition 2.C.(36) (b) 3)
NOTE (7):	During power ascension above 3733 MWt, if an engineering evaluation is required because a Level 1 Acceptance Criterion was exceeded, a structural analysis to address frequency uncertainties up to ± 10% shall be performed with assurances that peak responses that fall within this uncertainty band are addressed. (License Condition 2.C.(36) (b) 5).

7.7.1 **Complete** the Special, Infrequent, or Complex Test/Evolution (SICT/E) briefing using Form NDAP-QA-0320-2 **AND Attach** the following completed forms to this procedure:

☐ a. SICT/E Briefing, Form NDAP-QA-320-2

☐ b. SICT/E Roster, Form NDAP-QA-320-3

_____ / _____
Confirmed By (Designated Activity Manager) Date

7.7.2 **Inform** Unit 2 Shift Supervision that the Administrative Hold Condition for exceeding 3733 MWt (prerequisite 6.4) has been lifted **AND** to **Perform** following:

☐ a. **Close** ZWO issued in prerequisite 6.4.

☐ b. **Remove** the Administrative Hold Condition from Unit Supervisor Turnover Sheet.

_____ / _____
Confirmed By (Shift Supervision) Date

☐ 7.7.3 **Confirm** Shift Supervision is cognizant of the Administrative Hold Condition that Reactor power may not exceed 3855 MWt (97.5%) until this Administrative Hold Condition is lifted by this TP or as otherwise notified by the Plant Manager. Reactor thermal power may briefly exceed 3855 MWt during minor power transients inherent to approved test procedures.

_____ / _____
Confirmed By Date

☐ 7.7.4 **Confirm** that Shift Supervision is aware that all tests listed in Attachment I, Test Condition D Review Summary, can be performed in any order at reactor power levels in the range of 3779 to 3855 MWt (95.6% to 97.5%) or at lower power levels as specified in Attachment I.

_____ / _____
Confirmed By (Shift Supervision) Date

☐ 7.7.5 **Confirm** required reactivity briefing and controls have been completed in accordance with OP-AD-338 to support the power ramp. Note that completion of this step may be performed out of sequence with this section.

_____ / _____
Confirmed By (Shift Supervision) Date

CAUTION (1)

If any frequency peaks from MSL Strain Gauge data exceed limit curves above 3733 MWt, Reactor Power shall be returned to a power level at which the acceptance criteria is not exceeded. (Operating License Condition 2.C.(20) (a) 4).

CAUTION (2)

RPV Level Instrumentation and MSL Piping accelerometers shall be monitored during power ascension above 3489 MWt. If resonance frequencies are identified as increasing above nominal levels in proportion to instrumentation data, power ascension shall be stopped and the issue evaluated and conveyed to the NRC prior to further power ascension. (Operating License Condition 2.C(20)(a) 5).

☐ 7.7.6 **Inform** Test Director for TP-262-033, Steam Dryer and Flow Induced Vibration Testing that the initial power ascension from 3733 MWt (94.4%) to 3855 MWt (97.5%) is about to commence **AND Confirm** that all test personnel are in place and prepared to perform assigned duties.

_____ / _____
Confirmed By Date

NOTE: All thermal power ascension ramps above previously attained thermal power levels must meet the following requirements:

- SICT/E Controls must be established in accordance with NDAP-QA-0320
- TP-262-033 and OI-TA-008 test personnel must be in place and ready to monitor and record data
- Power ascension ramps are limited to less than or equal to 1% / hour
- *Power ascension ramps are to utilize Reactor* Recirculation flow only

Vibration datasets during power increases are collected but not analyzed and inserted into the Test Point Report. Datasets are analyzed at each 3.5% plateau. (Operating License Condition 2.C(20)(a) 3).

7.7.7 **Complete** ramp to 3855 MWt (97.5%) as follows:

☐ a. **Complete** Attachment J, EPU Test Program Power Ramp Data, items recorded prior to start of ramp step.

☐ b. **Inform** Shift Supervision to perform a power increase step not to exceed 1% per hour increase in reactor power.

☐ c. **Complete** Attachment J items recorded for the power ramp step.

d. **AFTER** the power ramp step has been completed, **THEN Inform** TP-262-033 Test Director to perform following (in any order):

☐ (1) **Record** a dataset of vibrations as required to be taken with Local Vibration Monitoring Instrumentation.

☐ (2) **Record** a dataset of MSL Strain Gauges.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ (4) **Record** a dataset of MSL and FW accelerometers.

☐ (5) **Record** a dataset of Recirculation and RHR accelerometers.

☐ (6) **Record** a dataset for OI-TA-008 Data Acquisition

☐ (7) **Perform** Walkdown of accessible areas.

☐ (8) **Perform** Remote Walkdown of inaccessible areas.

☐ e. **Repeat** Steps 7.7.7.a – d above when directed by Reactor Engineering until 3855 MWt is achieved.

NOTE:	After the plant has reached a stable steady state power level of 3855 MWT (97.5%) the SICT/E for this plateau is terminated.

7.8 *Test Condition D Testing*

☐ 7.8.1 **Perform** testing listed in Attachment I, Test Condition Review Summary, while completing the remaining steps in this section.

7.8.2 **Perform** following 97.5% vibration testing in accordance with TP-262-033:

☐ a. **Maintain** reactor power between 3837 MWt and 3855 MWt (97% - 97.5%) as displayed on PICSY point NBA01.

b. **Perform** MSL Strain Gauge dataset recordings:

☐ (1) **Record** two 3-minute segment datasets of MSL Strain Gauges.

☐ (2) **AFTER** the datasets are recorded, **Evaluate** the measured data to ensure the instrumentation is operating properly. Correct and repeat the data recording if necessary.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ c. **Record** a dataset of vibrations as required to be taken with Local Vibration Monitoring Instrumentation.

☐ d. **Record** a dataset of MSL and FW accelerometers.

☐ e. **Record** a dataset of Recirculation and RHR accelerometers.

☐ f. **Perform** Walkdown of accessible areas.

☐ g. **Perform** Remote Walkdown of inaccessible areas.

☐ h. **Inform** Operations that the minimum power level of 3837 MWt is no longer in effect.

☐ i. **Evaluate** datasets **AND** **Confirm** that results are within the Level 1 and Level 2 Acceptance Criteria.

_____ / _____
Confirmed By (EPU Engineering) Date

☐ 7.8.3 **Prepare** a steam dryer performance evaluation for 3855 MWt as required by License Condition 2.C.(20)(a)3.

7.8.4 **Record** following date and time information:

☐ a. Performance Evaluation submitted to the NRC Project Manager.

_____ / _____
Date Time

☐ b. NRC Project Manager confirms receipt of transmission.

_____ / _____
Date Time

_____ / _____
Confirmed By Date

7.8.5 **Confirm** the following:

☐ a. All testing listed in Attachment I has been successfully completed **OR** Test Exception Reports have been written.

☐ b. All EPU Test Results Summaries for completed Startup Tests listed in Attachment I have been reviewed by the TP-299-010 Test Director or EPU Test Program Director.

☐ c. Test Exception Reports have been written for any test listed in Attachment I that was not successfully completed.

☐ d. All Test Exception Reports have been dispositioned.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

☐ 7.8.6 **Prepare** a Test Plateau Review Record, Attachment O, to the extent practical for submittal to the TRC, PORC and Plant Manager for review and approval.

7.9 Preparation for Power Ascension Above 3855 MWt (97.5%)

NOTE:	Steps 7.9.1 through 7.9.6 may be completed in any order.

☐ 7.9.1 **Confirm** that all CRs and CRAs necessary for power ascension above 3855 MWt (97.5%) are resolved and Responsible Supervisor certifies that all required work is completed.

_____ / _____
Confirmed By — Date
Manager-Corrective
Action and Assessment

7.9.2 **Confirm** that at least 96 hours have elapsed since the NRC Project Manager confirmed receipt of the steam dryer performance evaluation for 3855 MWt as required by License Condition 2.C.(20)(a)3.

☐ a. Date and time that NRC Project Manager confirmed receipt of information (from step 7.8.4.b) _____ Date _____ Time

☐ b. *Line a plus 96 hours.* _____ Date _____ Time

☐ c. Date and time this step is signed off. (time elapsed ≥ line b) _____ Date _____ Time

_____
Confirmed By

7.9.3 **Confirm** the following:

☐ a. There are no open Test Exceptions or Correct Condition action items related to Test Exceptions that are required to be completed and closed prior to increasing power above 3855 MWt (97.5%).

☐ b. There are no open Test Exceptions or Subsequent Action items related to Test Exceptions that are required to be completed and closed prior to entering Test Condition E.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

☐ 7.9.4 **Confirm** Test Plateau Review Record for the 97.5% Plateau has been approved by TRC, PORC and Plant Manager with recommendation and approval to continue power ascension to the next plateau as documented on Attachment O.

_____ / _____
Confirmed By Date

☐ 7.9.5 **Complete** Attachment H, Unit 2 Station Verification of Activities for Power Ascension.

☐ 7.9.6 **Confirm** that Reactor Engineering is aware that the initial power increase from 3855 MWt to 3952 MWt shall be made using recirculation flow along a constant rod line at an average rate not to exceed 1%/hr.

_____ / _____
Confirmed By (Reactor Engineering) Date

7.9.7 **Obtain** permission from the Plant Manager to perform following:

NOTE:	If 108 Mlb/hr core flow is not achievable, identify maximum core flow allowable on Attachment A, Test Control Documentation.

☐ a. **Increase** reactor thermal power with plant conditions not to exceed 3952 MWt or 108 Mlb/Hr core flow.

☐ b. **Perform** all tests listed in Attachment K, Test Condition E Review Summary.

_____ / _____
Plant Manager Date

7.10 **(Start of SICT/E Section)** Initial Power Ascension Above 3855 MWt (97.5%).

NOTE (1):	The initial power ascension above 3855 MWt will be from 3855 MWt (97.5%) to 3952 MWt (100%) using recirculation flow along a constant rod line at an average power ascension rate not to exceed 1%/hr.
NOTE (2):	BOP parameters such as main generator gross electrical output and main condenser pressure may limit reactor thermal power to a level less than 3952 MWt (100%).
NOTE (3):	If 3952 MWt is not achieved during the initial power ascension above 3855 MWt, subsequent power ascensions above the previous maximum power achieved may be desired and are permissible.
NOTE (4):	Subsequent power ascensions above previous maximum power levels attained shall be done using reactor recirculation flow along a constant rod line at an average power ascension rate not to exceed 1%/hr. It is not necessary to use the same rod line that was used in the initial or subsequent previous power ascensions.
NOTE (5):	All testing performed during Test Condition E must be done within the range of 3873 MWt to 3952 MWt (98.0% to 100%) or at lower power levels as specified in Attachment K.
NOTE (6):	In the event acoustic signals are identified that challenge the limit curve during power ascension above 3733 MWt, dryer loads shall be evaluated and acceptance criteria be re-established based on the new data. An assessment of ACM uncertainty at the acoustic signal frequency shall be performed. (License Condition 2.C.(20) (b) 3).
NOTE (7):	During power ascension above 3733 MWt, if an engineering evaluation is required because a Level 1 Acceptance Criterion was exceeded, a structural analysis to address frequency uncertainties up to ± 10% shall be performed with assurances that peak responses that fall within this uncertainty band are addressed. (License Condition 2.C.(20) (b) 5).

7.10.1 **Complete** the Special, Infrequent, or Complex Test/Evolution (SICT/E) briefing using Form NDAP-QA-0320-2 **AND Attach** the following completed forms to this procedure:

☐ a. SICT/E Briefing, Form NDAP-QA-320-2

☐ b. SICT/E Roster, Form NDAP-QA-320-3

_____ / _____
Confirmed By (Designated Activity Manager) Date

7.10.2 **Inform** Unit 1 Shift Supervision that the Administrative Hold Condition for exceeding 3855 MWt (Prerequisite 6.5) has been lifted **AND** to **Perform** following:

☐ a. **Close** ZWO issued in Prerequisite 6.5.

☐ b. **Remove** the Administrative Hold Condition from Unit Supervisor Turnover Sheet.

_____ / _____
Confirmed By (Shift Supervision) Date

☐ 7.10.3 **Confirm** that Shift Supervision is aware that all tests listed in Attachment K, Test Condition E Review Summary, can be performed in any order at reactor power levels in the range of 3873 to 3952 MWt (98.0% to 100%) or at lower power levels as specified in Attachment K.

_____ / _____
Confirmed By (Shift Supervision) Date

CAUTION (1)

If any frequency peaks from MSL Strain Gauge data exceed limit curves above 3733 MWt, Reactor Power shall be returned to a power level at which the acceptance criteria is not exceeded. (Operating License Condition 2.C (20) (a) 4).

CAUTION (2)

RPV Level Instrumentation and MSL Piping accelerometers shall be monitored during power ascension above 3489 MWt. If resonance frequencies are identified as increasing above nominal levels in proportion to instrumentation data, power ascension shall be stopped and the issue evaluated and conveyed to the NRC prior to further power ascension. (Operating License Condition 2.C (20) (a) 5).

☐ 7.10.4 **Inform** Test Director for TP-262-033, Steam Dryer and Flow Induced Vibration Testing that the initial power ascension from 3855 MWt (97.5%) to 3952 MWt (100%) is about to commence **AND Confirm** that all test personnel are in place and prepared to perform assigned duties.

_____ / _____
Confirmed By Date

☐ 7.10.5 **Confirm** required reactivity briefing and controls have been completed in accordance with OP-AD-338 to support the power ramp. Note that completion of this step may be performed out of sequence with this section.

_____ / _____
Confirmed By Date
(Shift Supervision)

NOTE: *All thermal power ascension ramps above previously attained thermal power levels must meet the following requirements:*

- *SICT/E Controls must be established in accordance with NDAP-QA-0320*
- *TP-262-033 and OI-TA-008 test personnel must be in place and ready to monitor and record data*
- *Power ascension ramps are limited to less than or equal to 1% / hour*
- *Power ascension ramps are to utilize Reactor Recirculation flow only*

Vibration datasets during power increases are collected but not analyzed and inserted into the Test Point Report. Datasets are analyzed at each 3.5% plateau. (Operating License Condition 2.C(20)(a) 3).

7.10.6 **Complete** ramp to 3952 MWt (100%) as follows:

☐ a. **Complete** Attachment J, EPU Test Program Power Ramp Data, items recorded prior to start of ramp step.

☐ b. **Inform** Shift Supervision to perform a power increase step not to exceed 1% per hour increase in reactor power.

☐ c. **Complete** Attachment J items recorded for the power ramp step.

d. **ONCE** the power ramp step has been completed, **THEN Inform** TP-262-033 Test Director to perform following (in any order):

☐ (1) **Record** a dataset of vibrations as required to be taken with Local Vibration Monitoring Instrumentation.

☐ (2) **Record** a dataset of MSL Strain Gauges.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ (4) **Record** a dataset of MSL and FW accelerometers.

☐ (5) **Record** a dataset of Recirculation and RHR accelerometers.

☐ (6) **Record** a dataset for OI-TA-008 Data Acquisition.

☐ (7) **Perform** Walkdown of accessible areas.

☐ (8) **Perform** Remote Walkdown of inaccessible areas.

e. **Repeat** steps 7.10.6.a – d above when directed by Reactor Engineering until one of the following occurs:

☐ (1) 3952 MWt is achieved **OR**

☐ (2) BOP parameters such as main generator gross electrical output and main condenser pressure limit(s) are reached.

☐ f. **Record** date and time when 3872 MWt (98.0%) was initially achieved.

_____ / _____
Date Time

☐ g. **Record** date and time when 3952 MWt (100%) **OR** highest power level was initially achieved.

_____ _____ / _____
MWt (NBA01) Date Time

NOTE:	After the plant has reached a stable steady state power level of 3952 MWt (100%) or the highest power level achievable, the SICT/E for this plateau is terminated.

7.11 Test Condition E Testing

NOTE:	TC E is defined as 3873 MWt to 3952 MWt (98% -100%). If 3952 MWt is not achievable, required testing specified to be performed at 3952 MWt is to be performed in the band between highest power level achievable minus 18 MWt. Testing not identified to be performed at a specific power level can be performed in any order and within 3873 MWt to 3952 MWt as identified on Attachment K.

7.11.1 **Perform** following 100% vibration testing in accordance with TP-262-033:

☐ a. **Maintain** reactor power between 3934 MWt and 3952 MWt (99.5% - 100%) **OR** highest achievable power minus 18 MWt as displayed on PICSY point NBA01.

☐ b. **IF** initial 100% power level was achieved with core flow between 100 Mlb/Hr and 101 Mlbm/Hr **THEN Maintain** core flow between 100 Mlbm/Hr and 101 Mlbm/Hr. Otherwise this step is N/A.

c. **Perform** MSL Strain Gauge dataset recordings:

☐ (1) **Record** two 3-minute segment datasets of MSL Strain Gauges.

☐ (2) **AFTER** the datasets are recorded, **Evaluate** the measured data to ensure the instrumentation is operating properly. Correct and repeat the data recording if necessary.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ d. **Record** a dataset of vibrations as required to be taken with Local Vibration Monitoring Instrumentation.

☐ e. **Record** a dataset of MSL and FW accelerometers.

☐ f. **Record** a dataset of Recirculation and RHR accelerometers.

☐ g. **Perform** Walkdown of accessible areas.

☐ h. **Perform** Remote Walkdown of inaccessible areas.

☐ i. **Inform** Operations that the minimum power level of 3934 (or highest achievable power minus 18 MWt) is no longer in effect.

☐ j. **Evaluate** dataset **AND Confirm** that results are within the Level 1 and Level 2 Acceptance Criteria.

_____ / _____
Confirmed By (EPU Engineering) Date

☐ 7.11.2 **Perform** remaining testing identified on Attachment K, Test Condition E Review Summary not requiring specific core flow or power level.

NOTE:	Sections 7.12 and 7.13 can be performed in either order.

7.12 TC E Testing at 100 Mlb/Hr Core Flow

NOTE:	If core flow was established between 100 Mlbm/Hr and 101 Mlbm/Hr supporting section 7.11 vibration testing, then section 7.12 can be N/A'd with documentation as to why this section is not applicable on Attachment A, Test Documentation.

☐ 7.12.1 **Establish** core flow between 100 and 101 Mlbm/Hr (100.5 ± .5 Mlbm/Hr).

7.12.2 **Perform** following 100 Mlb/Hr vibration testing in accordance with TP-262-033:

☐ a. **Maintain** core flow between 100 and 101 Mlb/Hr until all vibration datasets have been completed.

b. **Perform** MSL Strain Gauge dataset recordings:

☐ (1) **Record** two 3-minute segment datasets of MSL Strain Gauges.

☐ (2) **AFTER** the datasets are recorded, **Evaluate** the measured data to ensure the instrumentation is operating properly. Correct and repeat the data recording if necessary.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ c. **Record** a dataset of vibrations as required to be taken with Local Vibration Monitoring Instrumentation.

☐ d. **Record** a dataset of MSL, FW, Recirc and RHR accelerometers.

☐ e. **Inform** Operations that the restrictions on core flow is no longer in effect.

☐ f. **Evaluate** dataset **AND Confirm** that results are within the Level 1 and Level 2 Acceptance Criteria.

_____ / _____
Confirmed By (EPU Engineering) Date

☐ 7.12.3 **Perform** ST-1B, Moisture Carryover, by completing Attachment G, Moisture Carryover Support Data.

7.13 TC E Testing at Maximum Allowable Core Flow

NOTE:	If 108 Mlb/hr core flow is not achievable, identify maximum core flow allowable on Attachment A, Test Control Documentation. The core flow limitation for this test section is maximum core flow achievable minus 1 Mlb/hr.

☐ 7.13.1 **Establish** core flow between 107 Mlb/Hr and 108 Mlb/Hr **OR** maximum core flow achievable minus 1 Mlb/hr.

7.13.2 **Perform** following 108 Mlb/Hr vibration testing in accordance with TP-262-033:

☐ a. **Maintain** core flow between the limits established in step 7.13.1 until all vibration datasets have been completed.

b. **Perform** MSL Strain Gauge dataset recordings:

☐ (1) **Record** two 3-minute segment datasets of MSL Strain Gauges.

☐ (2) **AFTER** the datasets are recorded, **Evaluate** the measured data to ensure the instrumentation is operating properly. Correct and repeat the data recording if necessary.

☐ (3) **Record** reactor operating conditions at the time MSL data is recorded by completing PI data sheet.

☐ c. **Record** a dataset of vibrations as required to be taken with Local Vibration Monitoring Instrumentation.

☐ d. **Record** a dataset of MSL, FW, Recirc and RHR accelerometers.

☐ e. **Inform** Operations that the restrictions on core flow are no longer in effect.

☐ f. **Evaluate** dataset **AND** **Confirm** that results are within the Level 1 and Level 2 Acceptance Criteria.

_____ / _____
Confirmed By (EPU Engineering) Date

☐ 7.13.3 **Perform** ST-1B, Moisture Carryover, by completing Attachment G, Moisture Carryover Support Data.

7.14 Test Condition E Review

7.14.1 **Confirm** the following:

☐ a. All testing listed in Attachment K has been successfully completed **OR** Test Exception Reports have been written.

☐ b. All EPU Test Results Summaries for completed Startup Tests listed in Attachment K have been reviewed by the TP-299-010 Test Director or EPU Test Program Director.

☐ c. Test Exception Reports have been written for any test listed in Attachment K that was not successfully completed.

☐ d. All Test Exception Reports have been dispositioned.

_____ / _____
Confirmed By (EPU Test Prog Director) Date

☐ 7.14.2 **Prepare** a Test Plateau Review Record, Attachment O, to the extent practical for submittal to the TRC, PORC, and Plant Manager for review and approval.

_____ / _____
Confirmed By Date

☐ 7.14.3 **Prepare** a steam dryer performance evaluation for 3952 MWt as required by License Condition 2.C.(20)(a)3.

☐ 7.14.4 **Record** date that the steam dryer performance evaluation for 3952 MWt was provided to the NRC Project Manager.

_____ _____ / _____
Date Confirmed By Date

8. RESTORATION

8.1 **Confirm** Test Plateau Review Record for the 100% Plateau has been approved by TRC, PORC and Plant Manager as documented on Attachment O.

_____ / _____
Confirmed By Date

8.2 **Prepare** a Final Test Program Review Record, Attachment Q, to the extent practical for submittal to the TRC, PORC and Plant Manager for review and approval.

8.3 **Confirm** the final Test Program Review has been approved.

_____ / _____
Confirmed By Date
(EPU Test Prog Director)

9. ACCEPTANCE CRITERIA

There are no specific Acceptance Criteria associated with this test.

10. REVIEW

10.1 The completed test procedure has been reviewed by the Supervisor-Mechanical/BOP and found to be acceptable as documented on PA cover sheet.

_____ / _____
Confirmed By Date

11. RECORDS

11.1 The original completed test procedure shall be transmitted to DCS.

11.2 The completed test procedure includes the attached forms identified below as well as procedure attachments:

11.2.1 SICT/E Analysis, Form NDAP-QA-0320-1

11.2.2 SICT/E Briefing, Form NDAP-QA-0320-2

11.2.3 SICT/E Roster, Form NDAP-QA-0320-3

_____ / _____
Confirmed By Date

TEST CONTROL DOCUMENTATION

Procedure No. TP-299-010 Page ____ of ____

EPU Test 42 Required Surveillances

Confirm that the following procedures have been successfully completed:

___ SI-283-304, 24 Month Calibration of Main Steam Line A Flow Channels FIS-B21-2N006A&B and Main Steam Line B Flow Channels FIS-B21-2N007A&B

1041810

___ SI-283-305, 24 Month Calibration of Main Steam Line A Flow Channels FIS-B21-2N006C&D and Main Steam Line B Flow Channels FIS-B21-2N007C&D

1145886

___ SI-283-306, 24 Month Calibration of Main Steam Line C Flow Channels FIS-B21-2N008C&D and Main Steam Line D Flow Channels FIS-B21-2N009C&D

1179830

___ SI-283-307, 24 Month Calibration of Main Steam Line C Flow Channels FIS-B21-2N008A&B and Main Steam Line D Flow Channels FIS-B21-2N009A&B

1075060

_____ / _____
Confirmed By Date

Test Condition A Review Summary

TP-299-010 Subtest Number	Additional Plant Conditions Requirements	Procedure Number	Description	Test Completed (Initial/Date)	Results Summary Reviewed (Initial/Date)	All TERs Dispositioned (Initial/Date)
3	Mode 5	RE-081-036	Core Fuel Pool Verification			
5.1	Mode 5 or Mode 4	TP-055-001	CRD Stroke Time			
12B	Mode 5 or Mode 4	TP-299-010 Attachment L	RBM Calibration			
42	Mode 5 or Mode 4	TP-299-010 Attachment B	I&C Surveillances			
10.1	Mode 5 or Mode 4	TP-299-010 Attachment T	IRM Surveillances			
5.2	Mode 4 AND/OR ≤ 1580 MWt (40%)	SR-255-004	Scram Time Measurements of Control Rods			
4	Mode 2	SR-200-008	In Sequence Critical and Shutdown Margin Demo.			
22.1	~ Every 120 MWt (3%) following gen sync up to 60%	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Incremental Regulation			
22.2	~1027 MWt (26%)	TP-293-041 TP-299-010 Attachment V	Scram Bypass Setpoint Verification			
22.3	~2371 MWt (60%)	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Step Changes and Pressure Regulator Failure			
22.1	~ Every 120 MWt (3%) from 60% to 83.3%	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Incremental Regulation			

Test Condition A Review Summary

TP-299-010 Subtest Number	Additional Plant Conditions Requirements	Procedure Number	Description	Test Completed (Initial/Date)	Results Summary Reviewed (Initial/Date)	All TERs Dispositioned (Initial/Date)
100.1	~2569 MWt (65%)	TP-262-033	Steam Dryer Steady State Vibration Data			
100.1 100.4	~3293 MWt (83.3%)	TP-262-033	Steam Dryer Steady State Vibration Data and Plant Walkdown			
11	Per Station Schedule	SR-278-012	LPRM Calibration			
12A.2	Per Station Schedule	TP-299-010 Attachment M	APRM Calibration			
10.2	When switching from Mode 1 to Mode 2	GO-200-004	IRM/APRM Overlap			

EPU Test Condition Definitions
(Phase 2)

Test Condition	Power Level (%)	Power Level (MWt)	Core Flow
A	0 – 94.4 %	< 3733 MWt	Note 1
B	83.3% - 85%	3293 – 3360 MWt	Note 1
C	92.6% - 94.4%	3658 – 3733 MWt	Note 1
D	95.6% - 97.5%	3779 – 3855 MWt	Note 1
E	97.5% - 100%	3873 – 3952 MWt	Note 1

NOTE (1):	Any flow within the safe operating region of the Power/Flow Map that will produce the required power level.
NOTE (2):	Test Condition definitions from EPU Startup Specification M-1563. Note that Test Condition A overlaps Test Condition A, B & C.
NOTE (3):	Refer to Unit 2 approved Cycle 16 Power/Flow Map for pictorial view of test conditions.

Test Condition B Review Summary

TP-299-010 Subtest Number	Additional Plant Conditions Requirements	Procedure Number	Description	Test Completed (Initial/Date)	Results Summary Reviewed (Initial/Date)	All TERs Dispositioned (Initial/Date)
101		TP-200-013	Baseline Data Collection & Extrapolation			
12A.2		TP-299-010 Attachment M	APRM Calibration			
19		TP-299-010 Attachment N	Core Thermal Limits			
22.1	~ Every 120 MWt (3%)	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Incremental Regulation			
22.3	3360 MWt (85%)	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Step Changes			
23		TP-245-029	Feedwater Level Setpoint Changes			
24	3360 MWt (85%)	TP-293-041 TP-299-010 Attachment W	Turbine Valve Surveillance			

Test Condition C Review Summary

TP-299-010 Subtest Number	Additional Plant Conditions Requirements	Procedure Number	Description	Test Completed (Initial/Date)	Results Summary Reviewed (Initial/Date)	All TERs Dispositioned (Initial/Date)
100.1 100.4	3733 MWt (94.4%)	TP-262-033	Steam Dryer Steady State Vibration Data and Plant Walkdown			
101		TP-200-013	Baseline Data Collection & Extrapolation			
11		SR-278-012	LPRM Calibration			
12A.2	3733 MWt (94.4%)	TP-299-010 Attachment M	APRM Calibration			
19		TP-299-010 Attachment N	Core Thermal Limits			
1A		TP-299-010 Attachment S	Chemical and Radiochemical			
1B		TP-299-010 Attachment G	Moisture Carryover			
2		TP-299-010 Attachment U	Radiation Measurements			
22.1	~ Every 120 MWt (3%)	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Incremental Regulation			
22.3		TP-293-041 TP-299-010 Attachment V	Pressure Regulator Step Changes and Pressure Regulator Failure			
23		TP-045-001	Feedwater Level Setpoint Changes			
24	3733 MWt (94.4%)	TP-293-041 TP-299-010 Attachment W	Turbine Valve Surveillance			
32		SO-200-007 Attachment A Item 9	Drywell Cooling			

ST 1B Moisture Carryover Testing

Test Condition _____ Core Flow _____

Completion of the following steps satisfies the requirement of ST 1B:

___ 1. **Instruct** Chemistry to perform CH-SY-026 "Moisture Carry Over."

___ 2. **Attach** copy of Core Performance Verification Printouts created during performance of *ST-19 at same power/flow conditions.*

___ 3. **Record** plant data listed in table below using specified PICSY points.

___ 4. **Inform** *TP-299-010 Test Director when sample has been collected.*

___ 5. **Record** *Main Steam Line moisture content:* _____

___ 6. **Confirm** *Main Steam Line moisture content is not in excess of 0.1 wt%* (Level 2 Acceptance Criterion)

_____ / _____
Confirmed By Date

Parameter	PICSY Point	Value
Reactor Water Level	NFL01	
	NFL02	
	NFL03	
MSL Flow	NFF01	
	NFF02	
	NFF03	
	NFF04	
Total Feedwater flow (Mlb/hr) 10 minute average	FPA10	
CRD flow (Mlb/hr)	NEF52	
Reactor Power	NBA01	

Unit 2 Station Verification of Activities for Power Ascension

All action items required for power ascension above the current maximum power level of _____ MWt for which my group is responsible have been completed.

_____ / _____
Manager – Nuclear Operations

_____ / _____
Manager – Nuclear Maintenance

_____ / _____
Supervisor – Reactor Engineering

_____ / _____
Supervisor – Health Physics

_____ / _____
Supervisor – Chemistry

_____ / _____
Manager – Nuclear Systems Engineering

_____ / _____
Manager – Special Projects

Test Condition D Review Summary

TP-299-010 Subtest Number	Additional Plant Conditions Requirements	Procedure Number	Description	Test Completed (Initial/Date)	Results Summary Reviewed (Initial/Date)	All TERs Dispositioned (Initial/Date)
100.3	Initial ascension to 3855 MWt (97.5%)	TP-262-033	Steam Dryer Vibe Monitoring During Ascension			
100.1 100.4	3855 MWt (97.5%)	TP-262-033	Steam Dryer Steady State Vibration Data and Plant Walkdown			
101		TP-200-013	Baseline Data Collection & Extrapolation			
12A.2		TP-299-010 Attachment M	APRM Calibration			
19		TP-299-010 Attachment N	Core Thermal Limits			
22.1	~ Every 120 MWt (3%)	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Incremental Regulation			
22.3	3855 MWt (97.5%)	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Step Changes			
23		TP-245-029	Feedwater Level Setpoint Changes			
24	3855 MWt (97.5%)	TP-299-010 Attachment W TP-293-041	Turbine Valve Surveillance			
1B		TP-299-010 Attachment G	Moisture Carryover			

EPU Test Program Power Ramp Data

Power Ramp _____ MWt to _____ MWt TC # _____

Date						
SICT/E Control In Effect						
Testing Personnel Ready						
Prior to Ramp - MWt						
Prior to Ramp – Gross MWe						
Prior to Ramp – MVAR						
Notified Shift Supervision						
Time at Start of Ramp						
Time at End of Ramp						
Post Ramp – MWt						
Post Ramp – Gross MWe						
Post Ramp – MVAR						

Sheet ____ of ____

Test Condition E Review Summary

TP-299-010 Subtest Number	Additional Plant Conditions Requirements	Procedure Number	Description	Test Completed (Initial/Date)	Results Summary Reviewed (Initial/Date)	All TERs Dispositioned (Initial/Date)
100.3	Initial ascension to 3952 MWt (100%)	TP-262-033	Steam Dryer Vibe Monitoring During Ascension			
100.1 100.4	3952 MWt (100%)	TP-262-033	Steam Dryer Steady State Vibration Data and Plant Walkdown			
100.1	100 Mlb/hr Core Flow	TP-262-033	Steam Dryer Steady State Vibration Data			
100.1	108 Mlb/hr Core Flow	TP-262-033	Steam Dryer Steady State Vibration Data			
101		TP-200-013	Baseline Data Collection & Extrapolation			
11		SR-278-012	LPRM Calibration			
12A.2	3952 MWt (100%)	TP-299-010 Attachment M	APRM Calibration			
12A.3	TP-264-032 performed first	SE-278-001(2)(3)(4)	APRM 1(2)(3)(4) Drive Flow Calibration			
19		TP-299-010 Attachment N	Core Thermal Limits			
1A		TP-299-010 Attachment S	Chemical and Radiochemical			
1B	100 Mlb/Hr	TP-299-010 Attachment G	Moisture Carryover			
1B	108 Mlb/Hr	TP-299-010 Attachment G	Moisture Carryover			
2		TP-299-010 Attachment U	Radiation Measurements			

Test Condition E Review Summary

TP-299-010 Subtest Number	Additional Plant Conditions Requirements	Procedure Number	Description	Test Completed (Initial/Date)	Results Summary Reviewed (Initial/Date)	All TERs Dispositioned (Initial/Date)
22.1	~ Every 120 MWt (3%)	TP-293-041 TP-299-010 Attachment V	Pressure Regulator Incremental Regulation			
22.5		TP-293-041 TP-299-010 Attachment V	SLRC and Incremental Regulation Evaluation, Load Limit Potentiometer Check			
32		SO-200-007 Attachment A Item 9	Drywell Cooling			
35	3952 MWt (100%) 100 Mlb/Hr	TP-264-032	Core Flow Calibration			
18		RE-0TP-201	TIP Uncertainty			
29.2		SE-264-305	Recirc M-G Set Positioners High Speed Stops			
36		TP-299-011	EPU Temperature Data Collection for Service Water			
49		SI-279-360	MSL Rad Monitor Adjustment			

ST 12B RBM TESTING

Completion of the following steps satisfies the requirement for ST 12B testing:

___ 1. **Level 1 Acceptance Criterion a, test 12B. Confirm** that the RBM setpoints reflect the appropriate EPU settings.

___ 2. **Level 1 Acceptance Criterion b, test 12B. Confirm** that the RBM setpoints enable at the proper power levels for EPU settings.

_____ _____
Confirmed By (Station Engineering) Date

ST 12A APRM TESTING

Completion of the following steps satisfies the requirement for ST 12A testing:

___ 1. **Confirm** ST-11 LPRM Calibration (SR-278-012) has been completed at current power level.

___ 2. **Perform** SO-278-004.

___ 3. **Level 1 Acceptance Criterion a, test 12A. Confirm** that the APRM system is calibrated consistent with Technical Specifications.

___ 4. **Level 1 Acceptance Criterion b, test 12A. Confirm** that Technical Specifications on APRM scram and rod block setpoints are not being exceeded.

_____ _____
Confirmed By (Station Engineering) Date

ST-19 CORE PERFORMANCE

Enter Test Condition _____

Completion of the following steps satisfies the requirements for ST 19.

___ 1. **Obtain** and **Attach** copy of SO-200-007, Attachment A, Item 11.

___ 2. **Level 1 Acceptance Criterion a, test 19. Confirm** that core thermal limits CMPRAT, CMFLCPR and CMFDLRX are less than 1.0. Refer to SO-200-007 item 11.

___ 3. **Level 1 Acceptance Criterion b, test 19. Confirm** that steady state reactor power is limited to the maximum value of the lesser of either 3952 MWt or the MELLLA Boundary as depicted on the Power / Flow map.

___ 4. **Level 1 Acceptance Criterion c, test 19. Confirm** that core flow does not exceed its maximum and minimum values as depicted on the Power / Flow map.

___ 5. **Obtain** and **Attach** Core Performance Verification printouts from Reactor Engineering.

_____ _____
Confirmed By (Station Engineering) Date

TEST PLATEAU REVIEW RECORD

1. **Identify** current Test Plateau: _____

2. **List** all tests scheduled for this current Test Plateau which were not completed to the extent required and the related Test Exception Reports.

3. **List** all tests completed during the current Test Plateau for which EPU Test Results Summaries have not been reviewed and the related Test Exception Reports.

4. **List** all Test Exception Reports which remain open.

SUMMARY: All testing scheduled for the current Test Plateau has been successfully completed to the extent required, including related analysis, and EPU Test Results Summaries have been reviewed with the exception of the open items listed above. All Test Exception Reports have been resolved. The open items list can be carried without impacting the safe operation of the plant.

Test Plateau Review completed and recommended for approval:

_____ / _____
EPU Test Program Director Date

TRC Meeting: _____ / _____

PORC Meeting: _____ / _____

Test Plateau Review Approved:

_____ / _____
Plant Manager Date

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FINAL TEST PROGRAM REVIEW RECORD

1. List all tests scheduled for the EPU Test Program which were not completed to the extent required and the related Test Exception Reports.

2. List all tests completed during the EPU Test Program for which EPU Test Results Summaries have not been reviewed and the related Test Exception Reports.

3. List all Test Exception Reports which remain open.

SUMMARY: All testing scheduled for the EPU Test Program has been successfully completed to the extent required, including related analysis, and EPU Test Results Summaries have been reviewed with the exception of the open items listed above. All Test Exception Reports have been resolved. The open items list can be carried without impacting the safe operation of the plant.

Test Plateau Review completed and recommended for approval:

_____ / _____
EPU Test Program Director Date

TRC Meeting: _____ / _____

PORC Meeting: _____ / _____

Test Plateau Review Approved:

_____ / _____
Plant Manager Date

TP-299-010 SUBTEST NUMBERS

M-1563 Number	*TP-299-010 Subtest Number*	*Description or Title*	*Implementing Procedure Number*
1	1A	Chemical and Radiochemical	TP-299-010 Attachment S
1	1B	Moisture Carryover	TP-299-010 Attachment G
2	2	Radiological Survey Program in Support of the Unit 2 EPU Modification	HP-TP-522
3	3	Core Fuel Pool Verification	RE-081-036
4	4	*In Sequence Critical and Shutdown Margin Demo.*	*SR-200-008*
5	5.1	CRD Stroke Time	TP-055-001
5	5.2	Scram Time Measurements of Control Rods	SR-255-004
10	10	IRM/APRM Overlap	GO-200-004
11	11	LPRM Calibration	SR-278-012
12	12A.1	Validation of Core Thermal Power Heat Balance	RE-2TP-026
12	12A.2	*APRM Calibration*	TP-299-010 Attachment P
12	12A.3	APRM 21(22)(23)(24) Drive Flow Calibration	SE-278-001 (2)(3)(4)
12	12B	RBM Calibration	TP-299-010 Attachment L
18	18	TIP Uncertainty	RE-0TP-201
19	19	Core Thermal Limits	TP-299-010 Attachment N
22	22.1	Pressure Regulator Incremental Regulation	TP-293-041
22	22.2	Scram Bypass Setpoint Verification	TP-293-041

TP-299-010 SUBTEST NUMBERS

M-1563 Number	*TP-299-010 Subtest Number*	*Description or Title*	*Implementing Procedure Number*
22	22.3	Pressure Regulator Step Changes and Ctrl Failures	TP-293-041
22	22.4	SLRC Eval and Incremental Regulation Evaluation	TP-293-041
23	23	Feedwater Master Water Level Controller Tuneup	TP-245-029
24	24	Turbine Valve Surveillance	TP-293-041
29	29.2	Recirc MG Set Positioners High Speed Stops	SE-264-305
32	32	Drywell Cooling	SO-200-007 Attachment A Item 9
33	NA	(Combined into ST 100)	
35	35	Core Flow Calibration	TP-264-032
36	36	EPU Temperature Data Collection for Service Water	TP-299-011
37	37	Gaseous Radwaste Systems (Combined with ST 1A)	TP-299-010 Attachment S
42	42	I&C Surveillances	TP-299-010 Attachment B
49	49	MSL Rad Monitor Adjustment	SI-279-360
100	100.1	Steam Dryer Steady State Vibration Data	TP-262-033
100	100.3	Steam Dryer Vibe Monitoring During Ascension	TP-262-033
100	100.4	Plant Walkdown	TP-262-033
101	101	Baseline Data Collection & Extrapolation	TP-200-013

ST-1A CHEMICAL AND RADIOCHEMICAL
(Includes ST 37 Gaseous Radwaste)

Enter Test Condition _____

Completion of the following steps satisfies the requirements for ST 1A and 37.

___ 1. **Confirm** that samples have been taken for the following procedures:

   a. SC-276-101

   b. SC-276-102

   c. SC-276-106

   d. SC-233-101

   e. SC-233-102

   f. SC-243-101

___ 2. **Inform** the EPU TP-299-010 Test Director that step 1 has been completed.

___ 3. **Confirm** completion of analysis for the samples collected in step 1.

___ 4. **IF** a Radwaste discharge has been completed since the last power increase, **THEN** **Confirm** completion of SC-069-001. **OTHERWISE**, N/A this step.

___ 5. **Confirm** that the following Level 1 Acceptance Criterion is satisfied: Chemical factors defined in the Technical Specifications, Technical Requirements Manual, COLR and Fuel Warranty must be maintained within the limits specified.

___ 6. **Confirm** that the following Level 1 Acceptance Criterion is satisfied: The activity of gaseous and liquid effluents must conform to current plant governing documents limitations.

___ 7. **Confirm** that the following Level 2 Acceptance Criterion is satisfied: Water quality is known at all times and remains within the requirements of the SSES Chemistry program.

_____ / _____
Confirmed By Date

ST-10 IRM PERFORMANCE

Mode 4 or Mode 5 Testing: ***Completion*** *of the following steps satisfies ST 10 requirements* that must be met prior to entering Mode 2.

___ 1. **Confirm** that 184DAY IRM CALIB CHANNEL A SI-278-301A is current (NIMS Activity #Z0852-01) 1277439.

___ 2. **Confirm** that 184DAY IRM CALIB CHANNEL B SI-278-301B is current (NIMS Activity #Z0851-01) 1277957.

___ 3. **Confirm** that 184DAY IRM CALIB CHANNEL C SI-278-301C is current (NIMS Activity #Z0850-01) 1277437.

___ 4. **Confirm** that 184DAY IRM CALIB CHANNEL D SI-278-301D is current (NIMS Activity #Z0849-01) 1277956.

___ 5. **Confirm** that 184DAY IRM CALIB CHANNEL E SI-278-301E is current (NIMS Activity #Z0848-01) 1277436.

___ 6. **Confirm** that 184DAY IRM CALIB CHANNEL F SI-278-301F is current (NIMS Activity #Z0847-01) 1277955.

___ 7. **Confirm** that 184DAY IRM CALIB CHANNEL G SI-278-301G is current (NIMS Activity #Z0846-01) 1277954.

___ 8. **Confirm** that 184DAY IRM CALIB CHANNEL H SI-278-301H is current (NIMS Activity #Z0845-01) 1277950.

_____ / _____
Confirmed By Date

ST-2 RADIATION MEASUREMENTS

Enter Test Condition _____

***Completion** of the following steps satisfies the requirements for ST 2.*

___ 1. **Confirm** completion of HP-TP-522.

___ 2. **Confirm** that the following Level 1 Acceptance Criterion is satisfied: The radiation doses of plant origin and the occupancy times of personnel in radiation zones shall be controlled consistent with the guidelines of The Standard for Protection Against Radiation as outlined in 10CFR20.

___ 3. **Confirm** that the following Level 2 Acceptance Criterion is satisfied: The radiation doses of plant origin shall meet the following limits depending upon the Radiation Zone in which the radiation measurement point is located:

FSAR Radiation Zone	Limit (FSAR Table 12.3-1)
I	< 0.5 mRem/hr
II	≤ 2.5 mRem/hr
III	≤ 15 mRem/hr
IV	< 100 mRem/hr

Note: All areas designated Radiation Zone V have potential radiation doses of ≥100 mRem/hr. Readings taken in Zone V during the EPU Test Program may be less than 100 mRem/hr; however, since Zone V is defined in terms of potential levels, there are no Acceptance Criteria for Zone V survey points.

_____ / _____
Confirmed By Date

ST-22 PRESSURE REGULATOR

Enter Test Condition _____ and complete the corresponding section. **Use** a separate copy of this attachment for each Test Condition. **Perform** the following steps:

In Test Condition A

___1. **Record** power level at which the TURB CV FAST CLOSURE & STOP VLV TRIP BYPASS Alarm (AR-203 window E03) cleared, and **Confirm** that it cleared before exceeding 26% power. This step is N/A for all other conditions.

Power Level _____ % _____ / _____
Confirmed By Date

In Test Condition A or at 60% power, prior to first Pressure Regulator Step Change test. N/A this section for all other conditions

___ 2. **Confirm** Incremental Regulation data and Control Valve position data was collected as required.

___ 3. **Confirm** actual Control Valve position is within +1% to -3% of predicted values as required by Level 2 Acceptance Criterion.

_____ / _____
Confirmed By Date

In Test Condition A at 60% power, Perform remaining steps following pressure regulator step changes and failover. N/A this section for all other conditions.

___ 4. **Confirm** all observed decay ratios were less than 1.0 as required by Level 1 Acceptance Criterion.

___ 5. **Confirm** all observed decay ratios were less or equal to 0.5 as required by Level 2 Acceptance Criterion.

___ 6. **Confirm** all pressure response times were less than or equal to 10 seconds as required by Level 2 Acceptance Criterion.

___ 7. **Confirm** all steam flow steady state limit cycles produced steam flow variations no larger than ±0.5% as required by Level 2 Acceptance Criterion.

___ 8. **Confirm** peak neutron flux remained below scram setting by at least 7.5% as required by Level 2 Acceptance Criterion.

___ 9. **Confirm** peak vessel pressure remained below scram setting by at least 10 psi as required by Level 2 Acceptance Criterion.

_____ / _____
Confirmed By Date

ST-22 PRESSURE REGULATOR

In Test Conditions B through D, Perform the following steps. N/A this section for Test Condition A at 60% power and Test Condition E.

___ 1. **Confirm** Incremental Regulation data, Control Valve position data, and Main Steam Line harmonic data was collected as required.

___ 2. **Confirm** actual Control Valve position is within +1% to -3% of predicted values as required by Level 2 Acceptance **Criterion.**

___ 3. **Confirm** all observed decay ratios were less than 1.0 as required by Level 1 Acceptance Criterion.

___ 4. **Confirm** all observed decay ratios were less or equal to 0.5 as required by Level 2 Acceptance Criterion.

___ 5. **Confirm** all pressure response times were less than or equal to 10 seconds as required by Level 2 Acceptance Criterion.

___ 6. **Confirm** all steam flow steady state limit cycles produced steam flow variations no larger than ±0.5% as required by Level 2 Acceptance Criterion.

___ 7. **Confirm** peak neutron flux remained below scram setting by at least 7.5% as required by Level 2 Acceptance Criterion.

___ 8. **Confirm** peak vessel pressure remained below scram setting by at least 10 psi as required by Level 2 Acceptance Criterion.

_____ / _____
Confirmed By Date

In Test Condition E, Perform the following steps. N/A this section for Test Conditions A through D.

___ 1. **Confirm** Incremental Regulation data, Control Valve position data, and Main Steam Line harmonic data was collected as required.

___ 2. **Confirm** the variation in incremental regulation (ratio of the maximum to the minimum value of the quantity, "incremental change in pressure control signal/incremental change in steam flow," for each flow range) meets the following Level 2 Acceptance Criteria:

% of Valves Wide Open Steam Flow	Variation
0 to 85%	4:1
85% to 97%	2:1
85% to 99%	5:1

ST-22 PRESSURE REGULATOR

___ 3. **Confirm** actual Control Valve position is within +1% to -3% of predicted values as required by Level 2 Acceptance Criterion.

___ 4. **Confirm** that the 3rd harmonic steam line frequency does not exist with significant amplitude that would require tuning of the second SLRC card.

_____ / _____
Confirmed By Date

ST-24 TURBINE VALVE SURVEILLANCE

Enter Test Condition _____ and complete the following. **Use** a separate copy of this attachment for each Test Condition.

Completion of the following steps satisfies the requirements for ST 24.

___ 1. ***Confirm*** *reactor did not SCRAM because of the test as required by Level 2* Acceptance Criterion.

___ 2. **Confirm** peak neutron flux remained below scram trip setting by at least 7.5% as required by Level 2 Acceptance Criterion.

___ 3. **Confirm** peak vessel pressure remained below scram setting by at least 10 psi as required by Level 2 Acceptance Criterion.

___ 4. **Confirm** peak heat flux remained below scram trip setting by at least 5.0% as required by Level 2 Acceptance Criterion.

___ 5. **Confirm** reactor did not isolate because of the test as required by Level 2 Acceptance Criterion.

___ 6. **Confirm** peak steam flow in each line remained below the high flow isolation setting by at least 10% as required by Level 2 Acceptance Criterion.

___ 7. **Confirm** peak vessel pressure remained above the steam line low pressure isolation setting by at least 25 psi as required by Level 2 Acceptance Criterion.

_____ / _____
Confirmed By Date