Nuclear Power Business Unit

TEMPORARY CHANGE REVIEW AND APPROVAL

Change #2

Note: Refer to NP 1.2.3, Temporary Procedure Changes, for requirements.

I - INITIATION

Doc Number OI 62A Current Rev 21 Unit PB0 Temp Change No. 2002-0868

Document Title Motor Driven Auxiliary System (P-38A & P-38B)

Existing Effective Temporary Changes 2002-0766

Brief Description Added direction to station operator locally at the pump for Starts and stops.

(Identify specific changes on Form PBF-0026c, Document Review and Approval Continuation, and include with the package)

☒ Initiate PBF-0026h and include with the change.

Other documents required to be effective concurrently with the temporary change: _____

Changes pre-screened according to NP 5.1.8? ☐ NO ☒ YES (Provide documentation according to NP 5.1.8)

Screening completed according to NP 5.1.8? ☐ NA ☒ YES (Attach copy)

Safety Evaluation Required? ☒ NO ☐ YES (If Yes, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Determine if the change constitutes a Change Of Intent to the procedure by evaluating the following questions.
(If any answers are YES, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Will the proposed change:	YES	NO
1. Require a change to, affect or invalidate a requirement, commitment, evaluation or description in the Current or ISFSI Licensing Basis (as defined in NP 5.1.8 and NP 5.1.7)?	☐	☒
2. Cause an increase in magnitude, significance or impact such that it should be processed as a revision?	☐	☒
3. Delete or modify a prerequisite, initial condition, precaution, limitation or other steps that could have safety significance or affect the procedure's margin of safety?	☐	☒
4. Delete QC hold points, Independent Verification or Concurrent Check steps without the related step(s) that require the performance also being deleted?	☐	☒
5. Change Tech Spec or other regulatory acceptance criteria other than for re-baselining purposes?	☐	☒
6. Require a change to the procedure Purpose or change the procedure classification?	☐	☒

Initiated By (print/sign) Mark A. Hansen / Mark A. Hansen Date 11/05/2002

II - INITIAL APPROVAL

This change is correct and complete, can be performed as written, and does not adversely affect personnel or nuclear safety, or Plant operating conditions.

Group Supervisor (print/sign) Ross Grochler / Ross H. Grochler Date 11/6/02

(Cannot be the Initiator)

This change does not adversely affect Plant operating conditions. (Safety Related procedures only)

Senior Reactor Operator (print/sign) K Sokol / K Sokol Date 11/7/02

(Cannot be the Initiator or Group Supervisor)

III - PROCEDURE OWNER REVIEW

☒ Permanent ☐ One-time Use ☐ Expiration Date, Event or Condition: _____

☐ Hold change until procedure completed (final review and approval still required within 14 days of initial approval)

☐ QR/MSS Review NOT Required (Admin/NNSR only) ☒ QR Review Required ☐ MSS Review Required (Reference NP 1.6.5)

Procedure Owner (print/sign) K Sokol / K Sokol Date 11/7/02

This Change and supporting requirements correctly completed and processed

IV - FINAL REVIEW AND APPROVAL

(Must be completed within 14 days of initial approval) (The Initiator, OR and Approval Authority shall be independent from each other)

QR/MSS (print/sign) M.B SAPP / Mike Sapp Date 11-7-2002

Indicates 50.59/72.48 applicability assessed, any necessary screenings/evaluations performed, determination made as to whether additional cross-disciplinary review required, and if required, performed.

MSS Meeting No. _____

Approval Authority (print/sign) R Sokol / K Sokol Date 11/7/02

V - REVISION INFORMATION FOR PERMANENT CHANGES

Post Typing Review (print/sign) _____ / _____ Date _____

Indicates temporary change(s) incorporated exactly as approved and no other changes made to document.

Incorporated into Revision Number _____ Effective Date _____

Doc Number OI 62A Revision 21 Unit PB0

Title Motor Driven Auxiliary System (P-38A & P-38B)

Temporary Change Number 2002-0868

Description of Changes:

Step *	Change/Reason
3.30	Step move from 3.21/ Keep limitations associated with AFW minimum recirc together Prescreened to criteria 1 Editorial
3.31	Re worded limitation associated with loss of instrument air to that of AOP-5B. / Prescreened to Criteria 4 AOP 5B, Loss of IA Attachment R.
5.1.7, Note before 5.1.9, 5.1.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.1.11, 5.2.11, 5.3.11, 5.4.11, 6.1.11, 6.2.11, 6.3.11, 6.4.11, 7.3.6	Added signature blank for 3rd bullet. Signoff was missing. / Prescreened to criteria 1 editorial.
note before 5.1.13, 5.1.13, Note before 6.1.13, 6.1.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.1.18, 5.2.18, 6.1.18, 6.2.18	Re word step to address what procedure hung caution tags. Procedural enhancement. /Prescreened to criteria 1
5.2.7, note before 5.2.9, 5.2.9, 6.2.7 Note before 6.2.9, 6.2.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
note before 5.2.13, 5.2.13, note before 6.2.13, 6.2.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.3.7, note before 5.3.9, 5.3.9, 6.3.7, note before 6.3.9, 6.3.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
note before 5.3.13, 5.3.13, note before 6.3.13, 6.3.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458

Other Comments

* Note: Recording of Step Number(s) is not required for multiple occurrences of identical information or when not beneficial to reviewers

Point Beach Nuclear Plant
DOCUMENT REVIEW AND APPROVAL CONTINUATION

Doc Number OI 62A Revision 21 Unit PB0

Title Motor Driven Auxiliary System (P-38A & P-38B)

Temporary Change Number 2002-0868

Description of Changes:

Step *	Change/Reason
5.4.7, note before 5.4.9, 5.4.9, 6.4.7, note before 6.4.9, 6.4.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
note before 5.4.13, 5.4.13, note before 6.4.13, 6.4.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.7.18, 5.8.18, 6.7.18, 6.8.18	Add step 5.7.3 to step associated with releasing dedicated operator. Was previously missing. Prescreened to criteria 3 See SCR 2002-0458
6.1.7, note before 6.1.9, 6.1.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
7.3.1, 7.3.2	Added guidance to station a level 3 dedicated operator during run of P-38A or P-38B, also added guidance for CO if either unit has a valid AFW signal. Prescreened to Criteria 3 see SCR 2002-0458 criteria 4
note before 7.3.4, 7.3.5	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started./ prescreened to criteria 3 SCR 2002 0458
B-2. B-3	Added Bases for temporary changes to AFW minimum Recirc flows.

Other Comments

* Note: Recording of Step Number(s) is not required for multiple occurrences of identical information or when not beneficial to reviewers.

References: NP 1.1.3, NP 1.2.3

Point Beach Nuclear Plant

TEMPORARY CHANGE AFFECTED MANUAL LOCATION

Procedure Number OI 62A Revision 21 Unit PB0

Title Motor Driven Auxiliary System (P-38A & P-38B)

Temporary Change Number 2002-0868

I - IMMEDIATELY AFTER INITIAL APPROVAL ON PBF-0026e (Non-Intent changes)
(after Final Approval if change of intent involved)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☐ Copy included in work package for field implementation. (WO No. _____)	
☒ Copy filed in Control Room temp change binder (Operations only).	11-7-02
☒ Original change package provided to KGS to obtain Procedure Owner Review (e.g., Owner review may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.).	11-7-02
☐	
☐	
☐	
☐	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 11-7-02

II - PROCEDURE OWNER REVIEW ON PBF-0026e
(may be performed by OA II, Procedure Writer, etc.)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☒ Copy sent to Document Control Distribution Lead for Master File. (Not required for one-time use change)	11-7-02
☐ Copy filed in Group satellite file. (Not required for one-time use changes.)	
☐ Copy filed in Group one-time use file.	
☒ Original Temp Change provided to KGS to obtain Final Approvals (e.g., final approval may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.)	11-7-02
☒ Control Rm Manual	11-7-02
☒ Control Rm Drawer	↓
☒ PAB	
☒ OPS Shop	
☒ OPS Office	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 11-7-02

Point Beach Nuclear Plant

10 CFR 50.59/72.48 PRE-SCREENING REVIEW

Brief Activity Title or Description: **TCN 2002-0868 to OI 62A rev 21, Motor driven Auxiliary System (P-38A & P-38B)**

This form is required to be completed and attached to the applicable activity change forms (i.e., PBF-0026a/c, etc.) to document use of Pre-screening Criterion 3 through 6 for 10 CFR 50.59 / 72.48 review of proposed changes (see NP 5.1.8, 10 CFR 50.59/72.48 Applicability, Screening and Evaluation (New Rule) Section 4.6 and Attachment A.)

Pre-screening Criterion 3 - Activity Covered by Existing 10 CFR 50.59 / 72.48 Screening or Evaluation

Criterion 3 is ☐ Not Applicable to the proposed activity.

Identify the screening or evaluation number(s) (SE for old 50.59/72.48 rule evaluations, EVAL for new rule evaluations):
SCR / SE / EVAL #(s): SCR 2002-0458 SPEED # (NP 9.3.3, Rev. 3 or later ONLY):

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 3.

AFW minimum flow precautions and limitations, notes and steps associated with starting operating and stopping AFW flow.

Pre-screening Criterion 4 - Activity Covered by Existing Approved and Valid Plant Procedure

Criterion 4 is ☐ Not Applicable to the proposed activity.

Identify the applicable plant procedure.
Procedure number, revision and title: AOP 5B, Rev 21, Loss OF Instrument Air OI-62A Rev 21, Motor driven auxiliary feedwater system (P-38A & P-38B)

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 4.

AOP 5B: P&L 3.31 reworded old P&L 3.19 to address limitation associated with loss of IA.

OI 62A: Step 7.3.2 adresses what actions are to be performed if a valid AFW actuation has . Step is commonly referenced in procedure. It was overlooked in this section, so step was added to ensure proper control of AFW.

Pre-screening Criterion 5 – NRC has Reviewed and Approved the Activity.

Criterion 5 is ☒ Not Applicable to the proposed activity.

Identify the NRC Safety Evaluation Report Number and/or Date.
NRC SER(s) # or Date(s):

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 5.

Pre-screening Criterion 6 – Maintenance Activity (NOTE: Dry cask or ISFSI facility maintenance CANNOT use this criterion. A screening is required for dry cask or ISFSI facility maintenance.)

Criterion 6 is ☒ Not Applicable to the proposed activity.

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 6.

VERIFY THAT NONE OF THE FOLLOWING CHANGES ARE PRE-SCREENED TO CRITERION 6:	Verified
No changes to structure, system or component design, performance, acceptance criteria, types of materials, torque values outside of vendor recommended values, etc. (NOTE: Use Criterion 3 for SPEEDs.)	☐

Point Beach Nuclear Plant

10 CFR 50.59/72.48 PRE-SCREENING REVIEW

No temporary alterations to support maintenance or modification installation will be in place longer than 90 days. (If there is any doubt whether the temporary alteration will be removed in 90 days, perform a screening.)	☐
No changes in acceptance criteria in technical specification surveillance or post-maintenance test procedures.	☐

10 CFR 50.59/72.48 PRE-SCREENING REVIEW CONCLUSION

Preparer and Reviewer signatures below signify that the portions of the proposed activity as described above are within the scope of Prescreening Criteria 3, 4, 5, or 6 of NP 5.1.8.

EITHER preparer **OR** reviewer shall be 50.59/72.48 screening or evaluation qualified.

Performed By	**Ross Groehler**	/ Ross H Groehler	Date	**11/06/2002**
	Name (Print)	Signature		
Reviewed By	K Sokol	/	Date	11/7/02
	Name (Print)	Signature		

Nuclear Power Business Unit

TEMPORARY CHANGE REVIEW AND APPROVAL

OPS Office Change #1

Note: Refer to NP 1.2.3, Temporary Procedure Changes, for requirements.

I - INITIATION

Doc Number OI 62A Current Rev 21 Unit PB0 Temp Change No. 2002-0766

Document Title Motor-Driven Auxilliary Feedwater System (P-38A & P-38B)

Existing Effective Temporary Changes N/A

Brief Description Add P&L to address AFW Minimum Flow requirements

(Identify specific changes on Form PBF-0026c, Document Review and Approval Continuation, and include with the package)

☒ Initiate PBF-0026h and include with the change.

Other documents required to be effective concurrently with the temporary change: N/A

Changes pre-screened according to NP 5.1.8? ☒ NO ☐ YES (Provide documentation according to NP 5.1.8)

Screening completed according to NP 5.1.8? ☐ NA ☒ YES (Attach copy)

Safety Evaluation Required? ☒ NO ☐ YES (If Yes, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Determine if the change constitutes a Change Of Intent to the procedure by evaluating the following questions.
(If any answers are YES, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Will the proposed change:

	YES	NO
1. Require a change to, affect or invalidate a requirement, commitment, evaluation or description in the Current or ISFSI Licensing Basis (as defined in NP 5.1.8 and NP 5.1.7)?	☐	☒
2. Cause an increase in magnitude, significance or impact such that it should be processed as a revision?	☐	☒
3. Delete or modify a prerequisite, initial condition, precaution, limitation or other steps that could have safety significance or affect the procedure's margin of safety?	☒	☐
4. Delete QC hold points, Independent Verification or Concurrent Check steps without the related step(s) that require the performance also being deleted?	☐	☒
5. Change Tech Spec or other regulatory acceptance criteria other than for re-baselining purposes?	☐	☒
6. Require a change to the procedure Purpose or change the procedure classification?	☐	☒

Initiated By (print/sign) Ross Groehler / Ross M Groehler Date 10/29/2002

II - INITIAL APPROVAL

This change is correct and complete, can be performed as written, and does not adversely affect personnel or nuclear safety, or Plant operating conditions.

Group Supervisor (print/sign) [illegible] / [illegible] Date 10/30/02
(Cannot be the Initiator)

This change does not adversely affect Plant operating conditions. (Safety Related procedures only)

Senior Reactor Operator (print/sign) Mark Hansen / Mark Hansen Date 10/29/02
(Cannot be the Initiator or Group Supervisor)

III - PROCEDURE OWNER REVIEW

☒ Permanent ☐ One-time Use ☐ Expiration Date, Event or Condition: ____

☐ Hold change until procedure completed (final review and approval still required within 14 days of initial approval)

☐ QR/MSS Review NOT Required (Admin/NNSR only) ☒ QR Review Required ☐ MSS Review Required (Reference NP 1.6.5)

Procedure Owner (print/sign) [illegible] / [illegible] Date 10/30/02
This Change and supporting requirements correctly completed and processed

IV - FINAL REVIEW AND APPROVAL

(Must be completed within 14 days of initial approval) (The Initiator, OR and Approval Authority shall be independent from each other)

QR/MSS (print/sign) [illegible] / [illegible] Date 10/30/02
Indicates 50.59/72.48 applicability assessed, any necessary screenings/evaluations performed, determination made as to whether additional cross-disciplinary review required, and if required, performed.

MSS Meeting No. ____

Approval Authority (print/sign) D. Schlosh / [illegible] Date 10/30/02

V - REVISION INFORMATION FOR PERMANENT CHANGES

Post Typing Review (print/sign) ____ / ____ Date ____
Indicates temporary change(s) incorporated exactly as approved and no other changes made to document.

Incorporated into Revision Number ____ Effective Date ____

Point Beach Nuclear Plant
DOCUMENT REVIEW AND APPROVAL CONTINUATION

Doc Number OI 62A Revision 21 Unit PB0

Title Motor-Driven Auxiliary Feedwater System (P-38A & P-38B)

Temporary Change Number 2002-0766

Description of Changes:

Step *	Change/Reason
3.30/5.1.2 5.1.14/5.2.2 5.2.14/5.3.2 5.3.14/5.4.2 5.4.14/5.5.3 5.5.34/5.6.3 5.6.34/5.7.3 5.8.3/6.1.2 6.1.14/6.2.2 6.2.14/6.3.2 6.3.14/6.4.2 6.4.14/6.5.3 6.5.34/6.6.3 6.6.34/6.7.3 6.8.3/7.3.1/7.3.7 and Att B	Added steps to insert a level 3 dedicated operator with instructions and to secure this operator for minimum AFW Flow concerns. Screening attached.
3.19/3.20	Corrected information that designated expected flow response. Prescreened to criterion 6.
3.31	Added step to state that the minimum flow is 50 gpm, but the desired flow rate is 70 gpm. Screening attached.
5.1.17.5.2.17. 6.1.17.6.2.17	Added step to remove caution tags previously hung. Prescreened to criterion 6.
NOTE PRIOR TO STEP 1.0, STEPS 3.3, 4.1, 4.2 8.5 AND 8.6	DELETED CTS NOTE AND CTS INFORMATION PRESCREENED TO CRITERIA #1 AND SER 2001-007 NRC APPROVAL OF IMPROVED TECH SPECS FOR PBNP DATE IMPLEMENTED WAS 11/20/01

Other Comments

* Note: Recording of Step Number(s) is not required for multiple occurrences of identical information or when not beneficial to reviewers.

References: NP 1.1.3, NP 1.2.3

Point Beach Nuclear Plant

TEMPORARY CHANGE AFFECTED MANUAL LOCATION

Page _____ of _____

Procedure Number OI 62A Revision 21 Unit PB0

Title Motor-Driven Auxiliary Feedwater System (P-38A & P-38B)

Temporary Change Number 2002-0766

I - IMMEDIATELY AFTER INITIAL APPROVAL ON PBF-0026e (Non-Intent changes)
(after Final Approval if change of intent involved)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☐ Copy included in work package for field implementation. (WO No. _____)	
☒ Copy filed in Control Room temp change binder (Operations only).	10-30-02
☒ Original change package provided to KGS to obtain Procedure Owner Review (e.g., Owner review may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.).	10-30-02
☐	
☐	
☐	
☐	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 10-30-02

II - PROCEDURE OWNER REVIEW ON PBF-0026e
(may be performed by OA II, Procedure Writer, etc.)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☒ Copy sent to Document Control Distribution Lead for Master File. (Not required for one-time use change)	10-30-02
☐ Copy filed in Group satellite file. (Not required for one-time use changes.)	
☐ Copy filed in Group one-time use file.	
☒ Original Temp Change provided to DDS to obtain Final Approvals (e.g., final approval may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.)	10-30-02
☒ Control Rm Manual	10-30-02
☒ Control Rm Drawer	↓
☒ PAB	
☒ Ops Shop	
☒ Ops Office	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 10-31-02

Point Beach Nuclear Plant

10 CFR 50.59/72.48 SCREENING (NEW RULE)

SCR 2002-0458

Verify SCR number on all pages

Title of Proposed Activity: AFW minimum flow requirement change to AOP, EOP, CSP, ECA, SEP, OI-62 A/B procedures

Associated Reference(s) #: Removal of internals from AF-117 and upgrade open function of AFW pumps minirecirc vlaves to safety -related (MR 02-029); SCR 2002-005-01 EOP/ARP actions for AFW mini-recirc requirement ; 2002-0055, P-38A/B mini recirc flow orifice replacment (MR 99-029 *A, *B) ; Flowserve Corporation Pump Division letter dated March 2, 20012; CAP 29908; CAP 29952

Prepared by: Eric A. Schmidt / John P. Schroeder (Name (Print)) — Signature — Date: 10/24/02

Reviewed by: [illegible] (Name (Print)) — Signature — Date: 10/29/02

PART I (50.59/72.48) - DESCRIBE THE PROPOSED ACTIVITY AND SEARCH THE PLANT AND ISFSI LICENSING BASIS (Resource Manual 5.3.1)

NOTE: The "NMC 10 CFR 50.59 Resource Manual" (Resource Manual) and NEI 96-07, Appendix B, Guidelines for 10 CFR 72.48 Implementation should be used for guidance to determine the proper responses for 10 CFR 50.59 and 10 CFR 72.48 screenings.

I.1 Describe the proposed activity and the scope of the activity being covered by this screening. (The 10 CFR 50.59 / 72.48 review of other portions of the proposed activity may be documented via the applicability and pre-screening process requirements in NP 5.1.8.) Appropriate descriptive material may be attached.

This screening supports procedural uprgrades to address the Auxiliary Feedwater (AFW) System issue as identified in CAP 29908 and CAP 29952. Procedural guidance for operation of AFW System will be changed such that the operator must ensure that discharge flow for P-38 A/B must be greater than 50 gpm and 1/2 P-29 discharge flow must be greater than 75 gpm. If pump flow cannot be maintained within these requirements, the pump must be secured.

I.2 Search the PBNP Current Licensing Basis (CLB) as follows: Final Safety Analysis Report (FSAR), FSAR Change Requests (FCRs) with assigned numbers, the Fire Protection Evaluation Report (FPER), the CLB (Regulatory) Commitment Database, the Technical Specifications, the Technical Specifications Bases, and the Technical Requirements Manual. Search the ISFSI licensing basis as follows: VSC-24 Safety Analysis Report, the VSC-24 Certificate of Compliance, the CLB (Regulatory) Commitment Database, and the VSC-24 10 CFR 72.212 Site Evaluation Report. Describe the pertinent design function(s), performance requirements, and methods of evaluation for both the plant and for the cask/ISFSI as appropriate. Identify where the pertinent information is described in the above documents (by document section number and title). (Resource Manual 5.3.1 and NEI 96-07, App. B, B.2)

FSAR 10.2 Auxiliary Feedwater System (AF) - The AFW system shall automatically start and deliver adequate AFW flow to maintain adequate steam generator levels during accidents which may result in main steam safety valve opening, such as: Loss of normal feedwater (LONF) and Loss of all AC power to the station auxiliaries (LOAC). AFW system shall also deliver sufficient flow to the steam generators supporting rapid cooldown during such accidents as: steam generator tube rupture (SGTR) and main steam line break (MSLB).

Each pump has an AOV controlled recirculation line back to the condensate storage tanks to ensure minimum flow to prevent hydraulic instabilities and dissipate pump heat.
TS 3.7.5 Auxiliary Feedwater (AFW) System
TS Bases B 3.7.5 Auxiliary Feedwater (AFW) System
FSAR 7.3.3.4 Manual AFW Flow Control During Plant Shutdown Manual control of steam generator water level using the AF pumps to remove reactor decay and sensible heat.
FPER 6.6.4 Auxiliary Feedwater System The Auxiliary Feedwater Pumps are provided with a mini-recirc line to ensure a minimum amount of flow is established to keep the pumps from dead heading.

FSAR 10.2 Auxiliary Feedwater System (AF)
TS 3.7.5 Auxiliary Feedwater (AFW) System
TS Bases B 3.7.5 Auxiliary Feedwater (AFW) System
FSAR 7.3.3.4 Manual AFW Flow Control During Plant Shutdown
FPER 6.6.4 Auxiliary Feedwater System

I.3 Does the proposed activity involve a change to any Technical Specification? Changes to Technical Specifications require a License Amendment Request (Resource Manual Section 5.3.1.2).

Technical Specification Change : ☐ Yes ☒ No

If a Technical Specification change is required, explain what the change should be and why it is required.

I.4 Does the proposed activity involve a change to the terms, conditions or specifications incorporated in any VSC-24 cask Certificate of Compliance (CoC)? Changes to a VSC-24 cask Certificate of Compliance require a CoC amendment request.

☐ Yes ☒ No

If a storage cask Certificate of Compliance change is required, explain what the change should be and why it is required.

10 CFR 50.59 SCREENING

PART II (50.59) - DETERMINE IF THE CHANGE INVOLVES A *DESIGN FUNCTION* (Resource Manual 5.3.2)

Compare the proposed activity to the relevant CLB descriptions, and answer the following questions:

YES	NO	QUESTION
☒	☐	Does the proposed activity involve Safety Analyses or structures, systems and components (SSCs) credited in the Safety Analyses?
☐	☒	Does the proposed activity involve SSCs that support SSC(s) credited in the Safety Analyses?
☒	☐	Does the proposed activity involve SSCs whose failure could initiate a transient (e.g., reactor trip, loss of feedwater, etc.) or accident, OR whose failure could impact SSC(s) credited in the Safety Analyses?
☒	☐	Does the proposed activity involve CLB-described SSCs or procedural controls that perform functions that are required by, or otherwise necessary to comply with, regulations, license conditions, orders or technical specifications?
☐	☒	Does the activity involve a *method of evaluation* described in the FSAR?
☐	☒	Is the activity a *test or experiment*? (i.e., a non-passive activity which gathers data)
☐	☒	Does the activity exceed or potentially affect a *design basis limit for a fission product barrier (DBLFPB)*? (NOTE: If THIS questions is answered YES, a 10 CFR 50.59 Evaluation is required.)

If the answers to ALL of these questions are NO, mark Part III as not applicable, document the 10 CFR 50.59 screening in the conclusion section (Part IV), then proceed directly to Part V - 10 CFR 72.48 Pre-screening Questions.

If any of the above questions are marked YES, identify below the specific design function(s), method of evaluation(s) or DBLFPB(s) involved.

MR-02-029 upgraded the open function of the AFW pumps mini-recirc AOV to safety-related. The safety-related boundary includes the recirc orifice and all associated upstream components and piping. It is postulated that a failure of the piping downstream of the recirc orifice will not have any adverse affects on the AFW system. The availability of the recirculation flowpath provides an additional flowpath to support minimum flow requirements. This procedure change will improve the reliability of the AFW pumps by not relying upon the recirc flow path for operability as it has been concluded that the restrictions in the recirc orifice may not be adequate for use. Whereas current guidance mandates that the operator verify the position of the recirc AOV and the status of the Instrument Air system, these procedural changes will only require the operator to monitor pump discharge flow.

PART III (50.59) - DETERMINE WHETHER THE ACTIVITY INVOLVES ADVERSE EFFECTS (Resource Manual 5.3.3)

If ALL the questions in Part II are answered NO, then Part III is ☐ **NOT APPLICABLE.**

Answer the following questions to determine if the activity has an *adverse effect* on a design function. Any YES answer means that a 10 CFR 50.59 Evaluation is required; EXCEPT where noted in Part III.3.

III.1 CHANGES TO THE FACILITY OR PROCEDURES

YES	NO	QUESTION
☐	☒	Does the activity adversely affect the *design function* of an SSC credited in safety analyses?
☐	☒	Does the activity adversely affect the method of performing or controlling the *design function* of an SSC credited in the safety analyses?

If any answer is YES, a 10 CFR 50.59 Evaluation is required. If both answers are NO, describe the basis for the conclusion (attach additional discussion as necessary):
Minimum flow requirements will be maintained within recommendations from the vendor by monitoring pump discharge flow and securing the pump as required. Starting and stopping of the AFW pumps has been previously evaluated in 50.59 Evaluation 2002-005, which addressed procedural changes to reduce the potential of pump damage as a result of the loss of the recirculation flow path.

III.2 CHANGES TO A METHOD OF EVALUATION

(If the activity does not involve a method of evaluation, these questions are ☒ **NOT APPLICABLE.**)

YES	NO	QUESTION
☐	☐	Does the activity use a revised or different method of evaluation for performing safety analyses than that described in the CLB?
☐	☐	Does the activity use a revised or different method of evaluation for evaluating SSCs credited in safety analyses than that described in the CLB?

If any answer is YES, a 10 CFR 50.59 Evaluation is required. If both answers are NO, describe the basis for the conclusion (attach additional discussion, as necessary).

III.3 TESTS OR EXPERIMENTS

If the activity is not a test or experiment, the questions in III.3.a and III.3.b are ☒ **NOT APPLICABLE.**

a. Answer these two questions first:

YES	NO	QUESTION
☐	☐	Is the proposed test or experiment bounded by other tests or experiments that are described in the CLB?
☐	☐	Are the SSCs affected by the proposed test or experiment isolated from the facility?

If the answer to BOTH questions in V.3.a is NO, continue to III.3.b. If the answer to EITHER question is YES, then describe the basis.

b. Answer these additional questions ONLY for tests or experiments which do NOT meet the criteria given in III.3.a above. If the answer to either question in III.3.a is YES, then these three questions are ☐ NOT APPLICABLE.

YES	NO	QUESTION
☐	☐	Does the activity utilize or control an SSC in a manner that is outside the reference bounds of the design bases as described in the CLB?
☐	☐	Does the activity utilize or control an SSC in a manner that is inconsistent with the analyses or descriptions in the CLB?
☐	☐	Does the activity place the facility in a condition not previously evaluated or that could affect the capability of an SSC to perform its intended functions?

If any answer in III.3.b is YES, a 10 CFR 50.59 Evaluation is required. If the answers in III.3.b are ALL NO, describe the basis for the conclusion (attach additional discussion as necessary):

Part IV - 10 CFR 50.59 SCREENING CONCLUSION (Resource Manual 5.3.4).

Check all that apply:

A 10 CFR 50.59 Evaluation is ☐ required or ☒ **NOT** required.

A Point Beach FSAR change is ☐ required or ☒ **NOT** required. If an FSAR change is required, then initiate an FSAR Change Request (FCR) per NP 5.2.6.

A Regulatory Commitment (CLB Commitment Database) change is ☐ required or ☒ **NOT** required. If a Regulatory Commitment Change is required, initiate a commitment change per NP 5.1.7.

A Technical Specification Bases change is ☐ required or ☒ **NOT** required. If a change to the Technical Specification Bases is required, then initiate a Technical Specification Bases change per NP 5.2.15.

A Technical Requirements Manual change is ☐ required or ☒ **NOT** required. If a change to the Technical Requirements Manual is required, then initiate a Technical Requirements Manual change per NP 5.2.15.

10 CFR 72.48 SCREENING

NOTE: NEI 96-07, Appendix B, Guidelines for 10 CFR 72.48 Implementation should be used for guidance to determine the proper responses for 72.48 screenings.

PART V (72.48) - 10 CFR 72.48 INITIAL SCREENING QUESTIONS

Part V determines if a full 10 CFR 72.48 screening is required to be completed (Parts VI and VII) for the proposed activity.

YES	NO	QUESTION
☐	☒	Does the proposed activity involve IN ANY MANNER the dry fuel storage cask(s), the cask transfer/transport equipment, any ISFSI facility SSC(s), or any ISFSI facility monitoring as follows: Multi-Assembly Sealed Basket (MSB), MSB Transfer Cask (MTC), MTC Lifting Yoke, Ventilated Concrete Cask (VCC), Ventilated Storage Cask (VSC), VSC Transporter (VCST), ISFSI Storage Pad Facility, ISFSI Storage Pad Data/Communication Links, or PPCS/ISFSI Continuous Temperature Monitoring System?

Nuclear Power Business Unit

TEMPORARY CHANGE REVIEW AND APPROVAL

Change #2

Note: Refer to NP 1.2.3, Temporary Procedure Changes, for requirements.

I - INITIATION

Doc Number OI 62A Current Rev 21 Unit PB0 Temp Change No. 2002-0868

Document Title Motor Driven Auxiliary System (P-38A & P-38B)

Existing Effective Temporary Changes 2002-0766

Brief Description Added direction to station operator locally at the pump for Starts and stops.

(Identify specific changes on Form PBF-0026c, Document Review and Approval Continuation, and include with the package)

☒ Initiate PBF-0026h and include with the change.

Other documents required to be effective concurrently with the temporary change: _____

Changes pre-screened according to NP 5.1.8? ☐ NO ☒ YES (Provide documentation according to NP 5.1.8)

Screening completed according to NP 5.1.8? ☐ NA ☒ YES (Attach copy)

Safety Evaluation Required? ☒ NO ☐ YES (If Yes, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Determine if the change constitutes a Change Of Intent to the procedure by evaluating the following questions.
(If any answers are YES, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Will the proposed change:	YES	NO
1. Require a change to, affect or invalidate a requirement, commitment, evaluation or description in the Current or ISFSI Licensing Basis (as defined in NP 5.1.8 and NP 5.1.7)?	☐	☒
2. Cause an increase in magnitude, significance or impact such that it should be processed as a revision?	☐	☒
3. Delete or modify a prerequisite, initial condition, precaution, limitation or other steps that could have safety significance or affect the procedure's margin of safety?	☐	☒
4. Delete QC hold points, Independent Verification or Concurrent Check steps without the related step(s) that require the performance also being deleted?	☐	☒
5. Change Tech Spec or other regulatory acceptance criteria other than for re-baselining purposes?	☐	☒
6. Require a change to the procedure Purpose or change the procedure classification?	☐	☒

Initiated By (print/sign) Mark A. Hansen / Mark A. Hansen Date 11/05/2002

II - INITIAL APPROVAL

This change is correct and complete, can be performed as written, and does not adversely affect personnel or nuclear safety, or Plant operating conditions.

Group Supervisor (print/sign) Ross Grochler / Ross A. Grochler Date 11/6/02

(Cannot be the Initiator)

This change does not adversely affect Plant operating conditions. (Safety Related procedures only)

Senior Reactor Operator (print/sign) K Sokol / K Sokol Date 11/7/02

(Cannot be the Initiator or Group Supervisor)

III - PROCEDURE OWNER REVIEW

☒ Permanent ☐ One-time Use ☐ Expiration Date, Event or Condition: _____

☐ Hold change until procedure completed (final review and approval still required within 14 days of initial approval)

☐ QR/MSS Review NOT Required (Admin/NNSR only) ☒ QR Review Required ☐ MSS Review Required (Reference NP 1.6.5)

Procedure Owner (print/sign) K Sokol / K Sokol Date 11/7/02

This Change and supporting requirements correctly completed and processed

IV - FINAL REVIEW AND APPROVAL

(Must be completed within 14 days of initial approval) (The Initiator, OR and Approval Authority shall be independent from each other)

QR/MSS (print/sign) M.B SAPP / Mike Sapp Date 11-7-2002

Indicates 50.59/72.48 applicability assessed, any necessary screenings/evaluations performed, determination made as to whether additional cross-disciplinary review required, and if required, performed.

MSS Meeting No. _____

Approval Authority (print/sign) R Sokol / K Sokol Date 11/7/02

V - REVISION INFORMATION FOR PERMANENT CHANGES

Post Typing Review (print/sign) _____ / _____ Date _____

Indicates temporary change(s) incorporated exactly as approved and no other changes made to document.

Incorporated into Revision Number _____ Effective Date _____

Point Beach Nuclear Plant
DOCUMENT REVIEW AND APPROVAL CONTINUATION

Doc Number OI 62A Revision 21 Unit PB0

Title Motor Driven Auxiliary System (P-38A & P-38B)

Temporary Change Number 2002-0868

Description of Changes:

Step *	Change/Reason
3.30	Step move from 3.21/ Keep limitations associated with AFW minimum recirc together Prescreened to criteria 1 Editorial
3.31	Re worded limitation associated with loss of instrument air to that of AOP-5B. / Prescreened to Criteria 4 AOP 5B, Loss of IA Attachment R.
5.1.7, Note before 5.1.9, 5.1.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.1.11, 5.2.11, 5.3.11, 5.4.11, 6.1.11, 6.2.11, 6.3.11, 6.4.11, 7.3.6	Added signature blank for 3rd bullet. Signoff was missing. / Prescreened to criteria 1 editorial.
note before 5.1.13, 5.1.13, Note before 6.1.13, 6.1.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.1.18, 5.2.18, 6.1.18, 6.2.18	Re word step to address what procedure hung caution tags. Procedural enhancement. /Prescreened to criteria 1
5.2.7, note before 5.2.9, 5.2.9, 6.2.7 Note before 6.2.9, 6.2.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
note before 5.2.13, 5.2.13, note before 6.2.13, 6.2.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.3.7, note before 5.3.9, 5.3.9, 6.3.7, note before 6.3.9, 6.3.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
note before 5.3.13, 5.3.13, note before 6.3.13, 6.3.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458

Other Comments

* Note: Recording of Step Number(s) is not required for multiple occurrences of identical information or when not beneficial to reviewers.

Point Beach Nuclear Plant
DOCUMENT REVIEW AND APPROVAL CONTINUATION

Doc Number OI 62A Revision 21 Unit PB0

Title Motor Driven Auxiliary System (P-38A & P-38B)

Temporary Change Number 2002-0868

Description of Changes:

Step *	Change/Reason
5.4.7, note before 5.4.9, 5.4.9, 6.4.7, note before 6.4.9, 6.4.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
note before 5.4.13, 5.4.13, note before 6.4.13, 6.4.13	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
5.7.18, 5.8.18, 6.7.18, 6.8.18	Add step 5.7.3 to step associated with releasing dedicated operator. Was previously missing. Prescreened to criteria 3 See SCR 2002-0458
6.1.7, note before 6.1.9, 6.1.9	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started. Changed P&L referenced to 3.8. Previously referenced P&L 3.9 which was the wrong P&L./ prescreened to criteria 3 SCR 2002 0458
7.3.1, 7.3.2	Added guidance to station a level 3 dedicated operator during run of P-38A or P-38B, also added guidance for CO if either unit has a valid AFW signal. Prescreened to Criteria 3 see SCR 2002-0458 criteria 4
note before 7.3.4, 7.3.5	Added guidance prior to starting AFW Pump to ensure an operator is stationed by pump and knows what recirc flow to look for when pump is started./ prescreened to criteria 3 SCR 2002 0458
B-2. B-3	Added Bases for temporary changes to AFW minimum Recirc flows.

Other Comments

* Note: Recording of Step Number(s) is not required for multiple occurrences of identical information or when not beneficial to reviewers.

Point Beach Nuclear Plant

TEMPORARY CHANGE AFFECTED MANUAL LOCATION

Procedure Number OI 62A Revision 21 Unit PB0

Title Motor Driven Auxiliary System (P-38A & P-38B)

Temporary Change Number 2002-0868

I - IMMEDIATELY AFTER INITIAL APPROVAL ON PBF-0026e (Non-Intent changes)
(after Final Approval if change of intent involved)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☐ Copy included in work package for field implementation. (WO No. _____)	
☒ Copy filed in Control Room temp change binder (Operations only).	11-7-02
☒ Original change package provided to KGS to obtain Procedure Owner Review (e.g., Owner review may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.).	11-7-02
☐	
☐	
☐	
☐	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 11-7-02

II - PROCEDURE OWNER REVIEW ON PBF-0026e
(may be performed by OA II, Procedure Writer, etc.)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☒ Copy sent to Document Control Distribution Lead for Master File. (Not required for one-time use change)	11-7-02
☐ Copy filed in Group satellite file. (Not required for one-time use changes)	
☐ Copy filed in Group one-time use file.	
☒ Original Temp Change provided to KGS to obtain Final Approvals (e.g., final approval may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.)	11-7-02
☒ Control Rm Manual	11-7-02
☒ Control Rm Drawer	
☒ PAB	
☒ OPS Shop	
☒ OPS Office	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 11-7-02

Point Beach Nuclear Plant

10 CFR 50.59/72.48 PRE-SCREENING REVIEW

Brief Activity Title or Description: **TCN 2002-0868 to OI 62A rev 21, Motor driven Auxiliary System (P-38A & P-38B)**

This form is required to be completed and attached to the applicable activity change forms (i.e., PBF-0026a/c, etc.) to document use of Pre-screening Criterion 3 through 6 for 10 CFR 50.59 / 72.48 review of proposed changes (see NP 5.1.8, 10 CFR 50.59/72.48 Applicability, Screening and Evaluation (New Rule) Section 4.6 and Attachment A.)

Pre-screening Criterion 3 - Activity Covered by Existing 10 CFR 50.59 / 72.48 Screening or Evaluation

Criterion 3 is ☐ Not Applicable to the proposed activity.

Identify the screening or evaluation number(s) (SE for old 50.59/72.48 rule evaluations, EVAL for new rule evaluations):
SCR / SE / EVAL #(s): SCR 2002-0458 SPEED # (NP 9.3.3, Rev. 3 or later ONLY):

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 3.

AFW minimum flow precautions and limitations, notes and steps associated with starting operating and stopping AFW flow.

Pre-screening Criterion 4 - Activity Covered by Existing Approved and Valid Plant Procedure

Criterion 4 is ☐ Not Applicable to the proposed activity.

Identify the applicable plant procedure.
Procedure number, revision and title: AOP 5B, Rev 21, Loss OF Instrument Air OI-62A Rev 21, Motor driven auxiliary feedwater system (P-38A & P-38B)

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 4.

AOP 5B: P&L 3.31 reworded old P&L 3.19 to address limitation associated with loss of IA.

OI 62A: Step 7.3.2 adresses what actions are to be performed if a valid AFW actuation has . Step is commonly referenced in procedure. It was overlooked in this section, so step was added to ensure proper control of AFW.

Pre-screening Criterion 5 – NRC has Reviewed and Approved the Activity.

Criterion 5 is ☒ Not Applicable to the proposed activity.

Identify the NRC Safety Evaluation Report Number and/or Date.
NRC SER(s) # or Date(s):

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 5.

Pre-screening Criterion 6 – Maintenance Activity (NOTE: Dry cask or ISFSI facility maintenance CANNOT use this criterion. A screening is required for dry cask or ISFSI facility maintenance.)

Criterion 6 is ☒ Not Applicable to the proposed activity.

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 6.

VERIFY THAT NONE OF THE FOLLOWING CHANGES ARE PRE-SCREENED TO CRITERION 6:	Verified
No changes to structure, system or component design, performance, acceptance criteria, types of materials, torque values outside of vendor recommended values, etc. (NOTE: Use Criterion 3 for SPEEDs.)	☐

Point Beach Nuclear Plant

10 CFR 50.59/72.48 PRE-SCREENING REVIEW

No temporary alterations to support maintenance or modification installation will be in place longer than 90 days. (If there is any doubt whether the temporary alteration will be removed in 90 days, perform a screening.)	☐
No changes in acceptance criteria in technical specification surveillance or post-maintenance test procedures.	☐

10 CFR 50.59/72.48 PRE-SCREENING REVIEW CONCLUSION

Preparer and Reviewer signatures below signify that the portions of the proposed activity as described above are within the scope of Prescreening Criteria 3, 4, 5, or 6 of NP 5.1.8.

EITHER preparer **OR** reviewer shall be 50.59/72.48 screening or evaluation qualified.

Performed By	Ross Groehler	/ Ross M Groehler	Date	11/06/2002
	Name (Print)	Signature		
Reviewed By	K Sokol	/	Date	11/7/02
	Name (Print)	Signature		

Nuclear Power Business Unit

TEMPORARY CHANGE REVIEW AND APPROVAL

OPS Office Change #1

Note: Refer to NP 1.2.3, Temporary Procedure Changes, for requirements.

I - INITIATION

Doc Number OI 62A Current Rev 21 Unit PB0 Temp Change No. 2002-0766

Document Title Motor-Driven Auxilliary Feedwater System (P-38A & P-38B)

Existing Effective Temporary Changes N/A

Brief Description Add P&L to address AFW Minimum Flow requirements

(Identify specific changes on Form PBF-0026c, Document Review and Approval Continuation, and include with the package)

☒ Initiate PBF-0026h and include with the change.

Other documents required to be effective concurrently with the temporary change: N/A

Changes pre-screened according to NP 5.1.8? ☒ NO ☐ YES (Provide documentation according to NP 5.1.8)

Screening completed according to NP 5.1.8? ☐ NA ☒ YES (Attach copy)

Safety Evaluation Required? ☒ NO ☐ YES (If Yes, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Determine if the change constitutes a Change Of Intent to the procedure by evaluating the following questions.
(If any answers are YES, a revision may be processed or final reviews and approvals shall be obtained before implementing)

Will the proposed change:

	YES	NO
1. Require a change to, affect or invalidate a requirement, commitment, evaluation or description in the Current or ISFSI Licensing Basis (as defined in NP 5.1.8 and NP 5.1.7)?	☐	☒
2. Cause an increase in magnitude, significance or impact such that it should be processed as a revision?	☐	☒
3. Delete or modify a prerequisite, initial condition, precaution, limitation or other steps that could have safety significance or affect the procedure's margin of safety?	☒	☐
4. Delete QC hold points, Independent Verification or Concurrent Check steps without the related step(s) that require the performance also being deleted?	☐	☒
5. Change Tech Spec or other regulatory acceptance criteria other than for re-baselining purposes?	☐	☒
6. Require a change to the procedure Purpose or change the procedure classification?	☐	☒

Initiated By (print/sign) Ross Groehler / Ross M Groehler Date 10/29/2002

II - INITIAL APPROVAL

This change is correct and complete, can be performed as written, and does not adversely affect personnel or nuclear safety, or Plant operating conditions.

Group Supervisor (print/sign) [illegible] / [illegible] Date 10/30/02
(Cannot be the Initiator)

This change does not adversely affect Plant operating conditions. (Safety Related procedures only)

Senior Reactor Operator (print/sign) Mark Hansen / Mark Hansen Date 10/29/02
(Cannot be the Initiator or Group Supervisor)

III - PROCEDURE OWNER REVIEW

☒ Permanent ☐ One-time Use ☐ Expiration Date, Event or Condition: ____

☐ Hold change until procedure completed (final review and approval still required within 14 days of initial approval)

☐ QR/MSS Review NOT Required (Admin/NNSR only) ☒ QR Review Required ☐ MSS Review Required (Reference NP 1.6.5)

Procedure Owner (print/sign) [illegible] / [illegible] Date 10/30/02
This Change and supporting requirements correctly completed and processed.

IV - FINAL REVIEW AND APPROVAL

(Must be completed within 14 days of initial approval) (The Initiator, OR and Approval Authority shall be independent from each other)

QR/MSS (print/sign) [illegible] / [illegible] Date 10/30/02
Indicates 50.59/72.48 applicability assessed, any necessary screenings/evaluations performed, determination made as to whether additional cross-disciplinary review required, and if required, performed.

MSS Meeting No. ____

Approval Authority (print/sign) D. Schlosh / [illegible] Date 10/30/02

V - REVISION INFORMATION FOR PERMANENT CHANGES

Post Typing Review (print/sign) ____ / ____ Date ____
Indicates temporary change(s) incorporated exactly as approved and no other changes made to document.

Incorporated into Revision Number ____ Effective Date ____

Point Beach Nuclear Plant
DOCUMENT REVIEW AND APPROVAL CONTINUATION

Doc Number OI 62A Revision 21 Unit PB0

Title Motor-Driven Auxiliary Feedwater System (P-38A & P-38B)

Temporary Change Number 2002-0766

Description of Changes:

Step *	Change/Reason
3.30/5.1.2 5.1.14/5.2.2 5.2.14/5.3.2 5.3.14/5.4.2 5.4.14/5.5.3 5.5.34/5.6.3 5.6.34/5.7.3 5.8.3/6.1.2 6.1.14/6.2.2 6.2.14/6.3.2 6.3.14/6.4.2 6.4.14/6.5.3 6.5.34/6.6.3 6.6.34/6.7.3 6.8.3/7.3.1/7.3.7 and Att B	Added steps to insert a level 3 dedicated operator with instructions and to secure this operator for minimum AFW Flow concerns. Screening attached.
3.19/3.20	Corrected information that designated expected flow response. Prescreened to criterion 6.
3.31	Added step to state that the minimum flow is 50 gpm, but the desired flow rate is 70 gpm. Screening attached.
5.1.17.5.2.17. 6.1.17.6.2.17	Added step to remove caution tags previously hung. Prescreened to criterion 6.
NOTE PRIOR TO STEP 1.0, STEPS 3.3, 4.1, 4.2 8.5 AND 8.6	DELETED CTS NOTE AND CTS INFORMATION PRESCREENED TO CRITERIA #1 AND SER 2001-007 NRC APPROVAL OF INPUMED TECH SPECS FOR PBNP NOTE IMPLEMENTED WAS 11/20/01

Other Comments

* Note: Recording of Step Number(s) is not required for multiple occurrences of identical information or when not beneficial to reviewers.

References: NP 1.1.3, NP 1.2.3

Point Beach Nuclear Plant

TEMPORARY CHANGE AFFECTED MANUAL LOCATION

Page _____ of _____

Procedure Number OI 62A Revision 21 Unit PB0

Title Motor-Driven Auxiliary Feedwater System (P-38A & P-38B)

Temporary Change Number 2002-0766

I - IMMEDIATELY AFTER INITIAL APPROVAL ON PBF-0026e (Non-Intent changes)
(after Final Approval if change of intent involved)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☐ Copy included in work package for field implementation. (WO No. _____)	
☒ Copy filed in Control Room temp change binder (Operations only).	10-30-02
☒ Original change package provided to KGS to obtain Procedure Owner Review (e.g., Owner review may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.).	10-30-02
☐	
☐	
☐	
☐	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 10-30-02

II - PROCEDURE OWNER REVIEW ON PBF-0026e
(may be performed by OA II, Procedure Writer, etc.)

This procedure change has been processed as follows: (Manual/Location)	Date Performed
☒ Copy sent to Document Control Distribution Lead for Master File. (Not required for one-time use change)	10-30-02
☐ Copy filed in Group satellite file. (Not required for one-time use changes.)	
☐ Copy filed in Group one-time use file.	
☒ Original Temp Change provided to DDS to obtain Final Approvals (e.g., final approval may be coordinated by In-Group OA II, Procedure Writer, Procedure Supervisor, etc.)	10-30-02
☒ Control Rm Manual	10-30-02
☒ Control Rm Drawer	↓
☒ PAB	
☒ Ops Shop	
☒ Ops Office	
☐	

Performed By (print and sign) Carol Schroeder / Carol Schroeder Date 10-31-02

Point Beach Nuclear Plant

10 CFR 50.59/72.48 SCREENING (NEW RULE)

SCR 2002-0458

Verify SCR number on all pages

Title of Proposed Activity: AFW minimum flow requirement change to AOP, EOP, CSP, ECA, SEP, OI-62 A/B procedures

Associated Reference(s) #: Removal of internals from AF-117 and upgrade open function of AFW pumps minirecirc vlaves to safety -related (MR 02-029); SCR 2002-005-01 EOP/ARP actions for AFW mini-recirc requirement ; 2002-0055, P-38A/B mini recirc flow orifice replacment (MR 99-029 *A, *B) ; Flowserve Corporation Pump Division letter dated March 2, 20012; CAP 29908; CAP 29952

Prepared by: Eric A. Schmidt / John P. Schroeder (Name (Print)) — Signature — Date: 10/24/02

Reviewed by: [illegible] (Name (Print)) — Signature — Date: 10/29/02

PART I (50.59/72.48) - DESCRIBE THE PROPOSED ACTIVITY AND SEARCH THE PLANT AND ISFSI LICENSING BASIS (Resource Manual 5.3.1)

NOTE: The "NMC 10 CFR 50.59 Resource Manual" (Resource Manual) and NEI 96-07, Appendix B, Guidelines for 10 CFR 72.48 Implementation should be used for guidance to determine the proper responses for 10 CFR 50.59 and 10 CFR 72.48 screenings.

I.1 Describe the proposed activity and the scope of the activity being covered by this screening. (The 10 CFR 50.59 / 72.48 review of other portions of the proposed activity may be documented via the applicability and pre-screening process requirements in NP 5.1.8.) Appropriate descriptive material may be attached.

This screening supports procedural uprgrades to address the Auxiliary Feedwater (AFW) System issue as identified in CAP 29908 and CAP 29952. Procedural guidance for operation of AFW System will be changed such that the operator must ensure that discharge flow for P-38 A/B must be greater than 50 gpm and 1/2 P-29 discharge flow must be greater than 75 gpm. If pump flow cannot be maintained within these requirements, the pump must be secured.

I.2 Search the PBNP Current Licensing Basis (CLB) as follows: Final Safety Analysis Report (FSAR), FSAR Change Requests (FCRs) with assigned numbers, the Fire Protection Evaluation Report (FPER), the CLB (Regulatory) Commitment Database, the Technical Specifications, the Technical Specifications Bases, and the Technical Requirements Manual. Search the ISFSI licensing basis as follows: VSC-24 Safety Analysis Report, the VSC-24 Certificate of Compliance, the CLB (Regulatory) Commitment Database, and the VSC-24 10 CFR 72.212 Site Evaluation Report. Describe the pertinent design function(s), performance requirements, and methods of evaluation for both the plant and for the cask/ISFSI as appropriate. Identify where the pertinent information is described in the above documents (by document section number and title). (Resource Manual 5.3.1 and NEI 96-07, App. B, B.2)

FSAR 10.2 Auxiliary Feedwater System (AF) - The AFW system shall automatically start and deliver adequate AFW flow to maintain adequate steam generator levels during accidents which may result in main steam safety valve opening, such as: Loss of normal feedwater (LONF) and Loss of all AC power to the station auxiliaries (LOAC). AFW system shall also deliver sufficient flow to the steam generators supporting rapid cooldown during such accidents as: steam generator tube rupture (SGTR) and main steam line break (MSLB).

Each pump has an AOV controlled recirculation line back to the condensate storage tanks to ensure minimum flow to prevent hydraulic instabilities and dissipate pump heat.
TS 3.7.5 Auxiliary Feedwater (AFW) System
TS Bases B 3.7.5 Auxiliary Feedwater (AFW) System
FSAR 7.3.3.4 Manual AFW Flow Control During Plant Shutdown Manual control of steam generator water level using the AF pumps to remove reactor decay and sensible heat.
FPER 6.6.4 Auxiliary Feedwater System The Auxiliary Feedwater Pumps are provided with a mini-recirc line to ensure a minimum amount of flow is established to keep the pumps from dead heading.

FSAR 10.2 Auxiliary Feedwater System (AF)
TS 3.7.5 Auxiliary Feedwater (AFW) System
TS Bases B 3.7.5 Auxiliary Feedwater (AFW) System
FSAR 7.3.3.4 Manual AFW Flow Control During Plant Shutdown
FPER 6.6.4 Auxiliary Feedwater System

I.3 Does the proposed activity involve a change to any Technical Specification? Changes to Technical Specifications require a License Amendment Request (Resource Manual Section 5.3.1.2).

Technical Specification Change : ☐ Yes ☒ No

If a Technical Specification change is required, explain what the change should be and why it is required.

I.4 Does the proposed activity involve a change to the terms, conditions or specifications incorporated in any VSC-24 cask Certificate of Compliance (CoC)? Changes to a VSC-24 cask Certificate of Compliance require a CoC amendment request.

☐ Yes ☒ No

If a storage cask Certificate of Compliance change is required, explain what the change should be and why it is required.

10 CFR 50.59 SCREENING

PART II (50.59) - DETERMINE IF THE CHANGE INVOLVES A *DESIGN FUNCTION* (Resource Manual 5.3.2)

Compare the proposed activity to the relevant CLB descriptions, and answer the following questions:

YES	NO	QUESTION
☒	☐	Does the proposed activity involve Safety Analyses or structures, systems and components (SSCs) credited in the Safety Analyses?
☐	☒	Does the proposed activity involve SSCs that support SSC(s) credited in the Safety Analyses?
☒	☐	Does the proposed activity involve SSCs whose failure could initiate a transient (e.g., reactor trip, loss of feedwater, etc.) or accident, OR whose failure could impact SSC(s) credited in the Safety Analyses?
☒	☐	Does the proposed activity involve CLB-described SSCs or procedural controls that perform functions that are required by, or otherwise necessary to comply with, regulations, license conditions, orders or technical specifications?
☐	☒	Does the activity involve a *method of evaluation* described in the FSAR?
☐	☒	Is the activity a *test or experiment*? (i.e., a non-passive activity which gathers data)
☐	☒	Does the activity exceed or potentially affect a *design basis limit for a fission product barrier (DBLFPB)*? (NOTE: If THIS questions is answered YES, a 10 CFR 50.59 Evaluation is required.)

If the answers to ALL of these questions are NO, mark Part III as not applicable, document the 10 CFR 50.59 screening in the conclusion section (Part IV), then proceed directly to Part V - 10 CFR 72.48 Pre-screening Questions.

If any of the above questions are marked YES, identify below the specific design function(s), method of evaluation(s) or DBLFPB(s) involved.

MR-02-029 upgraded the open function of the AFW pumps mini-recirc AOV to safety-related. The safety-related boundary includes the recirc orifice and all associated upstream components and piping. It is postulated that a failure of the piping downstream of the recirc orifice will not have any adverse affects on the AFW system. The availability of the recirculation flowpath provides an additional flowpath to support minimum flow requirements. This procedure change will improve the reliability of the AFW pumps by not relying upon the recirc flow path for operability as it has been concluded that the restrictions in the recirc orifice may not be adequate for use. Whereas current guidance mandates that the operator verify the position of the recirc AOV and the status of the Instrument Air system, these procedural changes will only require the operator to monitor pump discharge flow.

PART III (50.59) - DETERMINE WHETHER THE ACTIVITY INVOLVES ADVERSE EFFECTS (Resource Manual 5.3.3)

If ALL the questions in Part II are answered NO, then Part III is ☐ **NOT APPLICABLE.**

Answer the following questions to determine if the activity has an *adverse effect* on a design function. Any YES answer means that a 10 CFR 50.59 Evaluation is required; EXCEPT where noted in Part III.3.

III.1 CHANGES TO THE FACILITY OR PROCEDURES

YES	NO	QUESTION
☐	☒	Does the activity adversely affect the *design function* of an SSC credited in safety analyses?
☐	☒	Does the activity adversely affect the method of performing or controlling the *design function* of an SSC credited in the safety analyses?

If any answer is YES, a 10 CFR 50.59 Evaluation is required. If both answers are NO, describe the basis for the conclusion (attach additional discussion as necessary):
Minimum flow requirements will be maintained within recommendations from the vendor by monitoring pump discharge flow and securing the pump as required. Starting and stopping of the AFW pumps has been previously evaluated in 50.59 Evaluation 2002-005, which addressed procedural changes to reduce the potential of pump damage as a result of the loss of the recirculation flow path.

III.2 CHANGES TO A METHOD OF EVALUATION

(If the activity does not involve a method of evaluation, these questions are ☒ **NOT APPLICABLE.**)

YES	NO	QUESTION
☐	☐	Does the activity use a revised or different method of evaluation for performing safety analyses than that described in the CLB?
☐	☐	Does the activity use a revised or different method of evaluation for evaluating SSCs credited in safety analyses than that described in the CLB?

If any answer is YES, a 10 CFR 50.59 Evaluation is required. If both answers are NO, describe the basis for the conclusion (attach additional discussion, as necessary).

III.3 TESTS OR EXPERIMENTS

If the activity is not a test or experiment, the questions in III.3.a and III.3.b are ☒ **NOT APPLICABLE.**

a. Answer these two questions first:

YES	NO	QUESTION
☐	☐	Is the proposed test or experiment bounded by other tests or experiments that are described in the CLB?
☐	☐	Are the SSCs affected by the proposed test or experiment isolated from the facility?

If the answer to BOTH questions in V.3.a is NO, continue to III.3.b. If the answer to EITHER question is YES, then describe the basis.

b. Answer these additional questions ONLY for tests or experiments which do NOT meet the criteria given in III.3.a above. If the answer to either question in III.3.a is YES, then these three questions are ☐ NOT APPLICABLE.

YES	NO	QUESTION
☐	☐	Does the activity utilize or control an SSC in a manner that is outside the reference bounds of the design bases as described in the CLB?
☐	☐	Does the activity utilize or control an SSC in a manner that is inconsistent with the analyses or descriptions in the CLB?
☐	☐	Does the activity place the facility in a condition not previously evaluated or that could affect the capability of an SSC to perform its intended functions?

If any answer in III.3.b is YES, a 10 CFR 50.59 Evaluation is required. If the answers in III.3.b are ALL NO, describe the basis for the conclusion (attach additional discussion as necessary):

Part IV - 10 CFR 50.59 SCREENING CONCLUSION (Resource Manual 5.3.4).

Check all that apply:

A 10 CFR 50.59 Evaluation is ☐ required or ☒ **NOT** required.

A Point Beach FSAR change is ☐ required or ☒ **NOT** required. If an FSAR change is required, then initiate an FSAR Change Request (FCR) per NP 5.2.6.

A Regulatory Commitment (CLB Commitment Database) change is ☐ required or ☒ **NOT** required. If a Regulatory Commitment Change is required, initiate a commitment change per NP 5.1.7.

A Technical Specification Bases change is ☐ required or ☒ **NOT** required. If a change to the Technical Specification Bases is required, then initiate a Technical Specification Bases change per NP 5.2.15.

A Technical Requirements Manual change is ☐ required or ☒ **NOT** required. If a change to the Technical Requirements Manual is required, then initiate a Technical Requirements Manual change per NP 5.2.15.

10 CFR 72.48 SCREENING

NOTE: NEI 96-07, Appendix B, Guidelines for 10 CFR 72.48 Implementation should be used for guidance to determine the proper responses for 72.48 screenings.

PART V (72.48) - 10 CFR 72.48 INITIAL SCREENING QUESTIONS

Part V determines if a full 10 CFR 72.48 screening is required to be completed (Parts VI and VII) for the proposed activity.

'ES	NO	QUESTION
☐	☒	Does the proposed activity involve IN ANY MANNER the dry fuel storage cask(s), the cask transfer/transport equipment, any ISFSI facility SSC(s), or any ISFSI facility monitoring as follows: Multi-Assembly Sealed Basket (MSB), MSB Transfer Cask (MTC), MTC Lifting Yoke, Ventilated Concrete Cask (VCC), Ventilated Storage Cask (VSC), VSC Transporter (VCST), ISFSI Storage Pad Facility, ISFSI Storage Pad Data/Communication Links, or PPCS/ISFSI Continuous Temperature Monitoring System?

☐	☒	Does the proposed activity involve IN ANY MANNER SSC(s) installed in the plant specifically added to support cask loading/unloading activities, as follows: Cask Dewatering System (CDW), Cask Reflood System (CRF), or Hydrogen Monitoring System?
☐	☒	Does the proposed activity involve IN ANY MANNER SSC(s) needed for plant operation which are also used to support cask loading/unloading activities, as follows: Spent Fuel Pool (SFP), SFP Cooling and Filtration (SF), Primary Auxiliary Building Ventilation System (VNPAB), Drumming Area Ventilation System (VNDRM), RE-105 (SFP Low Range Monitor), RE-135 (SFP High Range Monitor), RE-221 (Drumming Area Vent Gas Monitor), RE-325 (Drumming Area Exhaust Low-Range Gas Monitor), PAB Crane, SFP Platform Bridge, Truck Access Area, or Decon Area?
☐	☒	Does the proposed activity involve a change to **Point Beach CLB** design criteria for external events such as earthquakes, tornadoes, high winds, flooding, etc.?
☐	☒	Does the activity involve plant heavy load requirements or procedures for areas of the plant used to support cask loading/unloading activities?
☐	☒	Does the activity involve any potential for fire or explosion where casks are loaded, unloaded, transported or stored?

If ANY of the Part V questions are answered YES, then a full 10 CFR 72.48 screening is required and answers to the questions in Part VI and Part VII are to be provided. If ALL the questions in Part V are answered NO, then check Parts VI and VII as not applicable. Complete Part VIII to document the conclusion that no 10 CFR 72.48 evaluation is required.

PART VI (72.48) - DETERMINE IF THE CHANGE INVOLVES A ISFSI LICENSING BASIS *DESIGN FUNCTION*

(If ALL the questions in Part V are NO, then Part VI is ☐ NOT APPLICABLE.)

Compare the proposed activity to the relevant portions of the ISFSI licensing basis and answer the following questions:

YES	NO	QUESTION
☐	☒	Does the proposed activity involve cask/ISFSI Safety Analyses or plant/cask/ISFSI structures, systems and components (SSCs) credited in the Safety Analyses?
☐	☒	Does the proposed activity involve plant, cask or ISFSI SSCs that support SSC(s) credited in the Safety Analyses?
☐	☒	Does the proposed activity involve plant, cask or ISFSI SSCs whose function is relied upon for prevention of a radioactive release, OR whose failure could impact SSC(s) credited in the Safety Analyses?
☐	☒	Does the proposed activity involve cask/ISFSI described SSCs or procedural controls that perform functions that are required by, or otherwise necessary to comply with, regulations, license conditions, CoC conditions, or orders?
☐	☒	Does the activity involve a *method of evaluation* described in the ISFSI licensing basis?
☐	☒	Is the activity a *test or experiment*? (i.e., a non-passive activity which gathers data)
☐	☒	Does the activity exceed or potentially affect a cask *design basis limit for a fission product barrier (DBLFPB)*? (NOTE: If THIS questions is answered YES, a 10 CFR 72.48 Evaluation is required.)

If the answers to ALL of these questions are NO, mark Parts VII as not applicable, and document the 10 CFR 72.48 screening in the conclusion section (Part VIII).

If any of the above questions are marked YES, identify below the specific design function(s), method of evaluation(s) or DBLFPB(s) involved.

PART VII (72.48) - DETERMINE WHETHER THE ACTIVITY INVOLVES ADVERSE EFFECTS (NEI 96-07, Appendix B, Section B.4.2.1)

(If ALL the questions in Part V or Part VI are answered NO, then Part VII is ☒ NOT APPLICABLE.)

Answer the following questions to determine if the activity has an *adverse effect* on a design function. Any YES answer means that a 10 CFR 72.48 Evaluation is required; EXCEPT where noted in Part VII.3.

VII.1 Changes to the Facility or Procedures

YES	NO	QUESTION
☐	☐	Does the activity adversely affect the *design function* of a plant, cask, or ISFSI SSC credited in safety analyses?
☐	☐	Does the activity adversely affect the method of performing or controlling the *design function* of a plant, cask, or ISFSI SSC credited in the safety analyses?

If any answer is YES, a 10 CFR 72.48 Evaluation is required. If both answers are NO, describe the basis for the conclusion (attach additional discussion, as necessary):

VII.2 Changes to a Method of Evaluation

(If the activity does not involve a method of evaluation, these questions are ☐ NOT APPLICABLE.)

YES	NO	QUESTION
☐	☐	Does the activity use a revised or different method of evaluation for performing safety analyses than that described in a cask SAR?
☐	☐	Does the activity use a revised or different method of evaluation for evaluating SSCs credited in safety analyses than that described in a cask SAR?

If any answer is YES, a 10 CFR 72.48 Evaluation is required. If both answers are NO, describe the basis for the conclusion (attach additional discussion, as necessary):

VII.3 Tests or Experiments

(If the activity is not a test or experiment, the questions in VII.3.a and VII.3.b are ☐ NOT APPLICABLE.)

a. Answer these two questions first:

YES	NO	QUESTION
☐	☐	Is the proposed test or experiment bounded by other tests or experiments that are described in the cask ISFSI licensing basis?
☐	☐	Are the SSCs affected by the proposed test or experiment isolated from the cask(s) or ISFSI facility?

If the answer to both questions is NO, continue to VII.3.b. If the answer to EITHER question is YES, then briefly describe the basis.

b. Answer these additional questions ONLY for tests or experiments which do not meet the criteria given in VII.3.a above. If the answer to either question in VII.3.a is YES, then these three questions are ☐ NOT APPLICABLE:

YES	NO	QUESTION
☐	☐	Does the activity utilize or control an SSC in a manner that is outside the reference bounds of the design bases as described in the ISFSI licensing basis?
☐	☐	Does the activity utilize or control a plant, cask or ISFSI facility SSC in a manner that is inconsistent with the analyses or descriptions in the ISFSI licensing basis?
☐	☐	Does the activity place the cask or ISFSI facility in a condition not previously evaluated or that could affect the capability of a plant, cask, or ISFSI SSC to perform its intended functions?

If any answer in VII.3.b is YES, a 10 CFR 72.48 Evaluation is required. If the answers are all NO, describe the basis for the conclusion (attach additional discussion as necessary):

PART VIII - DOCUMENT THE CONCLUSION OF THE 10 CFR 72.48 SCREENING

Check all that apply:

A 10 CFR 72.48 Evaluation is ☐ required or ☒ **NOT** required. Obtain a screening number and provide the original to Records Management regardless of the conclusion of the 50.59 or 72.48 screening.

A VSC-24 cask Safety Analysis Report change is ☐ required or ☒ **NOT** required. If a VSC-24 cask SAR change is required, then contact the Point Beach Dry Fuel Storage group supervisor.

A Regulatory Commitment (CLB Commitment Database) change is ☐ required or ☒ **NOT** required. If a Regulatory Commitment Change is required, initiate a commitment change per NP 5.1.7.

A change to the VSC-24 10 CFR 72.212 Site Evaluation Report is ☐ required or ☒ **NOT** required. If a VSC-24 10 CFR 72.212 Site Evaluation Report change is required, then contact the Point Beach Dry Fuel Storage group supervisor.

Point Beach Nuclear Plant

10 CFR 50.59/72.48 PRE-SCREENING REVIEW

Brief Activity Title or Description: OI 62A Motor-Driven Auxiliary Feedwater System (P-38A & P-38B)

This form is required to be completed and attached to the applicable activity change forms (i.e., PBF-0026a/c, etc.) to document use of Pre-screening Criterion 3 through 6 for 10 CFR 50.59 / 72.48 review of proposed changes (see NP 5.1.8, 10 CFR 50.59/72.48 Applicability, Screening and Evaluation (New Rule) Section 4.6 and Attachment A.)

Pre-screening Criterion 3 - Activity Covered by Existing 10 CFR 50.59 / 72.48 Screening or Evaluation

Criterion 3 is ☐ Not Applicable to the proposed activity.

Identify the screening or evaluation number(s) (SE for old 50.59/72.48 rule evaluations, EVAL for new rule evaluations):
SCR / SE / EVAL #(s): SPEED # (NP 9.3.3, Rev. 3 or later ONLY):

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 3.

Pre-screening Criterion 4 - Activity Covered by Existing Approved and Valid Plant Procedure

Criterion 4 is ☒ Not Applicable to the proposed activity.

Identify the applicable plant procedure.
Procedure number, revision and title:

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 4.

Pre-screening Criterion 5 – NRC has Reviewed and Approved the Activity.

Criterion 5 is ☒ Not Applicable to the proposed activity.

Identify the NRC Safety Evaluation Report Number and/or Date.
NRC SER(s) # or Date(s):

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 5.

Pre-screening Criterion 6 – Maintenance Activity (NOTE: Dry cask or ISFSI facility maintenance CANNOT use this criterion. A screening is required for dry cask or ISFSI facility maintenance.)

Criterion 6 is ☐ Not Applicable to the proposed activity.

If applicable, briefly summarize the parts of the proposed activity that are covered by Pre-screening Criterion 6.

Revised the required minimum flow requirements to clarify what is required and what is desired.
Per the vendor, 50 GPM is the minimum flow required for 60 hrs continious operation of P-38A or B
It is highly desirable that the flow be maintained greater than 70 GPM. This is to promote long life of the pump.
The recirc flow should be 70-80 GPM, but must be greater than 50.
Also added steps to remove tags if they were previously hung, this is an admin step to remind the operator that if tags were previously hung, they may be removed.
No acceptance criteria for pump operability has been changed, they are detailed in the inservice test for P-38A & B

VERIFY THAT NONE OF THE FOLLOWING CHANGES ARE PRE-SCREENED TO CRITERION 6:	Verified

Point Beach Nuclear Plant

10 CFR 50.59/72.48 PRE-SCREENING REVIEW

No changes to structure, system or component design, performance, acceptance criteria, types of materials, torque values outside of vendor recommended values, etc. (NOTE: Use Criterion 3 for SPEEDs.)	☒
No temporary alterations to support maintenance or modification installation will be in place longer than 90 days. (If there is any doubt whether the temporary alteration will be removed in 90 days, perform a screening.)	☒
No changes in acceptance criteria in technical specification surveillance or post-maintenance test procedures.	☒

10 CFR 50.59/72.48 PRE-SCREENING REVIEW CONCLUSION

Preparer and Reviewer signatures below signify that the portions of the proposed activity as described above are within the scope of Prescreening Criteria 3, 4, 5, or 6 of NP 5.1.8.

EITHER preparer **OR** reviewer shall be 50.59/72.48 screening or evaluation qualified.

Performed By	K Sokol	/ K Sokol	Date 10/30/2002
	Name (Print)	Signature	
Reviewed By	T L VANDERKOOI	/ T L Vanderkooi	Date 10/30/02
	Name (Print)	Signature	

OI 62A

MOTOR-DRIVEN AUXILIARY FEEDWATER SYSTEM (P-38A & P-38B)

DOCUMENT TYPE: Technical

CLASSIFICATION: Safety Related

REVISION: 21

EFFECTIVE DATE: May 21, 2001

REVIEWER: Qualified Reviewer

APPROVAL AUTHORITY: Department Manager

PROCEDURE OWNER (title): Group Head

OWNER GROUP: Operations

Verified Current Copy: _____ _____ _____
Signature Date Time

List pages used for Partial Performance

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Controlling Work Document Numbers

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1.0 PURPOSE

To provide instruction for proper operation of the motor-driven auxiliary feedwater system (P-38 A&B) which includes the following: filling Steam Generators, maintaining Steam Generator water level, adding chemicals to the Steam Generators, filling and venting of the MD AFW pumps, operation of MD AFW pumps in recirculation mode and resetting/overriding the MD AFW low suction pressure trip.

2.0 PREREQUISITES

NONE

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Bearing oil coolers must have service water cooling supplied to run the pump.

3.2 If 1C04 1C 4-8, 1TR2000A or B Temperature Monitor, alarm is received, then check the following:

3.2.1 Check service water flow to bearing oil coolers.

3.2.2 Check for proper oil levels.

3.2.3 Continue monitoring temperatures.

3.2.4 Secure the pump if bearing temperature exceeds 200°F.

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3.3 The condensate storage tanks must contain 13,000 gallons, (Ref. Tank Level Book), of useable water per operating unit and lined up to the auxiliary feed pumps. (TS: 3.7.6).

3.4 Packing on the pumps is **NOT** normally adjusted by Operations personnel. Some stuffing box leakage is required for packing lubrication and cooling. Leakage should be considered excessive when water is being sprayed outside the catch basin.

3.5 Valves within the system are normally red locked in position and will **NOT** normally be repositioned without DSS permission.

3.6 When RCS Temperature is greater than 200°F, then steam generator narrow range level should be maintained above the "J" nozzles (48% - Unit 1, 60% - Unit 2) and near the program level 64%. (Normal Operating Range is 60 - 75%).

3.7 When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 48% on Unit 1 (60% on Unit 2), then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

3.8 Should the Recirc Valve, AF-4007 or AF-4014, NOT open or shut as expected during the performance of this procedure, then the pump should be stopped and declared inoperable.

3.9 **UNIT 1 ONLY**
When RCS Temperature is greater than 200°F and Steam Generator narrow range level is greater than 48%, then auxiliary feedwater addition is limited 400 gpm for feed ring "J Tube" water hammer concerns.

3.10 **UNIT 2 ONLY**
When RCS Temperature is greater than 200°F, then maintain steam generator narrow range levels greater than 47%, to ensure appropriate steam generator downcomer feedwater preheating.

3.11 To avoid lifting the suction relief valve when the pump is secured, reduce discharge flow to less than or equal to 75 gpm and check that the mini-recirc valve has opened before securing the pump.

3.12 The motor-driven auxiliary feedwater pumps are the preferred pumps for feeding the steam generators during normal startup, hot standby and shutdown evolutions when the main feed system is NOT available. The use of the turbine-driven auxiliary feedwater pump should be limited, if possible, to testing and abnormal or emergency situations.

3.13 Normal position for the discharge MOVs is valves shut and control switch in "AUTO".

3.14 Feedwater additions should be performed in such a manner as to minimize the thermal stress cycles on the feedwater nozzle, i.e., continuous feed at a lower flow rate is less severe than batch feeding at a high flow rate.

3.15 To prevent pump motor breaker trip on overload, motor-driven pumps flow rate should NOT exceed 240 gpm.

3.16 For emergency situations, the existing criteria established in the EOPs for assurance of effective auxiliary feedwater flow will continue to be followed. However, for those instances when the unaffected units turbine-driven pump is incapable of automatically delivering flow, a motor-driven pump will be returned to service as soon as possible to the unaffected unit.

3.17 On a loss of instrument air, the back press control valves (AF-4012 and AF-4019) are backed up by nitrogen to provide continued operation for greater than one hour. For extended operation an installed spare nitrogen cylinder must be valved in.

3.18 On line nitrogen cylinders should be changed out when pressure drops below 1850 psig to ensure operational design requirements are met. (Ref. CALC M-09334-266-IA.1)

3.19 AF-4012 and AF-4019, P38A(B) AFP Discharge Control valves SHALL be set to 1200 psi whenever the valves are in AUTO, or declared inoperable.

3.20 The motor driven auxiliary feedwater pump is designed to deliver 200 gpm at 1192 psi with a shutoff head of 1305 psi.

3.21 There is a possibility that discharge MOV control switches can be placed in an "intermediate" position. Whenever the mode of operation (AUTO/MANUAL) is changed, the MOV control switch should be operated in the desired position (OPEN or SHUT), to verify the switch is **NOT** in the intermediate position.

3.22 Loss of DC power to the automatic logic is indicated by the white light near the control switches going out and 1C01A 2-8 (2-10), Auxiliary Feedwater System Disabled, alarm annunciating.

3.23 Motor-Driven Auxiliary Feedwater Pump Discharge MOV Modes of Operation:

- The automatic position (pushed-in) allows the valves to automatically open or shut.
- The manual position (pulled-out) allows operator control of the valves, except that an automatic shut signal shuts the valve.

3.24 1C01A 2-8 (2-10), Auxiliary Feedwater System Disabled alarm annunciates whenever the control switch is in the manual (full pull-out) position. This indicates automatic actuation is restricted.

3.25 To override a Motor-Driven Auxiliary Feedwater Pump Discharge MOV automatic open signal, that valve control switch must be placed in manual (pull-out) and the valve placed in the desired condition. This action also overrides the automatic shut signal to the unaffected unit's valve in the same train.

3.26 The only times the Motor-Driven Auxiliary Feedwater Pump Discharge MOV control switches should be placed in manual (pull-out) are:

3.26.1 When the affected steam generator is faulted or ruptured (tube rupture, steam line break, feed line break), then no feedwater is to be supplied to that steam generator;

3.26.2 During startup, shutdown, or going to or from a drained condition where narrow range steam generator level is expected to be below the lo-lo level setpoint, and RCS temperature is less than 350°F;

3.26.3 Approved special testing;

3.26.4 When absolutely necessary to defeat the automatic shut signal to the other unit's MOV (in the same train);

3.26.5 During concurrent automatic AFWS initiation to both units where it may be expected that one motor driven AFW pump could be selected to supply one Unit 1 SG and the other motor driven AFW pump could be selected to supply one Unit 2 SG. It is the operator's responsibility to direct flow in this situation by placing the MOVs, for those steam generators **NOT** to be fed, in the manual position and closing the valves.

3.27 Addition of auxiliary feedwater may affect RCS pressure and inventory.

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3.28 **IF** at any time, P-38A/B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B **(B-2, B-3)**

3.29 The minimum pump flow requirement is 50 gpm, but it is desirable to maintain 70 gpm to increase pump life.

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3.30 The recirculation flow should be between 70 gpm and 80 gpm based on recirc orifice design.

3.31 After 90 minutes with loss of instrument air, the manual gag on each motor driven AFW pump mini recirc valve must be used to provide minimum recirc flow if continuous flow through the pump cannot be verified.

INITIALS

NOTE: The Initial Conditions do NOT apply to Resetting/Overriding the motor-driven pump low suction pressure trip.

4.0 INITIAL CONDITIONS

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4.1 A minimum or 13,000 gallons of usable water are available in the CSTs per operating unit. (TS: 3.7.6) _____

4.2 The plant service water is available to provide suction to the Auxiliary Feedwater System. (TS: 3.7.5) _____

4.3 The auxiliary feedwater system lined up for critical operation per CL 13E Part 2, Auxiliary Feedwater Valve Lineup Motor-Driven. _____

NOTE: The Feedwater Addition Form should be maintained whenever auxiliary feedwater is added on shutdowns from turbine off-line until RCS temperature is less than 200°F. It should also be maintained on unit startup when RCS temperature is greater than 200°F until the unit is synchronized on-line. The feedwater flow rate is the average rate for each addition.

4.4 Feedwater Addition Log, PBF-2027, is available if required. _____

4.5 The CST water temperature is greater than or equal to 32°F and less than or equal to 110°F. _____

INITIALS

NOTE: **It is NOT necessary to complete all sections of this procedure. Only the applicable section(s) as noted below need to be completed.**

- **Section 5.1, Filling the 1HX-1A, Steam Generator**
- **Section 5.2, Filling the 1HX-1B, Steam Generator**
- **Section 5.3, Maintaining 1HX-1A Steam Generator Level**
- **Section 5.4, Maintaining 1HX-1B Steam Generator Level**
- **Section 5.5, Addition of Chemicals - 1HX-1A S/G, Chem Cart**
- **Section 5.6, Addition of Chemicals - 1HX-1B S/G, Chem Cart**
- **Section 5.7, Addition of Chemicals - 1HX-1A S/G, Chem Add. Tk**
- **Section 5.8, Addition of Chemicals - 1HX-1B S/G, Chem Add. Tk**

NOTE: **This section is written for Unit 1. Steps which are NOT applicable to the evolution in progress should be marked N/A.**

5.0 PROCEDURE - UNIT 1

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 48%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is greater than 48%, then auxiliary feedwater addition is limited 400 gpm for feed ring "J tube" water hammer concerns.

5.1 Filling the 1HX-1A Steam Generator

5.1.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators, to align the applicable AFW control switches per step 5.1.14 if a valid AFW signal occurs for either Unit.

_____

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INITIALS

5.1.2 **IF** at any time, P-38A AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B

5.1.3 **IF** the RCS is greater than 200°F,
THEN document feedwater addition on PBF-2027, Feedwater Addition Log.

5.1.4 Align the SG to receive water.

- Open AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator.
- Verify vent path available for the SG to be filled.
- Update CL 1E, if desired.

5.1.5 Verify AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator, is shut.

5.1.6 Place PC-4012, P-38A AFP Discharge Control valve controller in MANUAL and SHUT.

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5.1.7 Station an operator locally to monitor the recirc flow during startup operation.

5.1.8 Start P38A, Motor Driven Aux Feed Pump. (C01).

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NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

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5.1.9 IMMEDIATELY CHECK the following:

a. AF-4007, P-38A AFP Mini Recirc Control valve OPENS. (Reference P&L 3.8)

b. Recirc flow greater than 50 gpm.

INITIALS

CAUTION

Do NOT exceed 200 gpm per steam generator.

5.1.10 Adjust PC-4012, P-38A AFP Discharge Control valve controller in MANUAL to obtain the desired fill rate. _____

5.1.11 Monitor P-38A, Motor Driven Aux Feed Pump for proper operation:

- FI-4007, P-38A AFP Discharge Flow Indicator. _____
- PI-4012, P-38A AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 25, P-38A Inboard Pump Bearing. _____
- Point 26, P-38A Outboard Pump Bearing. _____

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5.1.12 IF chemical addition is required,
THEN go to Section 5.5 or Section 5.7. (Mark this step N/A if chemicals are NOT added.) _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

5.1.13 WHEN filling operation is complete;
THEN perform the following:

a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4007, P-38A AFP Discharge Flow Indicator. _____

c. Check that AF-4007, P-38A AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38A, Motor Driven Aux Feed Pump. (C01) _____

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INITIALS

CAUTION

AF-4012, P38A AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

5.1.14 Align the AFW control switches as follows:

a. Place PC-4012, P-38A AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____ IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ IV
- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ IV

c. Per DSS for unit less than 350°F. (May be N/A'd if greater than or equal to 350°F)

- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ IV
- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____

TCN 2002-0766

5.1.15 Release the Level 3 Dedicated Operator assigned in step 5.1.1 and/or 5.1.2 _____

5.1.16 Isolate the vent path opened in step 5.1.4. _____

5.1.17 Update CL 1E, if desired. _____

INITIALS

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5.1.18 IF Caution Tags were installed on the following control switches per OI 124, Draining Steam Generators:

- P-28A
- P-28B
- MS-2019
- MS-2020

AND level in BOTH S/G's is greater than 25%,
THEN remove the Caution Tags. _____

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 48%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is greater than 48%, then auxiliary feedwater addition is limited 400 gpm for feed ring "J tube" water hammer concerns.

5.2 Filling the 1HX-1B Steam Generator

5.2.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the applicable AFW control switches per step 5.2.14 if a valid AFW signal occurs for either Unit. _____

TCN 2002-0766

5.2.2 IF at any time, P-38B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

INITIALS

5.2.3 IF the RCS is greater than 200°F,
THEN document feedwater addition on PBF-2027, Feedwater Addition Log. _____

5.2.4 Align the SG to receive water.

- Open AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____
- Verify vent path available for the SG(s) to be filled. _____
- Update CL 1E, if desired. _____

5.2.5 Verify AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator, is shut. _____

5.2.6 Place PC-4019, P-38B AFP Discharge Control valve controller in MANUAL and SHUT. _____

5.2.7 Station an operator locally to monitor the recirc flow during startup operation. _____

5.2.8 Start P38B, Motor Driven Aux Feed Pump. (C01). _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

5.2.9 IMMEDIATELY CHECK the following:

a. AF-4014, P-38B AFP Mini Recirc Control valve OPENS. (Reference P&L 3.8) _____

b. Recirc flow greater than 50 gpm. _____

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CAUTION

Do NOT exceed 200 gpm per steam generator.

5.2.10 Adjust PC-4019, P-38B AFP Discharge Control valve controller in MANUAL to obtain the desired fill rate. _____

INITIALS

5.2.11 Monitor P-38B for proper operation:

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- FI-4014, P-38B AFP Discharge Flow Indicator. _____
- PI-4019, P-38B AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 27, P-38B Inboard Pump Bearing. _____
- Point 28, P-38B Outboard Pump Bearing. _____

5.2.12 IF chemical addition is required,
THEN go to Section 5.6 or Section 5.8. (Mark this step N/A if chemicals are NOT added.) _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

TCN 2002-0868

5.2.13 WHEN filling operation is complete;
THEN perform the following:

a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4014, P-38B AFP Discharge Flow Indicator. _____

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c. Check that AF-4014, P-38B AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38B, Motor Driven Aux Feed Pump. (C01) _____

INITIALS

CAUTION

AF-4019, P38B AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

5.2.14 Align the AFW control switches as follows:

a. Place PC-4019, P-38B AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____ _____ IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____ _____ IV
- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____ _____ IV

c. Per DSS for unit less than 350°F (May be N/A'd if greater than or equal to 350°F.

- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____ _____ IV
- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____ _____ IV

INITIALS

TCN 2002-0766

5.2.15 Release the Level 3 Dedicated Operator assigned in step 5.2.1 and/or 5.2.2 _____

5.2.16 Isolate the vent path opened in step 5.2.4. _____

5.2.17 Update CL 1E, if desired. _____

TCN 2002-0868

5.2.18 **IF** Caution Tags were installed on the following control switches per OI 124, Draining Steam Generators:

- P-28A
- P-28B
- MS-2019
- MS-2020

AND level in BOTH S/G's is greater than 25%,
THEN remove the Caution Tags. _____

INITIALS

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 48%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is greater than 48%, then auxiliary feedwater addition is limited 400 gpm for feed ring "J tube" water hammer concerns.

CAUTION

When Auxiliary Feedwater is less than or equal to 75 gpm for each steam generator after mini-recirc is shut, then the steam generators should be fed one at a time for equal periods of time (or as required by Chemistry) in order to minimize recirc piping vibration.

5.3 Maintaining 1HX-1A Steam Generator Level

5.3.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators, to align the applicable AFW control switches per step 5.3.14 if a valid AFW signal occurs for either Unit. _____

5.3.2 IF at any time, P-38A AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

TCN 2002-0766

INITIALS

5.3.3 IF the RCS is greater than 200°F, THEN document feedwater addition on PBF-2027, Feedwater Addition Log. _____

5.3.4 OPEN AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____

5.3.5 Verify AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator, is SHUT. _____

5.3.6 Place PC-4012, P-38A AFP Discharge Control pressure control valve in MANUAL and SHUT. _____

5.3.7 Station an operator locally to monitor the recirc flow during startup operation. _____

5.3.8 Start P38A, Motor Driven Aux Feed Pump. (C01). _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

5.3.9 IMMEDIATELY CHECK the following:

a. AF-4007, P-38A AFP Mini Recirc Control valve OPENS. (Reference P&L 3.8) _____

b. Recirc flow greater than 50 gpm. _____

TCN 2002-0868

CAUTION

Do NOT exceed 200 GPM per steam generator.

CAUTION

Do NOT exceed 100 gpm per steam generator if level is less than 20%.

5.3.10 Adjust PC-4012, P-38A AFP Discharge Control valve controller in MANUAL for the proper flow rate. _____

INITIALS

5.3.11 Monitor P-38A, Motor Driven Aux Feed Pump for proper operation.

- FI-4007, P-38A AFP Discharge Flow Indicator. _____
- PI-4012, P-38A AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 25, P-38A Inboard Pump Bearing. _____
- Point 26, P-38A Outboard Pump Bearing. _____

TCN 2002-0868

5.3.12 IF chemical addition is required,
THEN go to Section 5.5 or Section 5.7. (Mark this step N/A if chemicals are NOT added.) _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

TCN 2002-0868

5.3.13 WHEN the pump is no longer required,
THEN perform the following:

a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4007, P-38A AFP Discharge Flow Indicator. _____

c. Check that AF-4007, P-38A AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38A, Motor Driven Aux Feed Pump. (C01) _____

INITIALS

CAUTION

AF-4012, P38A AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

NOTE: It is desirable to place both units discharge MOVs in AUTO if conditions allow.

5.3.14 Align the AFW control switches as follows:

a. Place PC-4012, P-38A AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____ _____ IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ _____ IV
- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ _____ IV

c. Per DSS for unit less than 350°F. (May be N/A'd if greater than or equal to 350°F)

- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ _____ IV
- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ _____

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5.3.15 Release the Level 3 Dedicated Operator assigned in step 5.3.1 and/or 5.3.2 _____

INITIALS

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 48%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is greater than 48%, then auxiliary feedwater addition is limited 400 gpm for feed ring "J tube" water hammer concerns.

CAUTION

When Auxiliary Feedwater is less than or equal to 75 gpm for each steam generator after mini-recirc is shut, then the steam generators should be fed one at a time for equal periods of time (or as required by Chemistry) in order to minimize recirc piping vibration.

5.4 Maintaining 1HX-1B Steam Generator Level

5.4.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the applicable AFW control switches per step 5.4.14 if a valid AFW signal occurs for either Unit. _____

5.4.2 IF at any time, P-38B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

TCN 2002-0766

INITIALS

5.4.3 IF the RCS is greater than 200°F,
THEN document feedwater addition on PBF-2027, Feedwater Addition Log. _____

5.4.4 Open AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____

5.4.5 Verify AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator, is shut. _____

5.4.6 Place PC-4019, P-38B AFP Discharge Control valve controller in MANUAL and SHUT. _____

5.4.7 Station an operator locally to monitor the recirc flow during startup operation. _____

5.4.8 Start P-38B, Motor Driven Aux Feed Pump. (C01). _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

5.4.9 IMMEDIATELY CHECK the following:

a. AF-4014, P-38B, AFP Mini Recirc Control valve OPENS. (Reference P&L 3.8) _____

b. Recirc flow greater than 50 gpm. _____

TCN 2002-0868

INITIALS

CAUTION

Do NOT exceed 200 GPM per steam generator.

CAUTION

Do NOT exceed 100 gpm per steam generator if level is less than 20%.

5.4.10 Adjust PC-4019, P-38B AFP Discharge Control pressure controller in MANUAL for the proper flow rate. _____

5.4.11 Monitor P-38B AFP for proper operation.

- FI-4014, P-38B AFP Discharge Flow Indicator. _____
- PI-4019, P-38B AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 27, P-38B Inboard Pump Bearing. _____
- Point 28, P-38B Outboard Pump Bearing. _____

TCN 2002-0868

5.4.12 IF chemical addition is required,
THEN go to Section 5.6 or Section 5.8. (Mark this step N/A if chemicals are NOT added.) _____

INITIALS

TCN 2002-0868

NOTE: **If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.**

5.4.13 WHEN the pump is no longer required,
THEN perform the following:

a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4014, P-38B AFP Discharge Flow Indicator. _____

c. Check that AF-4014, P-38B AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38B, Motor Driven Aux Feed Pump. (C01) _____

CAUTION

AF-4019, P38B AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

NOTE: **It is desirable to place both units discharge MOVs in AUTO if conditions allow.**

5.4.14 Align the AFW control switches as follows:

a. Place PC-4019, P-38B AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____
IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____
IV

INITIALS

- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____

_____
IV

c. Per DSS for unit less than 350°F (May be N/A'd if greater than or equal to 350°F.

- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____

_____
IV

- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____

_____
IV

TCN 2002-0170

5.4.15 Release the Level 3 Dedicated Operator assigned in step 5.4.1 and/or 5.4.2 _____

INITIALS

5.5 Addition of Chemicals to the 1HX-1A Steam Generator - Cart Method

5.5.1 **IF** the P-38A pump is **NOT** operating,
THEN start the pump in accordance with Section 5.1 or Section 5.3, as appropriate. _____

NOTE: Injection of chemicals will be through AF-38, P-38A AFP Suction Drain through P-38A pump.

5.5.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 5.5.35 if a valid AFW signal occurs on either Unit. _____

TCN 2002-0766

5.5.3 **IF** at any time, P-38A AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

5.5.4 The 1HX-1B Steam Generator is **NOT** having any chemical additions. _____

5.5.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 5.5,
THEN perform step 5.5.35. _____

5.5.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

5.5.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System. _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

INITIALS

CAUTION

All chemicals will be handled in accordance with the CHES program.

5.5.8 IF NOT already performed,
THEN have Chemistry Group fill the Chemical Cart T-199, Steam Generator Chemical Addition Tank with the chemicals to be added to the 1HX-1A Steam Generator. _____

5.5.9 Ensure the chemical transfer hose supplied with the cart is connected to AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.5.10 Fill the chemical transfer hose with DI water AND plug the hose with the supplied dust plug. _____

NOTE: Cart has to be secured by blocking wheels or chaining in-order to meet seismic event requirements.

5.5.11 Uncap AF-38, P-38A AFW pump suction drain AND install AF-38B, Steam Generator Chemical Injection Check, on the piping downstream of AF-38, P-38A AFP Suction Drain. _____

5.5.12 Remove dust plug from chemical transfer hose and connect to AF-38B with the quick disconnect. _____

a. Ensure the Control Switch for P-271 is in the OFF position and plug in receptacle. _____

b. Request AFW flow be adjusted to ensure AF-4007, P-38A AFP Mini-recirc Control Valve is shut. _____

5.5.13 Open AF-38, P-38A AFP Suction Drain AND ensure no leaks from any fitting. _____

5.5.14 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.5.15 Place P-271, Steam Generator Chemical Addition Pump, Control Switch to ON. _____

INITIALS

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

5.5.16 WHEN T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

5.5.17 Shut AF-38, P-38A AFP Suction Drain. _____

5.5.18 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.5.19 WHEN chemical addition is complete
THEN connect AF-38C, Steam Generator Chemical Addition Tank Fill to AF-81 with the 1/2 inch tygon hose and hose clamps supplied with the cart. _____

5.5.20 Open AF-38C, Steam Generator Chemical Addition Tank Fill. _____

5.5.21 Open AF-81, T-47A Chem Add Tank Inlet. _____

5.5.22 WHEN the tank is full with about 60 gallons of DI water
THEN shut AF-81, T-47A Chem Add Tank Inlet. _____

5.5.23 Shut AF-38C, Steam Generator Chemical Addition Tank Fill. _____

5.5.24 Open AF-38, P-38A AFP Suction Drain AND ensure no leaks from any fitting. _____

5.5.25 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.5.26 Turn on P-271, Steam Generator Chemical Addition Pump. _____

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

5.5.27 WHEN T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

5.5.28 Shut AF-38, P-38A AFP Suction Drain. _____

INITIALS

5.5.29 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

NOTE: Water left in the hose should be collected in a bucket and returned back to the Chemical Addition Tank.

5.5.30 Disconnect hose between AF-38, P-38A AFP Suction Drain and AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.5.31 Remove AF-38B, Steam Generator Chemical Injection Check from the piping downstream of AF-38. _____

5.5.32 Install cap at AF-38, P-38A AFP suction drain. _____

5.5.33 Disconnect the 1/2 inch tygon tubing from AF-81, T-47A Chem Add Tank Inlet. _____

TCN 2002-0744

5.5.34 Release the Level 3 Dedicated Operator assigned in step 5.5.2 and/or 5.5.3 _____

5.5.35 **IF** a valid AFW actuation signal has occurred on either Unit during the performance of section 5.5
THEN ensure the following: (otherwise N/A)

a. Place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF **AND** unplug. _____

b. Shut AF-38, P-38A AFP Suction Drain. _____

c. Notify Shift Supervision of the following:

- Status of the T-199, Steam Generator Chemical Addition Tank. _____
- Status of the Chemicals. _____
- Resolve with Chemistry further actions to be taken. _____

INITIALS

5.5.36 **WHEN** the pump is no longer required,
THEN perform one of the following: (Mark the step **NOT** used N/A.)

a. Continue with Section 5.1, Filling the 1HX-1A Steam Generator, starting with Step 5.1.13. _____

b. Continue with Section 5.3, Maintaining the 1HX-1A Steam Generator Level, starting with Step 5.3.13. _____

INITIALS

5.6 Addition of Chemicals to the 1HX-1B Steam Generator - Cart Method

5.6.1 **IF** the P-38B pump is **NOT** operating,
THEN start the pump in accordance with Section 5.2 or Section 5.4, as appropriate. _____

NOTE: Injection of chemicals will be through AF-51, P-38B AFP Suction Drain through P-38B pump.

5.6.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 5.6.35 if a valid AFW signal occurs on either Unit. _____

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5.6.3 **IF** at any time, P-38A/B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

5.6.4 The 1HX-1A Steam Generator is **NOT** having any chemical additions. _____

5.6.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 5.6,
THEN perform step 5.6.35. _____

5.6.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

5.6.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System.

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

INITIALS

CAUTION

All chemicals will be handled in accordance with the CHES program.

5.6.8 **IF NOT** already performed,
THEN have Chemistry Group fill the Chemical Cart T-199, Steam Generator Chemical Addition Tank with the chemicals to be added to the 1HX-1B Steam Generator. _____

5.6.9 Ensure the chemical transfer hose supplied with the cart is connected to AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.6.10 Fill the chemical transfer hose with DI water **AND** plug the hose with the supplied dust plug. _____

NOTE: Cart has to be secured by blocking wheels or chaining in-order to meet seismic event requirements.

5.6.11 Uncap AF-51, P-38B AFW pump suction drain **AND** install AF-38B, Steam Generator Chemical Injection Check, on the piping downstream of AF-51, P-38B AFP Suction Drain. _____

5.6.12 Remove dust plug from chemical transfer hose and connect to AF-38B with the quick disconnect. _____

a. Ensure the Control Switch for P-271 is in the OFF position and plug in receptacle. _____

b. Request AFW flow be adjusted to ensure AF-4014, P-38B AFP Mini-recirc Control Valve is shut. _____

5.6.13 Open AF-51, P-38B AFP Suction Drain **AND** ensure no leaks from any fitting. _____

5.6.14 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.6.15 Place P-271, Steam Generator Chemical Addition Pump, Control Switch to ON. _____

INITIALS

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

5.6.16 WHEN T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

5.6.17 Shut AF-51, P-38B AFP Suction Drain.

5.6.18 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.6.19 WHEN chemical addition is complete
THEN connect AF-38C, Steam Generator Chemical Addition Tank Fill to AF-72 with the 1/2 inch tygon hose and hose clamps supplied with the cart. _____

5.6.20 Open AF-38C, Steam Generator Chemical Addition Tank Fill. _____

5.6.21 Open AF-72, T-47B Chem Add Tank Inlet. _____

5.6.22 WHEN the tank is full with about 60 gallons of DI water
THEN shut AF-72, T-47B Chem Add Tank Inlet. _____

5.6.23 Shut AF-38C, Steam Generator Chemical Addition Tank Fill. _____

5.6.24 Open AF-51, P-38B AFP Suction Drain AND ensure no leaks from any fitting. _____

5.6.25 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.6.26 Turn on P-271, Steam Generator Chemical Addition Pump. _____

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

5.6.27 WHEN T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

5.6.28 Shut AF-51, P-38B AFP Suction Drain. _____

INITIALS

5.6.29 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

NOTE: Water left in the hose should be collected in a bucket and returned back to the Chemical Addition Tank.

5.6.30 Disconnect hose between AF-51, P-38B AFP Suction Drain and AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

5.6.31 Remove AF-38B, Steam Generator Injection Check from piping downstream of AF-51. _____

5.6.32 Install cap at AF-51, P-38B AFP suction drain. _____

5.6.33 Disconnect the 1/2 inch tygon tubing from AF-72, T-47B Chem Add Tank Inlet. _____

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5.6.34 Release the Level 3 Dedicated Operator assigned in step 5.6.2 and/or 5.6.3 _____

5.6.35 IF a valid AFW actuation signal has occurred on either Unit during the performance of section 5.6
THEN ensure the following: (otherwise N/A)

a. Place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF AND unplug. _____

b. Shut AF-51, P-38B AFP Suction Drain. _____

c. Perform the following:

- Notify Shift Supervision of the following:
  - Status of the T-199, Steam Generator Chemical Addition Tank. _____
  - Status of the Chemicals. _____
- Resolve with Chemistry further actions to be taken. _____

INITIALS

5.6.36 **WHEN** the pump is no longer required,
THEN perform one of the following: (Mark the step **NOT** used N/A.)

a. Continue with Section 5.2, Filling the 1HX-1B Steam Generator, starting with Step 5.2.13. _____

b. Continue with Section 5.4, Maintaining the 1HX-1B Steam Generator Level, starting with Step 5.4.13. _____

CAUTION

Notification of Security prior to the addition of any chemical to the Auxiliary Feedwater System is necessary to eliminate personnel exposure to chemical fumes. (B-1)

5.7 Addition of Chemicals to the 1HX-1A S/G using Chemical Addition Tank

5.7.1 **IF** the P-38A pump is **NOT** operating,
THEN start the pump in accordance with Section 5.1 or Section 5.3, as appropriate. _____

5.7.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 5.7.19 if a valid AFW signal occurs on either Unit. _____

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5.7.3 **IF** at any time, P-38A AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

5.7.4 The 1HX-1B Steam Generator is **NOT** having any chemical additions. _____

5.7.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 5.7
THEN perform step 5.7.19. _____

INITIALS

5.7.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

5.7.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System.

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

CAUTION

All chemicals will be handled in accordance with the CHES program.

CAUTION

If more than one chemical is to be added, then each chemical should be added to the SG separately or mixed as directed by chemistry.

5.7.8 Verify OPEN AF-82A, T-47A Chem Add Tank Vent. _____

5.7.9 Open AF-85, T-47A Chem Add Tank Drain. _____

5.7.10 WHEN the tank is drained,
THEN perform the following:

a. Shut AF-85, T-47A Chem Add Tank Drain. _____

b. Open AF-82, T-47A Chem Add Tank Inlet. _____

INITIALS

5.7.11 Add chemicals to the tank and top off with DI water using AF-81, T-47A Chem Add Tank Inlet valve, as necessary to ensure no air is injected with the chemicals. _____

5.7.12 Shut the fill valve and vent valve.

- AF-82, T-47A Chem Add Tank Inlet. _____
- AF-82A, T-47A Chem Add Tank Vent. _____

5.7.13 Open T-47A, Chem Add Tank, outlet valves to route the chemicals to 1HX-1A steam generator.

- U1 HX-1A -
  - 1AF-86, T-47A Chem Add Tank Out to HX-1A SG 1st Off Isol. _____
  - 1AF-87, T-47A Chem Add Tank Out to HX-1A SG 2nd Off Isol. _____
  - AF-85A, T-47A Chem Add Tank Outlet. _____

5.7.14 Open the tank inlet/flush valves of the Chemical Addition tank.

- AF-83, T-47A Chem Add Tank High Pressure Inlet. _____
- AF-84, T-47A Chem Add Tank High Pressure Inlet. _____

a. Shut AF Pump Discharge MOV(s), if open, **AND** allow all flow to bypass through the chemical addition tank for a minimum of five (5) minutes. _____

b. After a minimum of five (5) minutes, **THEN** open AF pump discharge MOV. _____

INITIALS

5.7.15 Isolate the tank by shutting inlet/flush valves and outlet valves.

- U1 HX-1A -
  - AF-83, T-47A Chem Add Tank High Pressure Inlet. _____
  - AF-84, T-47A Chem Add Tank High Pressure Inlet. _____
  - 1AF-86, T-47A Chem Add Tank Out to HX-1A SG 1st Off Isol. _____
  - 1AF-87, T-47A Chem Add Tank Out to HX-1A SG 2nd Off Isol. _____
  - AF-85A, T-47A Chem Add Tank Outlet. _____

5.7.16 Repeat Steps 5.7.8 through 5.7.15 as necessary to add the desired amount of chemicals. Use Attachment A to record multiple step performance. _____

5.7.17 When all chemical additions are complete, slowly open the tank vent valve, and leave the tank full of DI water to prevent corrosion/deposit buildup in tank.

- AF-82A, T-47A Chem Add Tank Vent. _____

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5.7.18 Release the Level 3 Dedicated Operator assigned in step 5.7.2 and/or 5.7.3. _____

INITIALS

5.7.19 IF a valid AFW actuation signal has occurred on either Unit during the performance of section 5.7
THEN ensure the following: (otherwise N/A)

1. The Chem Add Tank is isolated by shut inlet/flush valves and outlet valves.

   - U1 HX-1A -

     - AF-83, T-47A Chem Add Tank High Pressure Inlet. _____
     - AF-84, T-47A Chem Add Tank High Pressure Inlet. _____
     - 1AF-86, T-47A Chem Add Tank Out to HX-1A SG 1st Off Isol. _____
     - 1AF-87, T-47A Chem Add Tank Out to HX-1A SG 2nd Off Isol. _____
     - AF-85A, T-47A Chem Add Tank Outlet. _____

2. Perform the following:

   - Notify Shift Supervision of the following:

     - Status of the Chem Add Tank, T-47A. _____
     - Status of the Chemicals. _____

   - Resolve with Chemistry further actions to be taken. _____

5.7.20 WHEN the pump is no longer required,
THEN perform one of the following: (Mark the step NOT used N/A.)

a. Continue with Section 5.1, Filling the 1HX-1A Steam Generator, starting with Step 5.1.13. _____

b. Continue with Section 5.3, Maintaining 1HX-1A Steam Generator Level, starting with Step 5.3.13. _____

INITIALS

CAUTION

Notification of Security prior to the addition of any chemical to the Auxiliary Feedwater System is necessary to eliminate personnel exposure to chemical fumes. (B-1)

5.8 Addition of Chemicals to the 1HX-1B S/G using Chemical Addition Tank

5.8.1 **IF** the P-38B pump is **NOT** operating,
THEN start the pump in accordance with Section 5.2 or Section 5.4, as appropriate. _____

5.8.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 5.8.19 if a valid AFW signal occurs on either Unit. _____

TCN 2002-0766

5.8.3 **IF** at any time, P-38B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

5.8.4 The 1HX-1A Steam Generator is **NOT** having any chemical additions. _____

5.8.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 5.8
THEN perform step 5.8.19. _____

5.8.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

INITIALS

5.8.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System.

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

CAUTION

All chemicals will be handled in accordance with the CHES program.

CAUTION

If more than one chemical is to be added, then each chemical should be added to the SG separately or mixed as directed by chemistry.

5.8.8 Verify OPEN AF-73A, T-47B Chem Add Tank Vent. _____

5.8.9 Open AF-76, T-47B Chem Add Tank Drain. _____

5.8.10 WHEN the tank is drained,
THEN perform the following:

a. Shut AF-76, T-47B Chem Add Tank Drain. _____

b. Open AF-73, T-47B Chem Add Tank Inlet. _____

5.8.11 Add chemicals to the tank and top off with DI water using AF-72, T-47B Chem Add Tank Inlet, as necessary to ensure no air is injected with the chemicals. _____

INITIALS

5.8.12 Shut the fill valve and vent valve.

- AF-73, T-47B Chem Add Tank Inlet. _____
- AF-73A, T-47B Chem Add Tank Vent. _____

5.8.13 Open T-47B, Chem Add Tank outlet valves to route the chemicals to 1HX-1B steam generator.

- U1 HX-1B -
  - 1AF-77, T-47B Chem Add Tank Out to HX-1B SG 1st Off Isol. _____
  - 1AF-78, T-47B Chem Add Tank Out to HX-1B SG 2nd Off Isol. _____
  - AF-76A, T-47B Chem Add Tank Outlet. _____

5.8.14 Open the tank inlet/flush valves of the Chemical Addition tank.

- AF-74, T-47B Chem Add Tank High Pressure Inlet. _____
- AF-75, T-47B Chem Add Tank High Pressure Inlet. _____

a. Shut AF Pump Discharge MOV(s), if open, **AND** allow all flow to bypass through the chemical addition tank for a minimum of five (5) minutes. _____

b. After a minimum of five (5) minutes, **THEN** open AF pump discharge MOV. _____

INITIALS

5.8.15 Isolate the tank by shutting inlet/flush valves and outlet valves.

- U1 HX-1B -
  - AF-74, T-47B Chem Add Tank High Pressure Inlet. _____
  - AF-75, T-47B Chem Add Tank High Pressure Inlet. _____
  - 1AF-77, T-47B Chem Add Tank Out to HX-1B SG 1st Off Isol. _____
  - 1AF-78, T-47B Chem Add Tank Out to HX-1B SG 2nd Off Isol. _____
  - AF-76A, T-47B Chem Add Tank Outlet. _____

5.8.16 Repeat Steps 5.8.8 through 5.8.15 as necessary to add the desired amount of chemicals. Use Attachment A to record multiple step performance. _____

5.8.17 When all chemical additions are complete, slowly open AF-73A, T-47B Chem Add Tank Vent and leave the tank full of DI water to prevent corrosion/deposit buildup in tank. _____

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5.8.18 Release the Level 3 Dedicated Operator assigned in step 5.8.2 and/or 5.8.3. _____

INITIALS

5.8.19 IF a valid AFW actuation signal occurs on either Unit during the performance of section 5.8
THEN ensure the following: (otherwise N/A)

a. The Chem Add Tank is isolated by shut inlet/flush valves and outlet valves.

- U1 HX-1B -

(a) AF-74, T-47B Chem Add Tank High Pressure Inlet. _____

(b) AF-75, T-47B Chem Add Tank High Pressure Inlet. _____

(c) 1AF-77, T-47B Chem Add Tank Out to HX-1B SG 1st Off Isol. _____

(d) 1AF-78, T-47B Chem Add Tank Out to HX-1B SG 2nd Off Isol. _____

(e) AF-76A, T-47B Chem Add Tank Outlet. _____

b. Perform the following:

- Notify Shift Supervision of the following:

(a) Status of the Chem Add Tank, T-47B. _____

(b) Status of the Chemicals. _____

(c) Resolve with Chemistry further actions to be taken. _____

5.8.20 WHEN the pump is no longer required,
THEN perform one of the following: (Mark the step NOT used N/A.)

a. Continue with Section 5.2, Filling the 1HX-1B Steam Generator, starting with Step 5.2.13. _____

b. Continue with Section 5.4, Maintaining the 1HX-1BSteam Generator Level, starting with Step 5.4.13. _____

INITIALS

NOTE: **It is NOT necessary to complete all sections of this procedure. Only the applicable section(s) as noted below need to be completed.**

- **Section 6.1, Filling the 2HX-1A Steam Generator**
- **Section 6.2, Filling the 2HX-1B Steam Generators**
- **Section 6.3, Maintaining 2HX-1A Steam Generator Level**
- **Section 6.4, Maintaining 2HX-1B Steam Generator Level**
- **Section 6.5, Addition of Chemicals - 2HX-1A S/G, Chem Cart**
- **Section 6.6, Addition of Chemicals - 2HX-1B S/G, Chem Cart**
- **Section 6.7, Addition of Chemicals - 2HX-1A S/G, Chem Add. Tk**
- **Section 6.8, Addition of Chemicals - 2HX-1B S/G, Chem Add. Tk**

NOTE: **This section is written for Unit 2. Steps which are NOT applicable to the evolution in progress should be marked N/A.**

6.0 PROCEDURE - UNIT 2

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 60%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F, then maintain Steam Generator narrow range levels greater than 47%, to ensure appropriate steam generator downcomer feedwater preheating.

6.1 Filling the 2HX-1A Steam Generator

6.1.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators, to align the applicable AFW control switches per step 6.1.14 if a valid AFW signal occurs for either Unit.

INITIALS

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6.1.2 IF at any time, P-38A/B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B

6.1.3 IF the RCS is greater than 200°F,
THEN document feedwater addition on PBF-2027, Feedwater Addition Log.

6.1.4 Align the SG to receive water.

- Open AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator.
- Verify vent path available for the SG(s) to be filled.
- Update CL 1E, if desired.

6.1.5 Verify AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator, is shut.

6.1.6 Place PC-4012, P-38A AFP Discharge Control valve controller in MANUAL and SHUT.

6.1.7 Station an operator locally to monitor the recirc flow during startup operation.

6.1.8 Start P38A, Motor Driven Aux Feed Pump. (C01).

TCN 2002-0868

NOTE: **If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.**

6.1.9 IMMEDIATELY CHECK the following:

a. AF-4007, P-38A AFP Mini Recirc Control valve OPENS.
(Reference P&L 3.8)

b. Recirc flow greater than 50 gpm.

INITIALS

CAUTION

Do NOT exceed 200 GPM per steam generator.

6.1.10 Adjust PC-4012, P-38A AFP Discharge Control valve controller in MANUAL to obtain the desired fill rate. _____

6.1.11 Monitor P-38A, Motor Driven Aux Feed Pump for proper operation:

- FI-4007, P-38A AFP Discharge Flow Indicator. _____
- PI-4012, P-38A AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 25, P-38A Inboard Pump Bearing. _____
- Point 26, P-38A Outboard Pump Bearing. _____

TCN 2002-0868

6.1.12 IF chemical addition is required,
THEN go to Section 6.5 or Section 6.7. (Mark this step N/A if chemicals are NOT added.) _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

TCN 2002-0868

6.1.13 WHEN filling operation is complete;
THEN perform the following:

a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4007, P-38A AFP Discharge Flow Indicator. _____

c. Check that AF-4007, P-38A AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38A, Motor Driven Aux Feed Pump. (C01) _____

INITIALS

CAUTION

AF-4012, P38A AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

6.1.14 Align the AFW control switches as follows:

a. Place PC-4012, P-38A AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____ IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ IV
- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ IV

c. Per DSS for unit less than 350°F. (May be N/A'd if greater than or equal to 350°F)

- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ IV
- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ IV

INITIALS

TCN 2002-0766

6.1.15 Release the Level 3 Dedicated Operator assigned in step 6.1.1 and/or 6.1.2 _____

6.1.16 Isolate the vent path opened in step 6.1.4. _____

6.1.17 Update CL 1E, if desired. _____

TCN 2002-0868

6.1.18 **IF** Caution Tags were installed on the following control switches per OI 124, Draining Steam Generators:

- P-28A
- P-28B
- MS-2019
- MS-2020

AND level in BOTH S/G 's is greater than 25%,
THEN remove the Caution Tags. _____

INITIALS

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 60%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F, then maintain Steam Generator narrow range levels greater than 47%, to ensure appropriate steam generator downcomer feedwater preheating.

6.2 Filling the 2HX-1B Steam Generator

6.2.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the applicable AFW control switches per step 6.2.14 if a valid AFW signal occurs for either Unit. _____

TCN 2002-0766

6.2.2 **IF** at any time, P-38B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

6.2.3 **IF** the RCS is greater than 200°F,
THEN document feedwater addition on PBF-2027, Feedwater Addition Log. _____

INITIALS

6.2.4 Align the SG to receive water.

- Open AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____
- Verify vent path available for the SG to be filled. _____
- Update CL 1E, if desired. _____

6.2.5 Verify AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator, SG is shut. _____

6.2.6 Place PC-4019, P-38B AFP Discharge Control valve controller in MANUAL and SHUT. _____

6.2.7 Station an operator locally to monitor the recirc flow during startup operation. _____

6.2.8 Start P38B, Motor Driven Aux Feed Pump. (C01). _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

6.2.9 IMMEDIATELY CHECK the following:

a. AF-4014, P-38B AFP Mini Recirc Control valve OPENS. (Reference P&L 3.8) _____

b. Recirc flow greater than 50 gpm. _____

TCN 2002-0818

CAUTION

Do NOT exceed 200 GPM per steam generator.

6.2.10 Adjust PC-4019, P-38B AFP Discharge Control valve controller in MANUAL to obtain the desired fill rate. _____

INITIALS

6.2.11 Monitor the pump for proper operation:

- FI-4014, P-38B AFP Discharge Flow Indicator. _____
- PI-4019, P-38B AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 27, P-38B Inboard Pump Bearing. _____
- Point 28, P-38B Outboard Pump Bearing. _____

TCN 2002-0868

6.2.12 IF chemical addition is required,
THEN go to Section 6.6 or Section 6.8. (Mark this step N/A if chemicals are NOT added.) _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

6.2.13 WHEN filling operation is complete;
THEN perform the following:

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a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4014, P-38B AFP Discharge Flow Indicator. _____

c. Check that AF-4014, P-38B AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38B, Motor Driven Aux Feed Pump (C01) _____

INITIALS

CAUTION

AF-4019, P38B AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

6.2.14 Align the AFW control switches as follows:

a. Place PC-4019, P-38B AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____ IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____ IV
- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____ IV

c. Per DSS for unit less than 350°F (May be N/A'd if greater than or equal to 350°F.

- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____ IV
- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____ IV

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6.2.15 Release the Level 3 Dedicated Operator assigned in step 6.2.1 and/or 6.2.2 _____

6.2.16 Isolate the vent path opened in step 6.2.4. _____

6.2.17 Update CL 1E, if desired. _____

INITIALS

TCN 2002-0868

6.2.18 **IF** Caution Tags were installed on the following control switches per OI 124, Draining Steam Generators:

- P-28A
- P-28B
- MS-2019
- MS-2020

AND level in BOTH S/G's is greater than 25%,
THEN remove the Caution Tags. _____

INITIALS

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 60%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F, then maintain Steam Generator narrow range levels greater than 47%, to ensure appropriate steam generator downcomer feedwater preheating.

CAUTION

When Auxiliary Feedwater is less than or equal to 75 gpm for each steam generator after mini-recirc is shut, then the steam generators should be fed one at a time for equal periods of time (or as required by Chemistry) in order to minimize recirc piping vibration.

6.3 Maintaining 2HX-1A Steam Generator Level

6.3.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators, to align the applicable AFW control switches per step 6.3.14 if a valid AFW signal occurs for either Unit. _____

TW 2002-0766

6.3.2 IF at any time, P-38A AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

6.3.3 IF the RCS is greater than 200°F,
THEN document feedwater addition on PBF-2027, Feedwater Addition Log. _____

INITIALS

6.3.4 Open AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____

6.3.5 Verify AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator, is shut. _____

6.3.6 Place PC-4012, P-38A AFP Discharge Control valve controller in MANUAL and SHUT. _____

TW2002-0868

6.3.7 Station an operator locally to monitor the recirc flow during startup operation. _____

6.3.8 Start P38A, Motor Driven Aux Feed Pump. (C01). _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

6.3.9 IMMEDIATELY CHECK the following:

a. AF-4007, P-38A AFP Mini Recirc Control valve OPENS. (Reference P&L 3.8) _____

b. Recirc flow greater than 50 gpm. _____

CAUTION

Do NOT exceed 200 GPM per steam generator.

CAUTION

Do NOT exceed 100 GPM per steam generator if level is less than 60%.

6.3.10 Adjust PC-4012, P-38A AFP Discharge Control valve controller in MANUAL for the proper flow rate. _____

INITIALS

6.3.11 Monitor the pump for proper operation.

- FI-4007, P-38A AFP Discharge Flow Indicator. _____
- PI-4012, P-38A AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 25, P-38A Inboard Pump Bearing. _____
- Point 26, P-38A Outboard Pump Bearing. _____

6.3.12 IF chemical addition is required,
THEN go to Section 6.5 or Section 6.7. (Mark this step N/A if chemicals are NOT added.) _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

6.3.13 WHEN P-38A, Motor Driven Aux Feed Pump is no longer required,
THEN perform the following:

a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4007, P-38A AFP Discharge Flow Indicator. _____

c. Check that AF-4007, P-38A AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38A, Motor Driven Aux Feed Pump. (C01) _____

TCN 2002-0898

TCN 2002-0898

INITIALS

CAUTION

AF-4012, P38A AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

NOTE: It is desirable to place both units discharge MOVs in AUTO if conditions allow.

6.3.14 Align the AFW control switches as follows:

a. Place PC-4012, P-38A AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____ IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ IV
- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ IV

c. Per DSS for unit less than 350°F. (May be N/A'd if greater than or equal to 350°F)

- AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ IV
- AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ IV

TW202-0766

6.3.15 Release the Level 3 Dedicated Operator assigned in step 6.3.1 and/or 6.3.2 _____

INITIALS

CAUTION

When RCS Temperature is greater than 200°F and Steam Generator narrow range level is less than 60%, then auxiliary feedwater addition is limited to 100 gpm and should NOT be interrupted for more than 15 minutes until water level recovers the feedring J-nozzles, to minimize Feed Line water hammer.

CAUTION

When RCS Temperature is greater than 200°F, then maintain Steam Generator narrow range levels greater than 47%, to ensure appropriate steam generator downcomer feedwater preheating.

CAUTION

When Auxiliary Feedwater is less than or equal to 75 gpm for each steam generator after mini-recirc is shut, then the steam generators should be fed one at a time for equal periods of time (or as required by Chemistry) in order to minimize recirc piping vibration.

6.4 Maintaining 2HX-1B Steam Generator Level

6.4.1 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the applicable AFW control switches per step 6.4.14 if a valid AFW signal occurs for either Unit. _____

TCN 2002-0766

6.4.2 IF at any time, P-38A/B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

6.4.3 IF the RCS is greater than 200°F,
THEN document feedwater addition on PBF-2027, Feedwater Addition Log. _____

INITIALS

6.4.4 Open AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____

6.4.5 Verify AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator, is shut. _____

6.4.6 Place PC-4019, P-38B AFP Discharge Control valve controller in MANUAL and SHUT. _____

6.4.7 Station an operator locally to monitor the recirc flow during startup operation. _____

6.4.8 Start P38B, Motor Driven Aux Feed Pump. (C01). _____

TW 2002-0868

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

6.4.9 IMMEDIATELY CHECK the following:

a. AF-4014, P-38B AFP Mini Recirc Control valve OPENS. (Reference P&L 3.8) _____

b. Recirc flow greater than 50 gpm. _____

CAUTION

Do NOT exceed 200 GPM per steam generator.

CAUTION

Do NOT exceed 100 GPM per steam generator if level is less than 60%.

6.4.10 Adjust PC-4019, P-38B AFP Discharge Control valve controller in MANUAL for the proper flow rate. _____

INITIALS

6.4.11 Monitor P-38B, Motor Driven Aux Feed Pump for proper operation.

- FI-4014, P-38B AFP Discharge Flow Indicator. _____
- PI-4019, P-38B AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
- Point 27, P-38B Inboard Pump Bearing. _____
- Point 28, P-38B Outboard Pump Bearing. _____

TRW 2002-0868

6.4.12 **IF** chemical addition is required,
THEN go to Section 6.6 or Section 6.8. (Mark this step N/A if chemicals are **NOT** added.) _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

6.4.13 **WHEN** the pump is no longer required,
THEN perform the following:

a. Station an operator locally to monitor the recirc flow during shutdown operation. _____

b. Reduce flow on FI-4014, P-38B AFP Discharge Flow Indicator. _____

c. Check that AF-4014, P-38B AFP Mini Recirc Control valve opens. (Reference P&L 3.8) _____

d. Stop P-38B, Motor Driven Aux Feed Pump. (C01) _____

TRW 2002-0868

INITIALS

CAUTION

AF-4019, P38B AFP Discharge Control valve SHALL be set to 1200 psi whenever the valve is in AUTO, or declared inoperable.

NOTE: It is desirable to place both units discharge MOVs in AUTO if conditions allow.

6.4.14 Align the AFW control switches as follows:

a. Place PC-4019, P-38B AFP Discharge Control pressure controller in AUTO with setpoint at 1200 psi. _____ IV

b. AUTO for any unit greater than or equal to 350°F (shut and pushed in). (May be N/A'd if less than 350°F)

- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____ IV
- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____ IV

c. Per DSS for unit less than 350°F (May be N/A'd if greater than or equal to 350°F.

- AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____ IV
- AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____ IV

TW 2002-0766

6.4.15 Release the Level 3 Dedicated Operator assigned in step 6.4.1 and/or 6.4.2 _____

INITIALS

6.5 Addition of Chemicals to the 2HX-1A Steam Generator - Cart Method

6.5.1 **IF** the P-38A pump is **NOT** operating,
THEN start the pump in accordance with Section 6.1 or Section 6.3, as appropriate. _____

NOTE: Injection of chemicals will be through AF-38, P-38A AFP Suction Drain through P-38A pump.

6.5.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 6.5.35 if a valid AFW signal occurs on either Unit. _____

TW 2002-0766

6.5.3 **IF** at any time, P-38A AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

6.5.4 The 2HX-1B Steam Generator is **NOT** having any chemical additions. _____

6.5.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 6.5,
THEN perform step 6.5.35. _____

6.5.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

6.5.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System. _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

INITIALS

CAUTION

All chemicals will be handled in accordance with the CHES program.

6.5.8 **IF NOT** already performed,
THEN have Chemistry Group fill the Chemical Cart T-199, Steam Generator Chemical Addition Tank with the chemicals to be added to the 2HX-1A Steam Generator. _____

6.5.9 Ensure the chemical transfer hose supplied with the cart is connected to AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.5.10 Fill the chemical transfer hose with DI water **AND** plug the hose with the supplied dust plug. _____

NOTE: Cart has to be secured by blocking wheels or chaining in-order to meet seismic event requirements.

6.5.11 Uncap AF-38, P-38A AFW pump suction drain **AND** install AF-38B, Steam Generator Chemical Injection Check, on the piping downstream of AF-38, P-38A AFP Suction Drain. _____

6.5.12 Remove dust plug from chemical transfer hose and connect to AF-38B with the quick disconnect. _____

a. Ensure the Control Switch for P-271 is in the OFF position and plug in receptacle. _____

b. Request AFW flow be adjusted to ensure AF-4007, P-38A AFP Mini-recirc Control Valve is shut. _____

6.5.13 Open AF-38, P-38A AFP Suction Drain **AND** ensure no leaks from any fitting. _____

6.5.14 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.5.15 Place P-271, Steam Generator Chemical Addition Pump, Control Switch to ON. _____

INITIALS

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

6.5.16 **WHEN** T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

6.5.17 Shut AF-38, P-38A AFP Suction Drain. _____

6.5.18 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.5.19 **WHEN** chemical addition is complete
THEN connect AF-38C, Steam Generator Chemical Addition Tank Fill to AF-81 with the 1/2 inch tygon hose and hose clamps supplied with the cart. _____

6.5.20 Open AF-38C, Steam Generator Chemical Addition Tank Fill. _____

6.5.21 Open AF-81, T-47A Chem Add Tank Inlet. _____

6.5.22 **WHEN** the tank is full with about 60 gallons of DI water
THEN shut AF-81, T-47A Chem Add Tank Inlet. _____

6.5.23 Shut AF-38C, Steam Generator Chemical Addition Tank Fill. _____

6.5.24 Open AF-38, P-38A AFP Suction Drain **AND** ensure no leaks from any fitting. _____

6.5.25 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.5.26 Turn on P-271, Steam Generator Chemical Addition Pump. _____

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

6.5.27 **WHEN** T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

6.5.28 Shut AF-38, P-38A AFP Suction Drain. _____

INITIALS

6.5.29 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

NOTE: Water left in the hose should be collected in a bucket and returned back to the Chemical Addition Tank.

6.5.30 Disconnect hose between AF-38, P-38A AFP Suction Drain and AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.5.31 Remove AF-38B Steam Generator Chemical Injection Check from the piping downstream of AF-38. _____

6.5.32 Install cap at AF-38, P-38A AFP suction drain. _____

6.5.33 Disconnect the 1/2 inch tygon tubing from AF-81, T-47A Chem Add Tank Inlet. _____

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6.5.34 Release the Level 3 Dedicated Operator assigned in step 6.5.2 and/or 6.5.3 _____

6.5.35 IF a valid AFW actuation signal has occurred on either Unit during the performance of section 6.5,
THEN ensure the following: (otherwise N/A)

a. Place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF AND unplug. _____

b. Shut AF-38, P-38A AFP Suction Drain. _____

c. Perform the following:

- Notify Shift Supervision of the following:
  - Status of the T-199, Steam Generator Chemical Addition Tank. _____
  - Status of the Chemicals. _____
- Resolve with Chemistry further actions to be taken. _____

INITIALS

6.5.36 **WHEN** the pump is no longer required,
THEN perform one of the following: (Mark the step **NOT** used N/A.)

a. Continue with Section 6.1, Filling the 2HX-1A Steam Generator, starting with Step 6.1.13. _____

b. Continue with Section 6.3, Maintaining the 2HX-1A Steam Generator Level, starting with Step 6.3.13. _____

6.6 Addition of Chemicals to the 2HX-1B Steam Generator - Cart Method

6.6.1 **IF** the P-38B pump is **NOT** operating,
THEN start the pump in accordance with Section 6.2 or Section 6.4, as appropriate. _____

NOTE: Injection of chemicals will be through AF-51, P-38B AFP Suction Drain through P-38B pump.

6.6.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 6.6.35 if a valid AFW signal occurs on either Unit. _____

TCN 2002-0726

6.6.3 **IF** at any time, P-38B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

6.6.4 The 2HX-1A Steam Generator is **NOT** having any chemical additions. _____

6.6.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 6.6,
THEN perform step 6.6.35. _____

6.6.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

INITIALS

6.6.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System.

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

CAUTION

All chemicals will be handled in accordance with the CHES program.

6.6.8 **IF NOT** already performed,
THEN have Chemistry Group fill the Chemical Cart T-199, Steam Generator Chemical Addition Tank with the chemicals to be added to the 2HX-1B Steam Generator. _____

6.6.9 Ensure the chemical transfer hose supplied with the cart is connected to AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.6.10 Fill the chemical transfer hose with DI water **AND** plug the hose with the supplied dust plug. _____

NOTE: Cart has to be secured by blocking wheels or chaining in-order to meet seismic event requirements.

6.6.11 Uncap AF-51, P-38B AFW pump suction drain **AND** install AF-38B, Steam Generator Chemical Injection Check, on the piping downstream of AF-51, P-38B AFP Suction Drain. _____

6.6.12 Remove dust plug from chemical transfer hose and connect to AF-38B with the quick disconnect. _____

a. Ensure the Control Switch for P-271 is in the OFF position and plug in receptacle. _____

INITIALS

b. Request AFW flow be adjusted to ensure AF-4014, P-38B AFP Mini-recirc Control Valve is shut. _____

6.6.13 Open AF-51, P-38B AFP Suction Drain **AND** ensure no leaks from any fitting. _____

6.6.14 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.6.15 Place P-271, Steam Generator Chemical Addition Pump, Control Switch to ON. _____

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

6.6.16 **WHEN** T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

6.6.17 Shut AF-51, P-38B AFP Suction Drain. _____

6.6.18 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.6.19 **WHEN** chemical addition is complete
THEN connect AF-38C, Steam Generator Chemical Addition Tank Fill to AF-72 with the 1/2 inch tygon hose and hose clamps supplied with the cart. _____

6.6.20 Open AF-38C, Steam Generator Chemical Addition Tank Fill. _____

6.6.21 Open AF-72, T-47B Chem Add Tank Inlet. _____

6.6.22 **WHEN** the tank is full with about 60 gallons of DI water
THEN shut AF-72, T-47B Chem Add Tank Inlet. _____

6.6.23 Shut AF-38C, Steam Generator Chemical Addition Tank Fill. _____

6.6.24 Open AF-51, P-38B AFP Suction Drain **AND** ensure no leaks from any fitting. _____

6.6.25 Open AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

INITIALS

6.6.26 Turn on P-271, Steam Generator Chemical Addition Pump. _____

NOTE: T-199, Steam Generator Chemical Addition Tank should empty within four minutes.

6.6.27 WHEN T-199, Steam Generator Chemical Addition Tank is empty
THEN place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF. _____

6.6.28 Shut AF-51, P-38B AFP Suction Drain. _____

6.6.29 Shut AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

NOTE: Water left in the hose should be collected in a bucket and returned back to the Chemical Addition Tank.

6.6.30 Disconnect hose between AF-51, P-38B AFP Suction Drain and AF-38D, Steam Generator Chemical Addition Pump Discharge. _____

6.6.31 Remove AF-38B, Steam Generator Chemical Injection Check from piping downstream of AF-51. _____

6.6.32 Install cap at AF-51, P-38B AFP suction drain. _____

6.6.33 Disconnect the 1/2 inch tygon tubing from AF-72, T-47B Chem Add Tank Inlet. _____

6.6.34 Release the Level 3 Dedicated Operator assigned in step 6.6.2 and/or 6.6.3 _____

6.6.35 IF a valid AFW actuation signal has occurred on either Unit during the performance of section 6.6,
THEN ensure the following: (otherwise N/A)

a. Place P-271, Steam Generator Chemical Addition Pump, Control Switch to OFF AND unplug. _____

b. Shut AF-51, P-38B AFP Suction Drain. _____

INITIALS

c. Perform the following:

- Notify Shift Supervision of the following:
  - Status of the T-199, Steam Generator Chemical Addition Tank. _____
  - Status of the Chemicals. _____
- Resolve with Chemistry further actions to be taken. _____

6.6.36 **WHEN** the pump is no longer required, **THEN** perform one of the following: (Mark the step **NOT** used N/A.)

a. Continue with Section 6.2, Filling the 2HX-1B Steam Generator, starting with Step 6.2.13. _____

b. Continue with Section 6.4, Maintaining the 2HX-1B Steam Generator Level, starting with Step 6.4.13. _____

CAUTION

Notification of Security prior to the addition of any chemical to the Auxiliary Feedwater System is necessary to eliminate personnel exposure to chemical fumes. (B-1)

6.7 Addition of Chemicals to the 2HX-1A S/G using Chemical Addition Tank

6.7.1 **IF** the P-38A pump is **NOT** operating, **THEN** start the pump in accordance with Section 6.1 or Section 6.3, as appropriate. _____

6.7.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 6.7.19 if a valid AFW signal occurs on either Unit. _____

INITIALS

TCN 2002-0716

6.7.3 **IF** at any time, P-38A/B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

6.7.4 The 2HX-1B Steam Generator is **NOT** having any chemical additions. _____

6.7.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 6.7,
THEN perform step 6.7.19. _____

6.7.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

6.7.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System.

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

INITIALS

CAUTION

All chemicals will be handled in accordance with the CHES program.

CAUTION

If more than one chemical is to be added, then each chemical should be added to the SG separately or mixed as directed by chemistry.

6.7.8 Verify OPEN AF-82A, T-47A Chem Add Tank Vent. _____

6.7.9 Open AF-85, T-47A Chem Add Tank Drain. _____

6.7.10 **WHEN** the tank is drained,
THEN perform the following:

a. Shut AF-85, T-47A Chem Add Tank Drain. _____

b. Open AF-82, T-47A Chem Add Tank. _____

INITIALS

6.7.11 Add chemicals to the tank and top off with DI water using AF-81, T-47A Chem Add Tank Inlet, as necessary to ensure no air is injected with the chemicals. _____

6.7.12 Shut the fill valve and vent valve.

- AF-82, T-47A Chem Add Tank Inlet. _____
- AF-82A, T-47A Chem Add Tank Vent. _____

6.7.13 Open T-47A, Chem Add Tank, outlet valves to route the chemicals to 2HX-1A generator.

- U2 HX-1A -
  - 2AF-88, T-47A Chem Add Tank Out to HX-1A SG 1st Off Isol. _____
  - 2AF-89, T-47A Chem Add Tank Out to HX-1A SG 2nd Off Isol. _____
  - AF-85A, T-47A Chem Add Tank Outlet. _____

6.7.14 Open the tank inlet/flush valves associated with the chemical addition tank being used.

- AF-83, T-47A Chem Add Tank High Pressure Inlet. _____
- AF-84, T-47A Chem Add Tank High Pressure Inlet. _____

a. Shut AF Pump Discharge MOV, if open, **AND** allow all flow to bypass through the chemical addition tank for a minimum of five (5) minutes. _____

b. After a minimum of five (5) minutes, **THEN** open AF pump discharge MOV. _____

INITIALS

6.7.15 Isolate the tank by shutting inlet/flush valves and outlet valves.

- U2 HX-1A -
  - AF-83, T-47A Chem Add Tank High Pressure Inlet. _____
  - AF-84, T-47A Chem Add Tank High Pressure Inlet. _____
  - 2AF-88, T-47A Chem Add Tank Out to HX-1A SG 1st Off Isol. _____
  - 2AF-89, T-47A Chem Add Tank Out to HX-1A SG 2nd Off Isol. _____
  - AF-85A, T-47A Chem Add Tank Outlet. _____

6.7.16 Repeat Steps 6.7.8 through 6.7.15 as necessary to add the desired amount of chemicals. Use Attachment A to record multiple step performance. _____

6.7.17 **WHEN** all chemical additions are complete, **THEN** slowly open AF-82A, T-47A Chem Add Tank Vent, **AND** leave the tank full of DI water to prevent corrosion/deposit buildup in tank. _____

6.7.18 Release the Level 3 Dedicated Operator assigned in step 6.7.2 and/or 6.7.3. _____

TRN 2001-0686

INITIALS

6.7.19 IF a valid AFW actuation signal has occurred on either Unit during the performance of section 6.7
THEN ensure the following: (otherwise N/A)

1. The Chem Add Tank, T-47A, is isolated by shut inlet/flush valves and outlet valves.

- U2 HX-1A -

  - AF-83, T-47A Chem Add Tank High Pressure Inlet. _____
  - AF-84, T-47A Chem Add Tank High Pressure Inlet. _____
  - 2AF-88, T-47A Chem Add Tank Out to HX-1A SG 1st Off Isol. _____
  - 2AF-89, T-47A Chem Add Tank Out to HX-1A SG 2nd Off Isol. _____
  - AF-85A, T-47A Chem Add Tank Outlet. _____

2. Perform the following:

- Notify Shift Supervision of the following:

  - Status of the Chem Add Tank, T-47A. _____
  - Status of the Chemicals. _____

- Resolve with Chemistry further actions to be taken. _____

6.7.20 WHEN the pump is no longer required,
THEN perform one of the following: (Mark the step NOT used N/A.)

a. Continue with Section 6.1, Filling the 2HX-1A Steam Generator, starting with Step 6.1.13. _____

b. Continue with Section 6.3, Maintaining the 2HX-1A Steam Generator Level, starting with Step 6.3.13. _____

INITIALS

6.8 Addition of Chemicals to the 2HX-1B S/G using Chemical Addition Tank

6.8.1 **IF** the P-38B pump is **NOT** operating,
THEN start the pump in accordance with Section 6.2 or Section 6.4, as appropriate. _____

6.8.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators to align the AFW per step 6.8.19 if a valid AFW signal occurs on either Unit. _____

TRN 2002-0767

6.8.3 **IF** at any time, P-38A/B AFW Pump Flow is adjusted to less than 50 gpm,
THEN the associated AFW Pump must be secured,
OR a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B _____

6.8.4 The 2HX-1A Steam Generator is **NOT** having any chemical additions. _____

6.8.5 **IF** a valid AFW actuation signal occurs on either Unit during the performance of section 6.8.
THEN perform step 6.8.19. _____

6.8.6 Notify Security of the need to add chemicals to the Steam Generators to minimize personnel exposure to chemical fumes. (B-1) _____

6.8.7 Record the type and amount of chemicals to be added to the Auxiliary Feedwater System.

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____

Type _____ Amount _____ _____

INITIALS

CAUTION

All chemicals will be handled in accordance with the CHES program.

CAUTION

If more than one chemical is to be added, then each chemical should be added to the SG separately or mixed as directed by chemistry.

6.8.8 Verify OPEN AF-73A, T-47B Chem Add Tank Vent valve. _____

6.8.9 Open AF-76, T-47B Chem Add Tank Drain valve. _____

6.8.10 WHEN the tank is drained,
THEN perform the following:

a. Shut AF-76, T-47B Chem Add Tank Drain valve. _____

b. Open AF-73, T-47B Chem Add Tank Inlet valve. _____

6.8.11 Add chemicals to the tank and top off with DI water using AF-72, T-47B Chem Add Tank Inlet valve, as necessary to ensure no air is injected with the chemicals. _____

6.8.12 Shut the fill valve, and vent valve.

- AF-73, T-47B Chem Add Tank Inlet. _____
- AF-73A, T-47B Chem Add Tank Vent. _____

INITIALS

6.8.13 Open the appropriate tank outlet valves to route the chemicals to 2HX-1B steam generator.

- U2 HX-1B -
  - 2AF-79, T-47B Chem Add Tank Out to HX-1B SG 1st Off Isol. _____
  - 2AF-80, T-47B Chem Add Tank Out to HX-1B SG 2nd Off Isol. _____
  - AF-76A, T-47B Chem Add Tank Outlet. _____

6.8.14 Open the Chem Add Tank inlet/flush valves.

- AF-74, T-47B Chem Add Tank High Pressure Inlet. _____
- AF-75, T-47B Chem Add Tank High Pressure Inlet _____

a. Shut AF Pump Discharge MOV, if open, **AND** allow all flow to bypass through the chemical addition tank for a minimum of five (5) minutes. _____

b. After a minimum of five (5) minutes, **THEN** open AF pump discharge MOV. _____

6.8.15 Isolate the tank by shutting inlet/flush valves and outlet valves.

- U2 HX-1B -
  - AF-74, T-47B Chem Add Tank High Pressure Inlet. _____
  - AF-75, T-47B Chem Add Tank High Pressure Inlet. _____
  - 2AF-79, T-47B Chem Add Tank Out to HX-1B SG 1st Off Isol. _____
  - 2AF-80, T-47B Chem Add Tank Out to HX-1B SG 2nd Off Isol. _____
  - AF-76A, T-47B Chem Add Tank Outlet. _____

INITIALS

6.8.16 Repeat Steps 6.8.8 through 6.8.15 as necessary to add the desired amount of chemicals. Use Attachment A to record multiple step performance. _____

6.8.17 When all chemical additions are complete, slowly open AF-73A, T-47B Chem Add Tank Vent valve, and leave the tank full of DI water to prevent corrosion/deposit buildup in tank. _____

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6.8.18 Release the Level 3 Dedicated Operator assigned in step 6.8.2 and/or 6.8.3. _____

6.8.19 IF a valid AFW actuation signal occurs on either Unit during the performance of section 6.8.
THEN ensure the following: (otherwise N/A)

1. The Chem Add Tank, T-47B, is isolated by shut inlet/flush valves and outlet valves.

   - U2 HX-1B -

     - AF-74, T-47B Chem Add Tank High Pressure Inlet. _____
     - AF-75, T-47B Chem Add Tank High Pressure Inlet. _____
     - 2AF-79, T-47B Chem Add Tank Out to HX-1B SG 1st Off Isol. _____
     - 2AF-80, T-47B Chem Add Tank Out to HX-1B SG 2nd Off Isol. _____
     - AF-76A, T-47B Chem Add Tank Outlet. _____

INITIALS

2. Perform the following:

   - Notify Shift Supervision of the following:
     - Status of the Chem Add Tank, T-47B. _____
     - Status of the Chemicals. _____
   - Resolve with Chemistry further actions to be taken. _____

6.8.20 **WHEN** the pump is no longer required, **THEN** perform one of the following: (Mark the step **NOT** used N/A.)

a. Continue with Section 6.2, Filling the 2HX-1B Steam Generator, starting with Step 6.2.13. _____

b. Continue with Section 6.4, Maintaining the 2HX-1B Steam Generator Level, starting with Step 6.4.13. _____

INITIALS

NOTE: It is NOT necessary to complete all sections of this procedure. Only the applicable section(s) as noted below need to be completed.

- **Section 7.1, Fill and Vent P-38A, Auxiliary Feedwater Pump, following maintenance.**
- **Section 7.2, Fill and Vent P-38B, Auxiliary Feedwater Pump, following maintenance.**
- **Section 7.3, Post maintenance test run of P-38A and P-38B, Auxiliary Feedwater pumps.**
- **Section 7.4, Resetting/overriding the motor-driven pump low suction pressure trip.**

7.0 MOTOR-DRIVEN AUXILIARY FEEDWATER PUMPS

7.1 Fill and Vent P-38A Auxiliary Feedwater Pump Following Maintenance.

7.1.1 Ensure AF-39, P-38A Aux Feedwater Pump Suction is OPEN. _____

7.1.2 Open AF-35B, P-38A Aux feedwater Pump Suction Sample Valve. _____

CAUTION

When venting, keep water away from instrumentation and electrical gear.

7.1.3 Throttle open, as necessary, SS-173, P-38A AFP Suction Sample Vent, to vent the air out of the suction piping. _____

7.1.4 **WHEN** all air has been vented from the P-38A suction piping, **THEN** shut SS-173, P-38A AFP Suction Sample Vent. _____

CAUTION

When venting, keep water away from instrumentation and electrical gear.

7.1.5 Throttle open, as necessary, AF-37, P-38A Aux Feedwater Pump Casing Vent. _____

INITIALS

7.1.6 **WHEN** all air has been vented from the pump casing,
THEN shut AF-37, P-38A AFP Casing Vent. _____

7.1.7 Open AF-33A, P-38A Aux Feedwater Pump Discharge Vent. _____

CAUTION

When venting, keep water away from instrumentation and electrical gear.

7.1.8 Throttle open, as necessary, AF-33B, P-38A AFP Discharge Vent Second Isolation. _____

7.1.9 **WHEN** all air has been vented from the P-38A pump discharge piping,
THEN shut AF-33B, P-38A AFP Discharge Vent Second Isolation. _____

7.1.10 Shut AF-33A, P-38A Aux Feedwater Pump Discharge Vent. _____

INITIALS

7.2 Fill and Vent P-38B Auxiliary Feedwater Pump Following Maintenance

7.2.1 Ensure AF-52, P-38B Aux Feedwater Pump Suction is OPEN. _____

7.2.2 Open AF-48B, P-38B Aux Feedwater Pump Suction Sample Valve. _____

CAUTION

When venting, keep water away from instrumentation and electrical gear.

7.2.3 Throttle open, as necessary, SS-175, P-38B AFP Suction Sample Vent, to vent the air out of the suction piping. _____

7.2.4 **WHEN** all air has been vented from the P-38B suction piping, **THEN** shut SS-175, P-38B AFP Suction Sample Vent. _____

CAUTION

When venting, keep water away from instrumentation and electrical gear.

7.2.5 Throttle open, as necessary, AF-50, P-38B AFP Casing Vent. _____

7.2.6 **WHEN** all air has been vented from the pump casing, **THEN** shut AF-50, P-38B AFP Casing Vent. _____

7.2.7 Open AF-46A, P-38B Aux Feedwater Pump Discharge Vent. _____

CAUTION

When venting, keep water away from instrumentation and electrical gear.

7.2.8 Throttle open, as necessary, AF-46B, P-38B AFP Discharge Vent Second Isolation. _____

INITIALS

7.2.9 **WHEN** all air has been vented from the P-38B pump discharge piping,
THEN shut AF-46B, P-38B AFP Discharge Vent Second Isolation. _____

7.2.10 Shut AF-46A, P-38B Aux Feedwater Pump Discharge Vent. _____

7.3 Operation of P-38A or P-38B, Auxiliary Feedwater Pumps - recirculation mode

7.3.1 Station Level 3 dedicated operator to continuously monitor recirc flow per Attachment B _____

7.3.2 Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators, to align the applicable AFW control switches per step 7.3.9 **AND** 7.3.10 if a valid AFW signal occurs for either Unit. _____

7.3.3 Place the appropriate discharge pressure control valve controller in MANUAL and SHUT.

- PC-4012, P-38A AFP Discharge Control. _____
- PC-4019, P-38B AFP Discharge Control. _____

NOTE: If recirc flow is less than 50 gpm, the associated AFW Pump must be secured.

7.3.4 Start the appropriate pump. (C01)

- P38A, Motor Driven Aux Feed Pump. _____
- P38B, Motor Driven Aux Feed Pump. _____

7.3.5 IMMEDIATELY CHECK the following:

a. AF-4007, P-38A AFP Mini Recirc Control OPENS. _____

OR

AF-4014, P-38B AFP Mini Recirc Control OPENS. _____

b. Recirc flow greater than 50 gpm. _____

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7.3.6 Monitor the pump for proper operation:

- Discharge pressure. _____
  - PI-4012, P-38A AFP Discharge Pressure Indicator. _____
  - PI-4019, P-38B AFP Discharge Pressure Indicator. _____
- Bearing temperatures on 1TR-2000B. _____
  - Point 25, P-38A Inboard Pump Bearing. _____
  - Point 26, P-38A Outboard Pump Bearing. _____
  - Point 27, P-38B Inboard Pump Bearing. _____
  - Point 28, P-38B Outboard Pump Bearing. _____

7.3.7 WHEN run is complete,
THEN stop the pump. (C01)

- P-38A, Motor Driven Aux Feed Pump. _____
- P-38B, Motor Driven Aux Feed Pump. _____

7.3.8 Secure the level 3 dedicated operator stationed in step 7.3.1 and 7.3.2 _____

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INITIALS

CAUTION

The associated AFW pump is NOT operable if the discharge pressure controller is in auto with a setpoint other than 1200 PSI.

7.3.9 Place the appropriate discharge pressure controller in AUTO with setpoint at 1200 psi.

- PC-4012, P-38A AFP Discharge Control. _____ IV
- PC-4019, P-38B AFP Discharge Control. _____ IV

7.3.10 Verify the discharge MOV control switch alignment.

- AUTO for operating unit (shut and pushed in).
  - AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator. _____ IV
  - AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator. _____ IV
  - AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator. _____ IV
  - AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator. _____ IV

INITIALS

- Per DSS for non-operating unit.
  - AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator.

    _____
    _____
    IV
  - AF-4021, P-38B AFP Discharge to 1HX-1B Steam Generator.

    _____
    _____
    IV
  - AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator.

    _____
    _____
    IV
  - AF-4020, P-38B AFP Discharge to 2HX-1B Steam Generator.

    _____
    _____
    IV

INITIALS

7.4 Resetting/Overriding the Low Suction Pressure Trip

CAUTION

There are two ways to restart a pump that has tripped on low suction press. One method resets the low suction press trip and one overrides it.

CAUTION

If it becomes necessary to override, then the operator must monitor the pump response to ensure it has sufficient net positive suction head, and take manual action if required.

NOTE: A low suction pressure condition of 7.0 psig will annunciate C01 A 4-9, Aux Feed Pump Suction Pressure Low

NOTE: If a low suction pressure of 6.5 psig exists for 20 seconds, then the following will occur:

- **The AFW pump will trip.**
- **Illuminate a white light above the control switch.**
- **C01A 4-8 (4-10) P-38A (P-38B) Aux Feed Pump Low Suction Pressure Trip, will alarm.**

NOTE: If the low suction pressure condition clears, then C01A 4-9 Aux Feed Pump Suction Pressure Low, alarm will clear but the pump will remain tripped.

NOTE: The associated alarm and white light will also reset.

7.4.1 To reset the low suction press trip **AND** restore normal pump operation, perform the following:

a. Place the pump control switch in PULLOUT. _____

b. Return the pump control switch to the desired position. _____

INITIALS

CAUTION

The following step will allow the AFW pump to start but the AFW pump will NOT trip if a low suction pressure condition exists.

NOTE: C01 A 3-8 (3-10), P-38A (P-38B) Auxiliary Feed Pump Suction Pressure Trip Disabled will annunciate.

7.4.2 To override the low suction pressure trip, perform the following:

a. Place the pump control switch to START. _____

b. Return the pump control switch to the mid position. _____

7.4.3 To clear C01A 3-8 (3-10), P-38A (P-38B) Auxiliary Feed Pump Suction Pressure Trip Disabled alarm, perform the following:

a. Place the pump control switch to STOP. _____

b. Return the pump control switch to the mid-position. _____

8.0 REFERENCES

8.1 M-217 Sheets 1 & 2, Auxiliary Feedwater System P&ID

8.2 M-207 Sheet 1a, Service Water P&ID

8.3 DBD 01, Auxiliary Feedwater Design Basis Document

8.4 DBD 12, Service Water Design Basis Document

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8.5 TS: 3.7.5, Auxiliary Feedwater System

8.6 TS: 3.7.6, Condensate Storage Tanks

8.7 Westinghouse Technical Manual 00104, Unit 1 Steam Generator

8.8 Westinghouse Technical Manual 00109, Unit 2 Steam Generator

8.9 Calculation M-09334-266-IA.1

8.10 PBF-2027, Feedwater Addition Log

8.11 Tank Level Book

8.12 CL 1E, Containment Closure Checklist

8.13 CL 13E Part 2, Auxiliary Feedwater Valve Lineup Motor-Driven

8.14 OM 3.26, Use of Dedicated Operators

9.0 BASES

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B-1, CR 97-1170, Fume Exposure in Auxiliary Feedwater Pump Tunnel

B-2, CAP029908, P-38A, Motor Driven AFW Pump Has Inadequate Recirc Flow During IT-10

B-3, CAP029952, Possible Common Mode Failure of Aux Feed Recirculation Lines.

Performed By:

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Reviewed By:

Shift Supervision (Print)	Shift Supervision (Sign)	Date / Time	Initials
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REMARKS SECTION: _____

Attachment A
Multiple Step Performance

1.0 This attachment shall be completed to document multiple step performance. A separate copy of this attachment shall be prepared for each step series requiring multiple performance. All copies of this attachment shall be attached to this procedure when the procedure is complete.

2.0 Refer to procedure steps when performing this attachment.

3.0 List procedure steps by number, including adequate spaces to record initials, as appropriate. For components requiring independent verification or concurrent checks, provide for such checks on the attachment.

4.0 Complete the attachment by performing the procedure steps and recording the required data.

Valve Number/Step sequence:_____Date:_

Step	Initials	Initials	Initials	Initials	Initials	Initials	Initials

Attachment B

AFW Minimum Flow Level 3 Dedicated Operator Instructions

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1.0 Continuously monitor FIT-4050A, P-38A AFP Mini Recirc Flow Indicator Transmitter AND/OR FIT-4050B, P-38B AFP Mini Recirc Flow Indicator Transmitter.

2.0 IF flow is reduced to less than 50 gpm,
THEN IMMEDIATELY NOTIFY the control room.