



ATTACHMENT 4 FILING INSTRUCTION ILLUSTRATION

NOTE: These changes update TIP Rev. 2 and are administrative in nature such as changes in end dates and updates to action steps and deliverables.

FILING INSTRUCTIONS

<u>Remove</u>	<u>Insert</u>
From Tab 5, remove TIP Action Plan 5.3.2.1, Rev. 2, dated 11/20/2002.	Replace with TIP Action Plan 5.3.2.1, Rev. 2a, dated 2/27/2003.

TIP ACTION PLAN

**PILLAR OF EXCELLENCE:** Equipment Excellence

**FOCUS AREA:** Programs

**ACTION PLAN TITLE:** Engineering Programs

**ACTION PLAN NUMBER:** 5.3.2.1

**COMPLETION DATE:** 1Q/07

**ACTION PLAN OWNER:** Scott Freborg

**FOCUS AREA OWNER:** Allen Williams

APPROVAL: Allen L. Williams For Scott Freborg  
APPROVAL: Allen L. Williams

**PROBLEM STATEMENT:**

The performance of Cooper Nuclear Station (CNS) Engineering Programs has historically lacked sustained effectiveness.

**CAUSAL FACTORS:**

1. Ownership of Engineering Programs has been loosely defined or not defined at all. (Actions 1, 2, 3)
2. The expectations of Engineering Program owners were not clearly defined or enforced. (Actions 1, 2, 9)
3. Organizational depth in Engineering Programs has been lacking. (Actions 5, 6, 7)
4. The quality and frequency of self-assessments has been lacking. (Actions 1, 2, 4, 10, 11, 12, 13)
5. Oversight and implementation of the CNS Engineering Programs has been less than adequate. (Action 8, 14a, 14b, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42)

**OBJECTIVES:**

1. Procedure 0-CNS-12, CNS Program Administration, is closely aligned with the industry with respect to proper scope of Engineering Programs and the proper standards and expectations for Engineering Program oversight and management.
2. The full extent of condition in Engineering Programs is identified through completion of the remaining program self-assessments and interface assessments.
3. High priority corrective actions resulting from the self-assessments, program benchmarks, and the interface assessments are identified and implemented.
4. Independent verification of effectiveness of program corrective actions and program health ratings is established. Programmatic controls to insure sustained Engineering Program health beyond The Strategic Improvement Plan closure are established.
5. Organizational depth in Engineering Programs is established.

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6. Implementation of required Engineering Program related modifications and projects.
7. Adequate and consistent management oversight of Engineering Program health is established.
8. Improvements in CNS Program Management through implementation of industry benchmarking recommendations.

NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
<b>CNS ENGINEERING PROGRAM INFRASTRUCTURE</b>					
1	Benchmark Procedure 0-CNS-12 against best industry practices in the area of major program scope and standards and expectations for Engineering Program management. (This action is tied to Action Plan 5.1.1.9.)  Benchmarking is to be performed in accordance with 0-CNS-06, Guideline for Benchmarking. Benchmarking goals and objectives will be established in accordance with the requirements by 0-CNS-06.	Beth Hannaford		Complete	Benchmark report in accordance with Procedure 0-CNS-06.
2	With input from the benchmark report, revise CNS Procedure 0-CNS-12 to include the proper scope of Engineering Programs and the appropriate standards and expectations for Engineering Program management.  (This action is tied to Action Plan 5.1.1.9.)	Beth Hannaford		Complete	Revised Procedure 0-CNS-12 which will reflect scope of engineering programs consistent with the industry, and the associated standards and expectations for program implementation.
3	Review and revise, as necessary, Action Plan 5.3.2.1 Rev. 2 to reflect applicable changes implemented as a result of Action 2.	Scott Freborg	4Q/02	1Q/03	Action Plan 5.3.2.1 revised as required, to incorporate additional Engineering Program improvements identified through completion of benchmarking and revision to 0-CNS-12.
4	Establish a specific standard for sustained quality Engineering Program self-assessments.	Beth Hannaford	2Q/03	3Q/03	Revised Procedure 0-CNS-12 to include specific standards for sustained quality Engineering Program self-assessments.

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NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
5	Develop and approve Training Qualification Descriptions (TQDs) for areas within Engineering Programs lacking formal qualification requirements. These include: <ul style="list-style-type: none"> <li>• Snubber</li> <li>◦ Repairs and Replacements, and</li> <li>• Paintings and Coatings</li> </ul> Establishment of these specific qualifications will be utilized to increase technical proficiency and provided increased organizational depth.	Ken Thomas	2Q/03	3Q/03	Approved TQD for stated programs.
6	Establish organizational depth for the major Engineering Programs listed in 0-CNS-12.	Jim Salisbury	4Q/02	4Q/04	Fully qualified back-up program owners for each major Engineering Program in accordance with applicable TQD.
7	Revise CNS Procedure 0-CNS-12 to include a standard for maintaining organizational depth.	Beth Hannaford	2Q/03	3Q/03	Standard for maintaining organizational depth in Engineering Programs included in procedure 0-CNS-12.

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NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
8	Develop a process that will insure adequate and consistent management oversight of program health.	Jim Salisbury	2Q/03	3Q/03	Revised Procedure 0-CNS-12 which includes a process for adequate and consistent management oversight of program health.
9	Revise 0-CNS-22, Conduct of Engineering, to align with standards and expectations established in 0-CNS-12 for engineers assigned to Engineering Programs. This includes specific expectations for Engineering Program engineers in providing field support.	Jim Salisbury	1Q/03	2Q/03	Procedure 0-CNS-22 revised to align with 0-CNS-12.
<b>CNS ENGINEERING PROGRAM ASSESSMENTS</b>					
10	<p>Complete detailed technical self-assessments of the following programs in 2002:</p> <ul style="list-style-type: none"> <li>• Boiling Water Reactor Vessel and Internals Project (BWRVIP),</li> <li>• Erosion/Corrosion (Flow Accelerated Corrosion (FAC)),</li> <li>• 10 CFR 50, Appendix J, and</li> <li>• Welding/repair and replacement.</li> </ul> <p>Procedure 0-CNS-25, Self Assessment, is used for assessment methodology and approach.</p>	Ken Thomas		Complete	Self-Assessment reports prepared in accordance with 0-CNS-25. Notifications written for deficiencies/conditions.

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NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
11	<p>Complete detailed technical self-assessments of the following programs in 2003.</p> <ul style="list-style-type: none"> <li>• Heat Exchangers,</li> <li>• Snubbers,</li> <li>• Check Valves,</li> <li>• Painting and Coatings, and</li> <li>• Probabilistic Risk Assessment (PRA)</li> </ul> <p>Procedure 0-CNS-25, Self Assessment, is used for assessment methodology and approach. The focus of these technical self-assessments is both regulatory compliance and technical adequacy of program elements.</p>	Scott Freborg	2Q/03	4Q/03	Self-Assessment reports prepared in accordance with 0-CNS-25. Notifications written for deficiencies/conditions.
12	<p>Complete interface assessments of the following programs in 2003.</p> <ul style="list-style-type: none"> <li>• BWRVIP,</li> <li>• Erosion/corrosion (FAC),</li> <li>• 10 CFR 50, Appendix J,</li> <li>• Welding/repair and replacement,</li> <li>• Inservice Inspection (ISI),</li> <li>• Inservice Testing (IST),</li> <li>• Motor Operated Valves (MOVs), and</li> <li>• Fire Protection (FP)</li> </ul> <p>The interface assessment is not expected to specifically cover the compliance aspects of the program being assessed, however the interface assessment could identify gaps in program interfaces that could affect procedural and regulatory compliance.</p>	Ken Thomas	2Q/03	4Q/03	Interface assessment reports prepared in accordance with 0-CNS-25. Notifications written for deficiencies/conditions.

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NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
13	<p>Complete interface assessments of the following programs in 2004.</p> <ul style="list-style-type: none"> <li>• Heat Exchangers</li> <li>• Snubbers</li> <li>• Check Valves</li> <li>• Painting and Coatings</li> <li>• PRA, and</li> <li>• Air Operated Valves (AOV)</li> </ul> <p>The interface assessment is not expected to specifically cover the compliance aspects of the program being assessed, however the interface assessment could identify gaps in program interfaces that could affect procedural and regulatory compliance.</p>	Scott Freborg	1Q/04	2Q/04	Interface assessment reports prepared in accordance with O-CNS-25. Notifications written for deficiencies/conditions.
<b>CNS ENGINEERING PROGRAMS CORRECTIVE ACTION IMPLEMENTATION</b>					
<b>BWRVIP</b>					
14a	<p>Identify and implement high priority corrective actions resulting from the BWRVIP Program technical self-assessment and the interface assessment. Perform required BWRVIP Program inspections in Refueling Outage 21 (RE 21).</p> <p>In addition, identify and schedule the required BWRVIP inspections for Refueling Outage 22.</p>	Mark Lyman	2Q/02	3Q/03	Action plan developed and high priority Corrective Action Program (CAP) items associated with BWRVIP Program implemented during RE 21. Target health goal is sustained GREEN by 7/05.
14b	Perform required BWRVIP Program inspections in Refueling Outage 22 (RE 22).	Mark Lyman	3Q/03	4Q/04	Required BWRVIP Program inspections completed in RE 22.
15	Develop a separate BWRVIP Program document and implementing procedure.	Mark Lyman		Complete	BWRVIP Program document in place and implementing procedure issued.



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<b>EROSION/CORROSION PROGRAM</b>					
16	Identify and implement high priority corrective actions resulting from the Erosion/Corrosion Program technical self-assessment and the interface assessment.	Mark Lyman	2Q/03	2Q/04	Action plan developed and high priority CAP items associated with Erosion/Corrosion Program implemented. Target health goal is sustained GREEN by 7/05.
<b>10CFR50 APPENDIX J PROGRAM</b>					
17	Identify and implement high priority corrective actions resulting from the Appendix J Program technical self-assessment and the interface assessment.	Scott Freborg	2Q/03	2Q/04	Action plan developed and high priority CAP items associated with Appendix J Program implemented. Target health goal is sustained GREEN by 7/05.
<b>WELDING/REPAIR AND REPLACEMENT PROGRAM</b>					
18	Identify and implement high priority corrective actions resulting from the Welding/Repair and Replacement Program technical self-assessment and the interface assessment.	Doug Boes	2Q/03	2Q/04	Action plan developed and high priority CAP items associated with Welding/Repair and Replacement Program implemented. Target health goal is sustained GREEN by 7/05.
<b>HEAT EXCHANGER PROGRAM</b>					
19	Identify and implement high priority corrective actions resulting from the Heat Exchanger Program technical self-assessment and the interface assessment.	Scott Freborg	2Q/03	3Q/04	Action plan developed and high priority CAP items associated with Heat Exchanger Program implemented. Target health goal is sustained GREEN by 7/05.
<b>SNUBBER PROGRAM</b>					
20	Identify and implement high priority corrective actions resulting from the Snubber Program technical self-assessment , and the interface assessment.	Doug Boes	2Q/03	3Q/04	Action plan developed and high priority CAP items associated with Snubber Program implemented. Target health goal is sustained GREEN by 7/05.

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NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
<b>ELECTRICAL BREAKERS PROGRAM</b>					
21	Deleted				
22	Implement the 4160 Volt Breaker Refurbishment Project Plan.	Jim Dykstra	2Q/02	2Q/03	Breakers refurbished and installed in accordance with 4160 Volt Breaker Refurbishment Project Plan.
23	Create and approve the 480 Volt Circuit Breaker Replacement and Refurbishment Project Plan per Procedure 0-CNS-18, Project Management.	Ted Hough		Complete	Approved project plan for 480 Volt Circuit Breakers.
24	Implement 480 Volt Circuit Breaker Replacement and Refurbishment Project Plan scope.	Jim Dykstra	2Q/02	1Q/07	Breakers refurbished in accordance with 480 Volt Circuit Breaker Replacement and Refurbishment Project Plan.
<b>CHECK VALVE PROGRAM</b>					
25	Identify and implement high priority corrective actions resulting from the Check Valve Program technical and the interface self-assessment.	Duane Stuhr	2Q/03	3Q/04	Action plan developed and high priority CAP items associated with Check Valve Program implemented. Target health goal is sustained GREEN by 7/05.
<b>PAINTING AND COATINGS PROGRAM</b>					
26	Identify and implement high priority corrective actions resulting from the Painting and Coatings Program technical and the interface self-assessment.	Romeo Serranzara	2Q/03	3Q/04	Action plan developed and high priority CAP items associated with Painting and Coatings Program implemented. Target health goal is sustained GREEN by 7/05.
<b>PRA PROGRAM</b>					
27	Identify and implement high priority corrective actions resulting from the PRA Program technical and the interface self-assessment.	Kent Sutton	2Q/03	3Q/04	Action plan developed and high priority CAP items associated with PRA Program implemented. Target health goal is sustained GREEN by 7/05.

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<b>NO.</b>	<b>ACTION</b>	<b>ACTION OWNER</b>	<b>START DATE</b>	<b>END DATE</b>	<b>DELIVERABLE</b>
<b>MOV PROGRAM</b>					
28	Identify and implement high priority corrective actions resulting from the MOV Program interface assessment.	Duane Weninger	2Q/01	2Q/04	Action plan developed and high priority CAP items associated with MOV Program implemented. Target health goal is sustained GREEN by 7/05.
29	<u>Regulatory Commitment</u> Complete MOV Program Category II Design Basis Calculations.	Duane Weninger	4Q/01	2Q/03	Calculations completed and approved.
30	<u>Regulatory Commitment</u> Perform baseline testing of Category II Valves.	Duane Weninger	1Q/03	3Q/03	Completed work packages for testing of Category II Valves.
31	<u>Regulatory Commitment</u> Include Category II MOVs in the MOV Program.	Duane Weninger		Complete	Revised MOV Program Document which includes Category II MOVs.
<b>AOV PROGRAM</b>					
32	Identify and implement high priority corrective actions resulting from the AOV Program interface assessment.	John Oswald	4Q/01	1Q/05	Action plan developed and high priority CAP items associated with AOV Program implemented. Target health goal is sustained GREEN by 7/05.
33	Complete Category I System Level Review/Component Level Review (SLR/CLR) calculations.	John Oswald	2Q/02	3Q/03	Calculations completed and approved.
34	Perform baseline testing of Category I AOV Valves.	John Oswald	1Q/03	2Q/03	Completed work packages for Category I AOV Valve Testing.
35	Complete Category II SLR/CLR calculations.	John Oswald	4Q/03	3Q/06	Calculations completed and approved.
36	Perform baseline testing of Category II Valves.	John Oswald	4Q/04	1Q/07	Completed work packages for Category II AOV Valve Testing.

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NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
<b>ISI PROGRAM</b>					
37	Identify and implement high priority corrective actions resulting from the ISI Program interface assessment.	Mark Lyman	2Q/01	2Q/04	Action plan developed and high priority CAP items associated with ISI Program implemented. Target health goal is sustained GREEN by 7/05.
<b>IST PROGRAM</b>					
38	Identify and implement high priority corrective actions resulting from the IST Program interface assessment.	Tom Robinson	2Q/01	2Q/04	Action plan developed and high priority CAP items associated with IST Program implemented. Target health goal is sustained GREEN by 7/05.
<b>FP PROGRAM</b>					
39	Identify and implement high priority corrective actions resulting from the FP Program interface assessment.	Ray Dyer	2Q/01	2Q/04	Action plan developed and high priority CAP items associated with FP Program implemented. Target health goal is sustained GREEN by 7/05.
<b>EQUIPMENT QUALIFICATION (EQ) IMPROVEMENT PROJECT</b>					
40	<u>Regulatory Commitment</u> Complete implementation of those portions of the EQ Improvement Project as necessary to establish 50.49 compliance.	Jim Lechner	2Q/00	2Q/03	All project milestones associated with restoring compliance with 10CFR50.49 completed.
41	Complete implementation of the EQ Improvement Project.	Jim Lechner	2Q/00	1Q/04	All project milestones complete, all project deliverables issued or implemented. Target health goal is sustained GREEN by project completion date.
<b>0-CNS-12 COMPLIANCE</b>					

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NO.	ACTION	ACTION OWNER	START DATE	END DATE	DELIVERABLE
42	CNS Program Activities listed in 0-CNS-12 Attachment 2 are brought into compliance with 0-CNS-12, latest effective revision.	Allen Williams	2Q/03	1Q/04	Program Health Report for each of the 19 CNS Programs documents compliance with 0-CNS-12 latest effective revision.
<b>GENERAL</b>					
43	Training of targeted personnel from the engineering department, as identified by CNS Training Procedure 1.12, Document Review Committee.	Beth Hannaford	2Q/03	3Q/03	Documentation that CNS Engineering personnel impacted by the procedural revisions are identified and trained in accordance with the systematic approach to training.
44	<u>Change Management</u> Establish a Change Management Plan in accordance with the CNS Change Management Guideline that communicates and reinforces the changes to expectations, requirements, roles and responsibilities.	Beth Hannaford	4Q/02	2Q/03	A written Change Management Plan approved by the Assistant Vice-President.
45	<u>Monitoring – Self-Assessments</u> Perform Interim Self-Assessments to determine the effectiveness of the individual actions taken to improve Engineering Programs. Revise Action Plan based upon Interim Assessment, as required, to improve effectiveness of Engineering Programs. Self-Assessments to be performed in accordance with 0-CNS-25, Self Assessment, as supplemented by the Generic Program Self-Assessment Guideline.	Scott Freborg	2Q/03	2Q/06	Documentation that the Interim Assessments were performed and determined the effectiveness of actions taken to improve the Engineering Programs. Action Plan would be revised as required based upon results of the Interim Assessments.

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<b>NO.</b>	<b>ACTION</b>	<b>ACTION OWNER</b>	<b>START DATE</b>	<b>END DATE</b>	<b>DELIVERABLE</b>
46	Verification – Final Assessment Perform Final Effective Assessment in accordance with 0-CNS-25, Self-Assessment, with assistance of Quality Assurance, to establish that the required actions have improved Engineering Programs and the end state is consistent with the stated Objective.	Scott Freborg	4Q/06	1Q/07	Documentation that the Final Effective Assessment was performed and established that the required actions have improved Engineering Programs and that the end state is consistent with the stated Objective.