

Northeast Utilities
Millstone - Unit 3

Independent Corrective Action Verification Program
(ICAVP)

Walkdown Checklist

CK-MP3-05-03, Rev. 1

Functional Walkdown Checklist

Prepared by: A.A. NER'
Name

[Signature]
Signature

6/9/97
Date

Approved by: D.K. Schapfer
Name

[Signature]
Signature

6-9-97
Date

IMPLEMENTATION

System	
Walkdown Team	
Concurrence by:	

Functional Walkdown Checklist

Instructions

This checklist supplements project instruction PI-MP3-05 and shall be used for performing the Phase 1 functional walkdowns described in the project instruction. Application and use of this checklist shall be as follows:

1. The checklist consists of three parts; 1) Attribute Forms, 2) Comment Form and 3) Equipment Nameplate Data Form.
2. The Walkdown Team shall check each attribute on the Attribute Forms during the walkdown. Each attribute shall be dispositioned as SAT (satisfactory), UNSAT (unsatisfactory) or N/A (not applicable). When all attributes for a specific category have been addressed, the Walkdown Team shall sign and date the Attribute Form. Note: The attribute form is divided into subcategories. Each subcategory requires a Prepared By and Checked By signature.
3. The Comment Form shall be used by the Walkdown Team to explain all "UNSAT" responses on the Attribute Form. Comments shall be numbered on the Comment Form and Attribute Form with the subcategory suffix followed by sequential numbers (i.e., for subcategory "Equipment", comment numbers shall be A1, A2, A3, etc.).
4. The Equipment Nameplate Data Form shall be used by the Walkdown Team to record nameplate data during the walkdown. All entries into this form require independent verification; the form shall be signed by a Preparer and a Checker.
5. When the functional walkdown and all checklists have been completed, the Walkdown Team shall assemble a complete checklist, enter the system name and number the checklist pages in the checklist title block, and sign and date the checklist coversheet.

Note: Pages shall normally be numbered sequentially. If subsequent changes are made, insert pages numbered as 1A, 2A, 2B, etc. can be added.
6. The CRG Lead shall indicate his concurrence the checklist has been properly applied by signing and dating the coversheet.
7. Dimensional verifications will not be performed during the walkdown. The intent is to visually verify that support locations are in general conformance with drawings and that duct, conduit, cable tray and pipe routing functionally agrees with drawings.

Functional Walkdown Checklist

Attribute Form

Attribute	SAT	UNSAT	N/A	Comment
A. Equipment:				
1. Labeling and component identification installed and correct.	_____	_____	_____	_____
2. Equipment covers and safety guards installed.	_____	_____	_____	_____
3. As appropriate, equipment operation access platforms are installed.	_____	_____	_____	_____
4. Manufacturer's equipment tags and name plates installed and legible.	_____	_____	_____	_____
5. Proper bolting hardware installed.	_____	_____	_____	_____
6. General component installation per design drawings.	_____	_____	_____	_____
7. Components have been installed in a manner that provides access for operation and maintenance, and does not present a personnel safety hazard.	_____	_____	_____	_____
8. Existing components, systems, or structures undamaged.	_____	_____	_____	_____
9. Construction debris removed and proper cleanliness level established.	_____	_____	_____	_____
10. Equipment nameplate data agrees with vendor drawings or equipment lists.	_____	_____	_____	_____

Prepared by _____ Date _____

Checked by _____ Date _____

Attribute	SAT	UNSAT	N/A	Comment
B. Valves:				
1. Valve glands and packing installed.	_____	_____	_____	_____
2. Pressure relief/safety valve/rupture disks settings per design (as indicated on attached valve tags).	_____	_____	_____	_____
3. Pressure relief/safety valve/rupture disks discharge piping properly secured and discharge flow is directed in a safe manner.	_____	_____	_____	_____
4. Valve orientation correct (including check valves and non-return valves).	_____	_____	_____	_____
5. Valve hand wheels installed.	_____	_____	_____	_____
6. Manual valves have sufficient clearance to be operated.	_____	_____	_____	_____

Functional Walkdown Checklist

Attribute	SAT	UNSAT	N/A	Comment
7. Locking device provided for those valves/breakers/switches required to be locked in a certain position.	_____	_____	_____	_____
8. Valves have manufacturer's labels and/or tags installed.	_____	_____	_____	_____
9. Solenoid valves installed with correct porting.	_____	_____	_____	_____
10. Solenoid valves have proper voltage rating.	_____	_____	_____	_____

Prepared by _____ Date _____

Checked by _____ Date _____

Attribute	SAT	UNSAT	N/A	Comment
C. Pumps, Fans, Compressors:				
1. Pumps, fans, compressors aligned and coupled, and coupling guards installed.	_____	_____	_____	_____
2. Pumps and fans oriented correctly.	_____	_____	_____	_____
3. Pump seals and packing installed.	_____	_____	_____	_____
4. Pump seal/bearing cooling lines installed.	_____	_____	_____	_____
5. Pump seal leakoff lines or baseplate drain lines installed.	_____	_____	_____	_____

Prepared by _____ Date _____

Checked by _____ Date _____

Attribute	SAT	UNSAT	N/A	Comment
D. Mountings and Supports:				
1. Equipment mounting bolts installed.	_____	_____	_____	_____
2. As required, equipment base plate grouted.	_____	_____	_____	_____
3. Installed pipe hangers, conduit supports, cable tray supports, and instrument line supports agree with hanger detail drawings.	_____	_____	_____	_____
4. Snubbers installed per design requirements and setpoints verified.	_____	_____	_____	_____

Functional Walkdown Checklist

Attribute	SAT	UNSAT	N/A	Comment
5. Hanger spring cans installed and adjusted per design requirements.	_____	_____	_____	_____
6. Adjustable struts installed and adjusted per design requirements.	_____	_____	_____	_____
7. Seismic anchors and restraints installed per design requirements.	_____	_____	_____	_____
8. Temporary supports removed.	_____	_____	_____	_____
9. Support locations agree with design drawings.	_____	_____	_____	_____

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Checked by _____ Date _____

Attribute	SAT	UNSAT	N/A	Comment
E. Instrument:				
1. Instrument sensing lines connected per design requirements.	_____	_____	_____	_____
2. Equipment mounted instrumentation installed per design requirements.	_____	_____	_____	_____
3. Physical protection for instrumentation installed per design requirements.	_____	_____	_____	_____
4. Instrument tubing and fittings installed per design requirements.	_____	_____	_____	_____
5. Surge suppressers for instrumentation installed per design requirements.	_____	_____	_____	_____

Prepared by _____ Date _____

Checked by _____ Date _____

Attribute	SAT	UNSAT	N/A	Comment
F. Electrical Equipment:				
1. Cable "to" and "from" agrees with physical drawings and cable schedule.	_____	_____	_____	_____
2. Conduit sizes agree with physical drawings.	_____	_____	_____	_____
3. Cable size agrees with cable schedule.	_____	_____	_____	_____
4. Conductor identification tags installed.	_____	_____	_____	_____

Functional Walkdown Checklist

	Attribute	SAT	UNSAT	N/A	Comment
5.	Train separation per design requirements.	_____	_____	_____	_____
6.	Wiring agrees with wiring diagram.	_____	_____	_____	_____
7.	Raceway fill configuration is consistent with assumptions in ampacity tables. (Assumptions will be identified by SRG.)	_____	_____	_____	_____
8.	Permanently lifted or abandoned leads/cables (spares) have been marked and documented.	_____	_____	_____	_____
9.	Mechanical protective devices for electrical conductors installed per design requirements.	_____	_____	_____	_____
10.	Ventilation installed/not blocked, (vents, fans, etc.)	_____	_____	_____	_____

Prepared by _____

Date _____

Checked by _____

Date _____

	Attribute	SAT	UNSAT	N/A	Comment
G.	Heat Tracing, Insulation, Painting:				
1.	Heat tracing installed per design requirements.	_____	_____	_____	_____
2.	Painting and other protective surface coatings satisfactory installed.	_____	_____	_____	_____
3.	Insulation installed per design requirements.	_____	_____	_____	_____

Prepared by _____

Date _____

Checked by _____

Date _____

	Attribute	SAT	UNSAT	N/A	Comment
H.	HVAC Equipment				
1.	Ventilation system filters and absorber units installed and properly oriented.	_____	_____	_____	_____
2.	Fire dampers properly oriented and installed.	_____	_____	_____	_____
3.	Fusible links installed and are of the proper temperature range.	_____	_____	_____	_____
4.	Ductwork access doors installed.	_____	_____	_____	_____
	Attribute	SAT	UNSAT	N/A	Comment

Functional Walkdown Checklist

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|----|--|-------|-------|-------|-------|
| 5. | Equipment condensation drains installed. | _____ | _____ | _____ | _____ |
| 6. | Ductwork routing functionally agrees with duct routing drawings. | _____ | _____ | _____ | _____ |

Prepared by _____	Date _____
Checked by _____	Date _____

Attribute	SAT	UNSAT	N/A	Comment
I. Piping:				
1. Restricting orifices and flow elements installed.	_____	_____	_____	_____
2. Flow elements oriented correctly.	_____	_____	_____	_____
3. Fluid system permanent filters installed.	_____	_____	_____	_____
4. Functional configuration of piping and other inline components agrees with piping drawings.	_____	_____	_____	_____
5. Piping line size agrees with piping drawings.	_____	_____	_____	_____
6. Hanger located in accordance with drawings.	_____	_____	_____	_____

Prepared by _____	Date _____
Checked by _____	Date _____

Attribute	SAT	UNSAT	N/A	Comment
J. Fire Barriers				
1. Fire barriers, cable tray barriers and covers, and other fire protection features/equipment installed per Design requirements.	_____	_____	_____	_____
2. Penetration seals between rooms/fire areas installed.	_____	_____	_____	_____
3. Fire door installed, identified and functional.	_____	_____	_____	_____
4. Fire stops in conduit are installed per design.	_____	_____	_____	_____

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Attribute	SAT	UNSAT	N/A	Comment
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K. Lubrication:

1. Lubrication reservoirs installed and at proper operating level.
2. Dike (Containment) provided.

_____	_____	_____	_____
_____	_____	_____	_____

Prepared by _____ Date _____

Checked by _____ Date _____

Equipment Nameplate Data Form

[illegible]

Prepared by	Date	Checked by	Date
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