

Revisions to this document shall be communicated in accordance with program document AM-EU-P034 to ensure alignment between PCM Templates and field work procedures.

Distribution Manhole				
Component Classification Categories				
Criticality	I	X		Critical Distribution Manholes
	II		X	Distribution Manholes
Duty Cycle	Heavy Load	N/A	N/A	
	Normal Load	N/A	N/A	
Service Condition	In Service	N/A	N/A	
	Spare	N/A	N/A	
Condition Monitoring Tasks				
	Task Frequencies		Failure Codes	Comments
Visual Inspection	5Y	12Y	1a-h, 2a-d, 3a-b, 4a-b	Critical MH's as defined by OpCo
Failure Finding Tasks				
	Task Frequencies		Failure Codes	Comments
None	N/A	N/A		
Time Directed Tasks				
	Task Frequencies		Failure Codes	Comments
None	N/A	N/A		
Condition Directed Tasks				
	Task Frequencies		Failure Codes	Comments
None	N/A	N/A		

FAILURE MODES

- 1. Fails to maintain structural integrity

- 2. Fails to provide adequate grounding

- 3. Fails to maintain adequate eqpt ventilation
- 3. Fails to maintain adequate eqpt ventilation

- 4. Fails to provide adequate work environment
- 4. Fails to provide adequate work environment

FAILURE CAUSES

- 1a. Deteriorated Structural Material
- 1b. Deteriorated Seam/Duct Sealant
- 1c. Deteriorated/Missing Duct Edge Protector
- 1d. Deteriorated Concrete/Brickwork
- 1e. Foundation Re-Bar Corrosion
- 1f. Deteriorated Lid / Casting
- 1g. Deteriorated Channel Iron/Hanger/Grip/Saddle-porcelain
- 1h. Deteriorated Ladder

- 2a. Ground rod failure
- 2b. Bond tree missing/defective
- 2c. Manhole to manhole ground wire missing/damaged
- 2d. Loose / defective connector

- 3a. Floor debris accumulation
- 3b. Vent debris accumulation

- 4a. Environmental / Friable Asbestos / Chemical / Bio Hazard
- 4b. Lighting

MAINTENANCE TASKS

- Visual Inspection

- Visual Inspection
- Visual Inspection
- Visual Inspection
- Visual Inspection

- Visual Inspection
- Visual Inspection

- Visual Inspection
- Visual Inspection

TASK**DEFINITION**

Visual Inspection

Visual inspection of manhole structure, walls, floors and ceilings. Scope can include:

- Inspect hardware including ladders, cable racking, saddles, verticals, brackets, hangars and duct shields.
- Inspect frames, covers and necks.
- Inspect and clean ventilating grates.
- Inspect the environmental condition of the manhole

Additional details are documented via procedures posted to the Management Model under control element Conduct of Maintenance.

Distribution Manhole Template Summary

The Preventive Maintenance program is documented via maintenance templates. Templates have been developed that address transmission, substation, and distribution equipment that is owned, and maintained by Exelon Utilities. Each template documents the program tasks, frequencies, failure modes, and maintenance basis for the associated equipment. Tasks and associated frequencies are designed to address known failure modes of the equipment covered by the template. In general, the tasks included in the maintenance templates are the result of good industry practices, industry experience, and manufacturer recommendations.

References:

Internal reports and operating experience

Boundary Definition

The boundary is the visible structure above grade and within the manhole/fiber tube. Excluded from this treatment are equipment in the manholes that are addressed in separate templates.

Failure Experiences

Failures are subject to ACE/RCI investigation. Findings/recommended corrective actions are incorporated into the template as required.

Vendor Recommendations

N/A

Disposition of Vendor Recommendations

N/A

Basis For Template Tasks

Visual Inspection: This inspection approximates real-time condition monitoring that can detect developing problems and degradation, and provides condition data used to initiate corrective actions.

Revision 0		Date 12/29/2006
Writer	Larry Griess (Strategic Programs)	
Reviewer(s)		
Approver(s)	Kathy McHugh (FAM Maintenance Planning)	
Reason Written	To document the maintenance program tasks, frequencies, failure modes, and maintenance basis	

Revision 1		Date 11/30/2010
Writer	Chris Stefanski	
Reviewer(s)	Ken Wendt (Mgr. Material Condition)	
Approver(s)	Bill Fluhler , Bill Gannon, Nitin Patel, Jim Crane, Bill Sullivan	
Reason Written	Added note to ensure template changes are communicated to affected work groups.	

Revision 2		Date 06/29/2012
Writer	Rudy Patriarca	
Reviewer(s)	Dan Brotzman, Pete Yan, Chris Stefanski, Ken Wendt, Bill Gannon	
Approver(s)	Bill Fluhler	
Reason Written	To document the change in frequency of distribution manhole inspections outside the City of Chicago.	

Revision 3		Date 09/27/2012
Writer	Rudy Patriarca	
Reviewer(s)	Dan Brotzman, Pete Yan, Chris Stefanski, Ken Wendt, Bill Gannon	
Approver(s)	Bill Fluhler	
Reason Written	To document the change in frequency of distribution manhole inspections inside the City of Chicago.	

Revision 4		Date 01/30/2015
Writer	Daniel Kurtz	
Reviewer(s)	Wasif Qazi (PECO), Pete Yan (ComEd), Tom Rafferty (BGE), Beth Pittaway (BGE)	
Approver(s)	Cory Summerson (UFAM BGE), Mike Moy (UFAM ComEd) , J. Coffman (UFAM PECO)	
Reason Written	EU PM Template Alignment (BGE, ComEd, PECO); Renamed template from R3013 to R3033 to be consistent with numbering of PECO template	

Revision 5		Date 01/30/2018
Writer	Jimi Conway (ComEd)	
Reviewer(s)	Keith Frost (ComEd)	
Approver(s)	Mike Moy (UFAM ComEd)	
Reason Written	EU PM Template Alignment based on the review conducted in April for AM-EU-P034-R3033; Updated Criticality/Frequency for Critical MH's and added description wording from the EU template for Critical MH's as defined by OpCo.	