

PRC-004-4(i)

**Mark Henry,
Director, Reliability Services
March 22, 2016**

U.S. Regulatory Status

PRC-004-4(i)

- Errata approved by Letter Order on November 13, 2015
- Enforcement date: 7/1/2016
- Retires PRC-004-2.1(i)a
- PRC-004-3 and PRC-004-4 will never go into effect

Purpose Statement: To identify and correct the causes of Misoperations of Protection Systems for Bulk Electric System (BES) Elements

- PRC-004-2.1(i)a: Currently enforceable.
- PRC-004-3: Removed “fill-in-the-blank” requirements. Retires PRC-004-2.1(i). Superseded by PRC-004-3.
- PRC-004-4: Added dispersed generation facilities. Superseded by PRC-004-4(i).
- PRC-004-4(i): Enforceable as of 7/1/2016.
- PRC-004-5: Superseded by PRC-004-5(i).
- PRC-004-5(i) : Enforceable as of 4/2/2017.

Reasons for the Standards Development Project

- Revise the definition of Misoperation.
- Combine PRC-003 and PRC-004, retire PRC-003, which was identified in FERC Order 693 as a “fill-in-the-blank” standard.

New/Revised Glossary Terms

Composite Protection System – *The total complement of Protection System(s) that function collectively to protect an Element. Backup protection provided by a different Element's Protection System(s) is excluded.*

Misoperation – *The failure a Composite Protection System to operate as intended for protection purposes. Any of the following is a Misoperation:*

1. *Failure to Trip – During Fault*
2. *Failure to Trip – Other Than Fault*
3. *Slow Trip – During Fault*
4. *Slow Trip – Other Than Fault.*
5. *Unnecessary Trip – During Fault*
6. *Unnecessary Trip – Other Than Fault*

Misoperation Reporting via Section 1600

- **Section 1600 Data Request:**
http://www.nerc.com/pa/RAPA/ProtectionSystemMisoperations/PRC-004-3%20Section%201600%20Data%20Request_20140729.pdf
- **NERC MIDAS:** (Misoperation Information Data Analysis System) portal development underway
 - Development site: <https://misopsstg.nerc.net/default.aspx>
- **Excel Template:** revised to accommodate additional optional regional data

NERC Misoperation Submittal Portal

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Misoperation Data Submission Form

* *required fields*

* Type NCR Number:

* Resubmittal Only: Yes No

* Select Submission Quarter:

* Select Submission Year:

* Select Region (Lead Region if MRRE):

* Submitter Name:

* Submitter Email Address:

* Key Code:

Select Misoperations File:

© 2016 NERC - Misoperation Data Submission Form

As a user starts typing in an NCR number, after the first 3 characters a dropdown will automatically start populating with all entities that match the characters typed in the field. Those characters don't have to be at the beginning of the NCR, e.g. typing in '401' will return NCR11401.

For MRRE entities, once the entity has been chosen, the Lead Region field will be populated with all regions for which the entity is registered as a TO, DP or GO, and required questions will appear:

* Do you have misoperations to report for the following regions?
FRCC Yes No
SPP Yes No

* Do you have protection system operations to report for the following regions?
FRCC Yes No
SPP Yes No

'Resubmittal Only' allows entities to submit changes for a previous quarter's data

An email notification will be sent following submission to all contacts associated to the Submitting NCR, who are subscribed to receiving MIDAS notifications. The email will contain any errors that were found when processing the submission.

Reporting Template

A	B	C	D	E	F	L	M	T
Data Reporting Year	Data Reporting Quarter	Regional Entity Name (or Lead Regional Entity, if MRRE)	NERC Compliance Registry Number (NCR) (ex:NCR00123)	Jurisdiction	Voltage Class	Total Number of Operations Occurred in (SPP)	Total Number of Operations Occurred in (TRE)	
2016	Qtr 1 (Jan 1 - Mar 31)	TRE	NCR00761	United States	<100 kV			
					100 kV			
					115 kV			
					120 kV			
					138 kV			
					161 kV			
					230 kV			
					345 kV			
					500 kV			
					735 kV			
					765 kV			
					HVdc			
					Total Protection System Operations (for each r			

Operations Summary Tab: Entity selects Reporting Year and Quarter, Regional Entity (Lead Region if MRRE), NCR number, and number of operations for each region

Reporting Template

Misoperation ID (CONCATENATED FIELD OF COLUMNS (B,C,E,F,H,I) DO NOT ENTER DATA)	Region Where Misoperation Occurred (select from dropdown)	NERC Compliance Registry Number (NCR) (ex:NCR00123)	Jurisdiction (select from dropdown)	Misoperation Date (MM/DD/YYYY)	Misoperation Time (HH:MM:SS)	Time zone (select from dropdown)	Facility Name (Location Misoperation)
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							
__00:00:00__							

Same mandatory fields as current template.
 New optional field added to further categorize misoperations.

Resources

- NERC MIDAS User Guide
- NERC MIDAS training videos:
<https://vimeopro.com/nerclearning/midas-video-library>

For Further Reading

- [PRC-004-4\(i\)](#)
- [PRC-004-4\(i\) Implementation Plan](#)
- [PRC-004-3 Implementation Plan](#)
- [FERC Letter Order Approving PRC-004-3](#)
- [FERC Letter Order Approving PRC-004-4](#)
- [FERC Letter Order Approving PRC-004-4\(i\)](#)

Questions

