

Project 2010-05.1 Protection System Misoperations

Please **DO NOT** use this form. Please use the [electronic comment form](#) at the link below to submit comments on the second draft of the PRC-004-3 standard for Protection System Misoperations. Comments must be submitted by **September 7, 2012**. If you have questions please contact Al McMeekin at al.mcmeekin@nerc.net or by telephone at 803-530-1963.

http://www.nerc.com/filez/standards/Project2010-05_Protection_System_Misoperations.html

Background Information:

The initial draft of this standard and associated documents were posted for a 30-day formal comment period from June 10, 2011 through July 11, 2011. Stakeholders from 106 companies representing all 10 Industry Segments provided feedback. The Protection System Misoperation Standard Drafting Team (PSM SDT) has responded to all commenters and developed a second draft of the standard for Protection System Misoperation Identification and Correction based on stakeholder input. Changes to the standard include:

- Revisions to the definition of Protection System Misoperation.
- Revisions to the Applicability section to include exclusions for relay functions.
- Separating Requirement R1 into four requirements.
- Introducing time intervals and activities in Requirements R1, R2, and R3 associated with identifying, investigating, and addressing Misoperations.
- Addressing Misoperations when two or more entities own separate components in a Protection System.
- Modifying the VRFs and VSLs to reflect the changes listed above.
- Modifying the Guidelines and Technical Basis section to include more explanation and examples for the definition of Misoperation and the requirements.

Please read and review the standard and the Consideration of Comments document carefully before answering the following questions. The ‘Guidelines and Technical Basis’ section (pp 15-22) of the standard provides examples and discussion around the technical merits and intent of the requirements, measures, and definition(s), etc. Also, the drafting team’s responses to stakeholder’s comments and the subsequent changes made to the standard are explained in detail in the **Consideration of Comments** document. A thorough read and review of these documents may eliminate the need for additional comments thereby reducing workload for both the commenters and the drafting team. The PSM SDT is posting this standard for a formal 45-day comment period and successive ballot. The drafting team thanks you in advance for your constructive thoughts.

For questions 1-8, please provide specific comments related to the individual question. Please reserve question 9 for general comments not related to questions 1-9.

1. The definition of “Misoperation” has been revised from the initial posting. Do you agree with the revised definition? If not, please provide specific suggestions for improvement.

Yes

No

Comments:

2. Requirement R1 requires the responsible entities to identify and review each Protection System operation that operates the entity’s interrupting device, and designate each Misoperation. Do you agree with this approach? If you do not agree, please provide specific alternatives.

Yes

No

Comments: Requirement R1 (as well as the other Requirements in the Standard) should be formatted to start with “Each...”. For consistency with the preferred format of all NERC Standards, a Requirement should start with the responsible entities, followed by under what conditions, and then what they have to do. The use of the words “in its Facility” should be changed to reflect what is being protected. Suggested wording for consideration:

R1. Each Transmission Owner, Generator Owner, and Distribution Provider within 120 calendar days of a Protection System Misoperation initiating an interrupting device operation in its system shall have and implement a procedure to identify and address all Protection System Misoperations within its system.

Closure is also needed in the procedure to ensure a definitive corrective response to a misoperation to prevent its recurrence.

3. Requirements R1, R2, and R3 introduce time limits associated with identifying, investigating, and addressing Misoperations. Do you agree with these time limits? If not, please provide specific reasons why not and alternative recommendations.

Yes

No

Comments: As with R1, Requirements R2 and R3 should be formatted to start with "Each...". For consistency with the preferred format of all NERC Standards, a Requirement should start with the responsible entities, followed by under what conditions, and then what they have to do.

The time limits specified are excessive for plans that do not include correcting the problem. Correction of Misoperations is extremely important to reliability because the Misoperation may indicate a defect that could have significant consequences. The time limit for R1 should be 15 calendar days, an additional 15 calendar days for R2, and 15 days for R3. A definite completion time period for correcting the Misoperation should also be specified. Sixty days would not be an excessive time assuming outages may be needed, hardware ordered, etc. to prevent a recurrence.

4. The team has modified the standard to address Misoperations when two or more entities own separate components in a Protection System. Do you agree that the standard adequately deals with this situation? If not, please provide specific reasons why not and alternative recommendations.

Yes

No

Comments:

5. Attachment 1 lists and describes the data to be included in the quarterly reporting. Do you believe this data is appropriate for metric analysis? If not, please provide specific suggestions for improvement.

Yes

No

Comments: An additional field should be added to improve the metric analysis of microprocessor relay malfunctions. For example, the field value for a microprocessor relay malfunction could include the following:

Setting Error-Incorrect Numerical Input Specified

Setting Error-Incorrect User-Programmed Custom Logic

Incorrect Design-Incorrect User Application

Incorrect Design-Wiring

Firmware Version Mismatch by User

Others

6. The team has included VRFs, VSLs, and Time Horizons with this posting. Do you agree with the assignments that have been made? If not, please provide specific reasons why not and alternative recommendations and justifications.

Yes

No

Comments:

7. The team has included Measures and Data Retention with this posting. Do you agree with the assignments that have been made? If not, please provide specific suggestions for improvement.

Yes

No

Comments:

8. The team has included an Implementation Plan with this posting. Do you agree with the changes? If not, please provide specific suggestions for improvement.

Yes

No

Comments:

9. If you have any other comments on this Standard that you **have not already provided in response to the prior questions**, please provide them here.

Comments: Measurement M1 has that "Acceptable evidence for Part 1.3 may include, but is not limited to, a copy of dated investigation report or documented findings for each Misoperation." This provides a choice in a document type with either a formal report or other method of documenting the findings. On page 22 of 28 of PRC-004-3, in the Application Guidelines section, it states "An investigation report may include..." which dictates the use of an investigation report, and eliminates the choice between a formal report or other method of documenting findings as stated in M1. The Application Guidelines should be consistent with the standard portion of the document.

There is a typographical error on the first bulleted item on page 6 of the standard. This item should read:

Analyze Misoperations of Protection Systems for Facilities that are part of the BES to determine the cause(s).