

# Violation Risk Factors and Violation Severity Level Justifications

PRC-004-3 – Protection System Misoperation Identification and Correction  
Project 2010-05.1 – Protection System (Misoperations)

## Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: PRC-004-3 — Protection System ~~Misoperations~~ Misoperation Identification and Correction.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the ~~Base Penalty Amount~~ base penalty amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Protection System Misoperations Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project.

### NERC Criteria - Violation Risk Factors

#### *High Risk Requirement*

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

#### *Medium Risk Requirement*

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if

violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### *Lower Risk Requirement*

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

### **FERC Violation Risk Factor Guidelines**

The standard drafting team (SDT) also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1</sup>

#### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the ~~VSL~~**VRF** Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:<sup>2</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination

<sup>1</sup> ~~North American Electric~~*N. Am. Elec. Reliability Corp.*, 119 FERC ¶ 61,145, (2007) (“VRF Order”), order on reh’g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

<sup>2</sup> ~~Id.~~ at footnote 15.

- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

### **Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

### **VRF Discussion**

The ~~following~~ discussion [below in the tables](#) addresses how the SDT considered FERC's VRF Guidelines 1 through 5. PRC-004-3 – Protection System Misoperation Identification and

Correction is a revision of PRC-004-2.1a – Analysis and Mitigation of Transmission and Generation Protection System Misoperations. ~~“The Reliability Standard PRC-003-1 – Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems requires Regional Entities to establish procedures for analysis of Misoperations. In FERC Order No. 693, the Commission identified PRC 003-0 as a “fill in the blank” standard. The Order stated that because the regional procedures had not been submitted, the Commission proposed not to approve or remand PRC 003-0. Because PRC 003-0 (now PRC 003-1) is not enforceable, there is not a mandatory requirement for Regional Entity procedures to support the requirements of PRC 004-2.1a. This is a potential reliability gap; consequently, PRC-004-3 and~~ combines the reliability intent of the two legacy standards PRC-003-1 and PRC-004-2.1a.

The proposed PRC-004-3 Reliability Standard has six (6) discrete requirements that incorporate and enhance the intent of the requirements of PRC-004-2.1a and PRC-003-1.<sup>3</sup> First, the revised standard requires the Transmission Owner, Generator Owner, and Distribution Provider to review each BES interrupting device operation meeting the criteria in Requirement R1, which includes: when caused by a Protection System operation or by manual intervention in response to a Protection System failure to operate and identify each that is a Misoperation; regardless of whether the BES interrupting device owner owns all or part of the Composite Protection System; and when BES interrupting device owner identified that its Protection System component(s) caused the BES interrupting device(s) operation.

Second, the BES interrupting device owner is required to notify the other Composite Protection System component owner(s) when the criteria in Requirement R2 are met, which includes: Composite Protection System ownership is shared with another owner; the BES interrupting device owner determined that a Misoperation occurred or cannot rule out a Misoperation; and the BES interrupting device owner determined that its Protection System component(s) did not cause the BES interrupting device(s) operation or is unsure.

Third, if a Transmission Owner, Generator Owner, or Distribution Provider is notified by a BES interrupting device owner that the Composite Protection System operated, it must review the operation according to Requirement R3. In most cases, Requirement R1 or R3 will reveal the cause of the Misoperation. If not, Requirement R4 mandates the entity perform investigative action(s) to determine the cause(s) as the fourth discrete Requirement. If a cause is not identified, the entity either may continue its investigation until a cause is identified or the entity may write a declaration that no cause was identified. If a cause is identified, the entity advances to the fifth Requirement.

In Requirement R5, the entity whose Protection System component was identified as the cause of the Misoperation must either develop a Corrective Action Plan (CAP) or explain in a declaration why it cannot correct the cause of the Misoperation. In developing a Corrective Action Plan (CAP) for the identified Protection System component(s), the entity must perform

<sup>3</sup> [The Reliability Standard PRC-003-1 – Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems requires Regional Entities to establish procedures for analysis of Misoperations.](#)

an evaluation of the CAP’s applicability to the entity’s other Protection Systems including other locations. If the entity determines that corrective actions are beyond the entity’s control or would not improve BES reliability, it must explain this in a declaration why no further corrective actions will be taken.

In the last Requirement R6, the entity must implement and complete the CAP. The entity must update the CAP during implementation when actions or timetables change.

The requirements of the proposed PRC-004-3 do not map, one-to-one, with the Requirements of the two legacy standards, PRC-003-1 and PRC-004-2.1a. The new Requirements comingle various reliability attributes of the legacy standards with precise reliability objectives, ~~thus a Requirement to Requirement comparison of VRFs is not possible.~~ In developing the new VRFs for the Requirements of PRC-004-3, the Standard Drafting Team carefully considered the NERC criteria for developing VRFs, as well as the FERC VRF guidelines. The VRFs of the FERC approved PRC-004-2.1a – Analysis and Mitigation of Transmission and Generation Protection System Misoperations (R1 & R2 – High VRF), PRC-004-WECC-1 – Protection System and Remedial Action Scheme Misoperation (R1 – Lower VRF), PRC-016-0.1 – Special Protection System Misoperation (R2 – Medium VRF), and PRC-022-1 – Under-Voltage Load Shedding Program Performance (R1 & R1.5 – Medium VRF), all influenced (citing FERC VRF Guideline 3) the drafting team’s VRF decisions, as such, the VRFs for PRC-004-3 Requirements R1 through R6 are assigned a VRF of Medium.

**NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance  The performance or product measured has significant value as it almost meets	Missing at least one significant element (or a moderate percentage) of the required performance.  The performance or product measured still has significant value in meeting the	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.  The performance or product has limited	Missing most or all of the significant elements (or a significant percentage) of the required performance.  The performance measured does not meet the intent of

the full intent of the requirement.	intent of the requirement.	value in meeting the intent of the requirement.	the requirement or the product delivered cannot be used in meeting the intent of the requirement.
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***FERC Order on Violation Severity Levels***

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

***Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance***

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

***Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties***

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

***Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement***

VSLs should not expand on what is required in the requirement.

***Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations***

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VRF and VSL Justifications – PRC-004-3, R1	
Proposed VRF	Medium
NERC VRF Discussion	<p>A Violation Risk Factor of Medium is consistent with the NERC VRF Guidelines. Failure to review each BES interrupting device operation caused by a Protection System operation or by manual intervention in response to a Protection System failure to operate for Misoperation could, in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>Composite Protection System operations reviewed for proper operation by an owner is the first step in preventing the future severity of disturbances affecting a wider area, or potential equipment damage. However, violation of this requirement is <del>unlikely</del><u>not in itself likely</u> to lead to bulk electric system instability, separation, or cascading failures.</p>
FERC VRF G1 Discussion	<p>Guideline 1- Consistency w/ Blackout Report:</p> <p>The blackout report and subsequent technical analysis noted that zone 3 relays increased the severity of the blackout. Reviewing Protection Systems for Misoperation, identifying an unnecessary operation and taking corrective actions would reduce the likelihood of reoccurrence. This requirement is consistent with Recommendation 8: Improve System Protection to Slow or Limit the Spread of Future Cascading Outages.</p>
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p>

VRF and VSL Justifications – PRC-004-3, R1	
	This requirement has a single reliability activity associated with the reliability objective and no sub-Requirement(s) which allows a single VRF to be assigned; therefore no conflict(s) exist.
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO-), <u>which both have a VRF of “High.”</u> The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan” <del>which both have a VRF of High. This</del>. <u>The performance activity that has been isolated in Requirement R1 of PRC-004-3, to “review” (similar to “analyze”), comports consistent with similar requirements in</u> Reliability Standards PRC-016-0.1 – Special Protection System Misoperations, R1 (“...shall analyze its SPS operations and maintain a record of all misoperations...”) and PRC-022-1 – Under-Voltage Load Shedding Program Performance, R1 (“...shall analyze and document all UVLS operations and Misoperations.”) which both have a VRF of Medium.</p> <p>A VRF of Medium does not inadvertently lower the current VRF of High in the former PRC-004-2.1a, Requirements R1 and R2, because this Requirement now provides a clear and concise single reliability activity whereas the former Requirement <del>contained multiple activities and is ambiguous. The VRF assignment also comports with the currently effective standards PRC-016-0.1 and PRC-022-1. comingles multiple activities</del></p>
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs:



VRF and VSL Justifications – PRC-004-3, R1

	<p>Failure to review each BES interrupting device operation caused by a Protection System operation or by manual intervention in response to a Protection System failure to operate for Misoperation could, in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>Protection System operations reviewed for proper operation by their owner(s) is the first step in preventing the future severity of disturbances affecting a wider area, or potential equipment damage. <del>However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del></p>
<p>FERC VRF G5 Discussion</p>	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>This requirement does not co-mingle reliability objectives of differing risk; therefore, the assigned VRF of Medium is consistent.</p>

VRF and VSL Justifications – PRC-004-3, R1			
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity identified whether <del>or not</del> its Protection System component(s) caused a Misoperation in accordance with Requirement R1, but in more than 120 calendar days and less than or equal to 150 calendar days of the BES interrupting device operation.	The responsible entity identified whether <del>or not</del> its Protection System component(s) caused a Misoperation in accordance with Requirement R1, but in more than 150 calendar days and less than or equal to 165 calendar days of the BES interrupting device operation.	The responsible entity identified whether <del>or not</del> its Protection System component(s) caused a Misoperation in accordance with Requirement R1, but in more than 165 calendar days and less than or equal to 180 calendar days of the BES interrupting device operation.	The responsible entity identified whether <del>or not</del> its Protection System component(s) caused a Misoperation in accordance with Requirement R1, but in more than 180 calendar days of the BES interrupting device operation.  OR The responsible entity failed to identify whether <del>or not</del> its Protection System component(s) caused a Misoperation in accordance with Requirement R1.
NERC VSL Guidelines	Meets NERC’s VSL Guidelines—There is an incremental aspect to the VSL for tardiness and a binary aspect for failure. The VSL is entity size-neutral because performance is event-driven and not by individual assets.		

VRF and VSL Justifications – PRC-004-3, R1	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO). The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan.” The VSLs are based on the three components and not individually as presented in the proposed PRC-004-3 standard.</p> <p>This VSL does not lower the current level of compliance because the former VSL was comingled with the other activities. The VSLs appropriately assess the severity of the violation with the failure to perform a review for Misoperation as Severe.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>This requirement is not binary; therefore, this criterion does not apply.</p> <p>Guideline 2b:</p> <p>This VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p>	<p>This VSL uses similar terminology to that used in the associated requirement, and is therefore consistent with this Requirement.</p>

VRF and VSL Justifications – PRC-004-3, R1

<p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	
<p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF and VSL Justifications – PRC-004-3, R2	
Proposed VRF	Medium
NERC VRF Discussion	<p>A Violation Risk Factor of Medium is consistent with the NERC VRF Guidelines. Failure to notify the other owner(s) of a Composite Protection System when the initiating owner determined its Protection System components did not cause a Misoperation or it did not rule out a Misoperation, could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>Unresolved Misoperations of Composite Protection Systems owned by others that are not ruled out as a Misoperation could <del>contribute to the severity of future disturbances affecting a wider area, or potential equipment damage. However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del> <u>affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system by creating a gap in analysis.</u></p>
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report:

VRF and VSL Justifications – PRC-004-3, R2	
	<p>This is consistent with Recommendation 8: Improve System Protection to Slow or Limit the Spread of Future Cascading Outages. A lack of coordination on system protection was one of eight factors common to substantive outages prior to and including the August 14, 2003 Blackout. The initiating entity in the planning time frame is required to notify the other owner(s) of the Composite Protection System component(s) when it determines that (or is unsure whether) its component(s) did not cause a Misoperation or when it is unable to rule out a Misoperation of the Composite Protection System owned by others. This ensures that all owners review their equipment for proper operation which may include checking for proper coordination depending on the circumstances.</p>
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>This requirement has a single reliability activity associated with the reliability objective and no sub-Requirement(s) which allows a single VRF to be assigned; therefore no conflict(s) exist.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p>

VRF and VSL Justifications – PRC-004-3, R2

	<p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO), <u>which both have a VRF of High</u>. The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan” <u>which both have a VRF of High</u>. This requirement and a VRF assignment of Medium is consistent, <u>for example</u>, with Reliability Standards FAC-008-3 – Facility Ratings, R7 (“...shall provide Facility Ratings (for its solely and jointly owned Facilities...)”), MOD-012-0 – Dynamics Data for Modeling and Simulation of the Interconnected Transmission System, R2 (“...shall provide appropriate equipment characteristics and system data...”), <del>and IRO-015-1 – NAME</del> <u>Special Protection System Data and Documentation</u>, R1.1 (“...shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas.”), <del>and IRO-016-1 –</del> <u>Coordination of Real-time Activities Between Reliability Coordinators, R1 (“...shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem.”)</u> which all have a VRF of Medium.</p> <p>Other Protection Systems based Reliability Standards such as PRC-005-1b – Transmission and Generation Protection System Maintenance and Testing, R2 (“...shall provide documentation...”), PRC-016-0.1 – Special Protection System Misoperations, R3 (“...that owns an SPS shall provide documentation of the misoperation analyses...”), and PRC-017-0 – Special Protection System Maintenance and Testing, R2 (“...SPS shall provide documentation of the program...”) all have a VRF of Lower; however, these requirements involve the administrative reporting to either the Regional Reliability Organization (now Regional Entity) or NERC and not a reliability function like the previously mentioned FAC-008-3 and MOD-012-0 Reliability Standards. As such, this Requirement R2 is assigned a VRF of Medium because it has a reliability need to be communicated to other owners.</p>
<p>FERC VRF G4 Discussion</p>	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p>

VRF and VSL Justifications – PRC-004-3, R2

	<p>Failure to notify other entities to review each Protection System operation, identify Misoperations, and determine the cause could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>Unresolved Misoperations of Composite Protection Systems owned by others that are not ruled out as a Misoperation could contribute to the severity of future disturbances affecting a wider area, or potential equipment damage. <del>However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del></p>
<p>FERC VRF G5 Discussion</p>	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:                  This requirement does not co-mingle reliability objectives of differing risk; therefore, the assigned VRF of Medium is consistent.</p>



VRF and VSL Justifications – PRC-004-3, R2			
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity notified the other owner(s) of the Protection System component(s) in accordance with Requirement R2, but in more than 120 calendar days and less than or equal to 150 calendar days of the BES interrupting device operation.	The responsible entity notified the other owner(s) of the Protection System component(s) in accordance with Requirement R2, but in more than 150 calendar days and less than or equal to 165 calendar days of the BES interrupting device operation.	The responsible entity notified the other owner(s) of the Protection System component(s) in accordance with Requirement R2, but in more than 165 calendar days and less than or equal to 180 calendar days of the BES interrupting device operation.	The responsible entity notified the other owner(s) of the Protection System component(s) in accordance with Requirement R2, but in more than 180 calendar days of the BES interrupting device operation.  OR  The responsible entity failed to notify one or more of the other owner(s) of the Protection System component(s) in accordance with Requirement R2.
NERC VSL Guidelines	Meets NERC’s VSL Guidelines—There is an incremental aspect to the VSL for tardiness and a binary aspect for failure. The VSL is entity size-neutral because performance is event-driven and not by individual assets.		

VRF and VSL Justifications – PRC-004-3, R2	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>This requirement is new to the standard and had no previous level of compliance. Other Reliability Standards use a variety of VSLs ranging from a single severe level (i.e., binary), two levels, to four VSL levels. Some use a percentage as the failure of the number entities not notified; however, this would not be practical for this requirement as Composite Protection Systems that are owned by multiple entities is generally limited to one or two owners. The incremental increase in violation is consistent with the NERC Guidelines and is reasonable in consideration of the time periods provided by the Requirement.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>This requirement is not binary; therefore, this criterion does not apply.</p> <p>Guideline 2b:</p> <p>This VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p>	<p>This VSL uses similar terminology to that used in the associated requirement, and is therefore consistent with this Requirement.</p>

VRF and VSL Justifications – PRC-004-3, R2

<p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	
<p>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF and VSL Justifications – PRC-004-3, R3

Proposed VRF	Medium
NERC VRF Discussion	<p>A Violation Risk Factor of Medium is consistent with the NERC VRF Guidelines. Failure of another Composite Protection System owner to review its component(s) for Misoperation, upon notification, for each BES interrupting device operation caused by a Protection System operation or by manual intervention in response to a Protection System failure to operate could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>Composite Protection System operations reviewed for proper operation by the other owner(s) is an important step in preventing the future severity of disturbances affecting a wider area, or potential equipment damage. <del>However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del></p>
FERC VRF G1 Discussion	<p>Guideline 1- Consistency w/ Blackout Report:</p> <p>The blackout report and subsequent technical analysis noted that zone 3 relays increased the severity of the blackout. Reviewing Protection Systems for Misoperation, identifying an unnecessary operation and taking corrective actions would reduce the likelihood of reoccurrence. This requirement is consistent with Recommendation 8: Improve System Protection to Slow or Limit the Spread of Future Cascading Outages.</p>

VRF and VSL Justifications – PRC-004-3, R3	
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>This requirement has a single reliability activity associated with the reliability objective and no sub-Requirement(s) which allows a single VRF to be assigned; therefore no conflict(s) exist.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO). The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan” which both have a VRF of High. This Requirement R3, to “review” (similar to “analyze”), comports with Reliability Standards PRC-016-0.1 – Special Protection System Misoperations, R1 (“...shall analyze its SPS operations and maintain a record of all misoperations...”) and PRC-022-1 – Under-Voltage Load Shedding Program Performance, R1 (“...shall analyze and document all UVLS operations and Misoperations.”) which both have a VRF of Medium.</p> <p>A VRF of Medium does not inadvertently lower the current VRF of High in the former PRC-004-2.1a, Requirements R1 and R2, because this Requirement now provides a clear and concise single reliability activity whereas the former Requirement contained multiple activities and is ambiguous.</p>

VRF and VSL Justifications – PRC-004-3, R3

<p>FERC VRF G4 Discussion</p>	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p> <p>Failure of another Composite Protection System owner to review its component(s) for Misoperation, upon notification, for each BES interrupting device operation caused by a Protection System operation or by manual intervention in response to a Protection System failure to operate could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>Composite Protection System operations reviewed for proper operation by the other owner(s) is an important step in preventing the future severity of disturbances affecting a wider area, or potential equipment damage. <del>However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del></p>
<p>FERC VRF G5 Discussion</p>	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>This requirement does not co-mingle reliability objectives of differing risk; therefore, the assigned VRF of Medium is consistent.</p>

VRF and VSL Justifications – PRC-004-3, R3			
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity identified whether or not its Protection System component(s) caused a Misoperation in accordance with Requirement R3, but was less than or equal to 30 calendar days late.	The responsible entity identified whether or not its Protection System component(s) caused a Misoperation in accordance with Requirement R3, but was greater than 30 calendar days and less than or equal to 45 calendar days late.	The responsible entity identified whether or not its Protection System component(s) caused a Misoperation in accordance with Requirement R3, but was greater than 45 calendar days and less than or equal to 60 calendar days late.	The responsible entity identified whether or not its Protection System component(s) caused a Misoperation in accordance with Requirement R3, but was greater than 60 calendar days late.  OR The responsible entity failed to identify whether or not a Misoperation of its Protection System component(s) occurred in accordance with Requirement R3.
NERC VSL Guidelines	Meets NERC’s VSL Guidelines—There is an incremental aspect to the VSL for tardiness and a binary aspect for failure. The VSL is entity size-neutral because performance is event-driven and not by individual assets.		

VRF and VSL Justifications – PRC-004-3, R3

<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (DP) and R2 (GO &amp; TO) for the notified Protection System owner. The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan.” The VSLs are based on the three components and not individually as presented in the proposed PRC-004-3 standard.</p> <p>A VSL does not lower the current level of compliance because the former VSL was comingled with the other activities. This VSLs appropriately assess the severity of the violation with the failure to perform investigative actions as Severe.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>This requirement is not binary; therefore, this criterion does not apply.</p> <p>Guideline 2b:</p> <p>This VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>



## VRF and VSL Justifications – PRC-004-3, R3

FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	This VSL uses similar terminology to that used in the associated requirement, and is therefore consistent with this Requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF and VSL Justifications – PRC-004-3, R4	
Proposed VRF	Medium
NERC VRF Discussion	<p>A Violation Risk Factor of Medium is consistent with the NERC VRF Guidelines. Failure to identify the cause(s) of a Misoperation (if not determined in Requirements R1 or R3) could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>An Unidentified cause(s) of a Misoperation could contribute to the severity of future disturbances affecting a wider area, or potential equipment damage. <del>However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del></p>
FERC VRF G1 Discussion	<p>Guideline 1- Consistency w/ Blackout Report:</p> <p>This requirement is consistent with Recommendation 8: Improve System Protection to Slow or Limit the Spread of Future Cascading Outages. The applicable entity must conduct investigative action(s) to determine the cause(s) of a Misoperation, if not determined during the course of a review as proposed in Requirements R1 and R3.</p>
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>This requirement has a single reliability activity associated with the reliability objective and no sub-Requirement(s) which allows a single VRF to be assigned; therefore no conflict(s) exist.</p>

VRF and VSL Justifications – PRC-004-3, R4

<p>FERC VRF G3 Discussion</p>	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO-), <del>which have a VRF of High.</del> The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan” <del>which have a VRF of High.”</del> This Requirement R4, to perform at least one “investigative action” (similar to “analyze”), comports with Reliability Standards PRC-016-0.1 – Special Protection System Misoperations, R1 (“...shall analyze its SPS operations and maintain a record of all misoperations...”) and PRC-022-1 – Under-Voltage Load Shedding Program Performance, R1 (“...shall analyze and document all UVLS operations and Misoperations.”) which both have a VRF of Medium.</p> <p>A VRF of Medium is not inadvertently lowering the current VRF of High in the former PRC-004-2.1a, Requirements R1 or R3, because this Requirement now provides a clear and concise single reliability activity whereas the former Requirement contained multiple activities and is ambiguous. This VRF of Medium comports with the VRF assignment of Medium for PRC-004-3, Requirements R1 and R3, which will generally reveal the cause(s) of an identified Misoperation.</p>
<p>FERC VRF G4 Discussion</p>	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p> <p>Failure to identify the cause(s) of a Misoperation could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p>

VRF and VSL Justifications – PRC-004-3, R4			
	Unidentified causes of a Misoperation could contribute to the severity of future disturbances affecting a wider area, or potential equipment damage. <del>However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del>		
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: This requirement does not co-mingle reliability objectives of differing risk; therefore, the assigned VRF of Medium is consistent.		
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity performed at least one investigative action in accordance with Requirement R4, but was less than or equal to one calendar quarter late.	The responsible entity performed at least one investigative action in accordance with Requirement R4, but was greater than one calendar quarter and less than or equal to two calendar quarters late.	The responsible entity performed at least one investigative action in accordance with Requirement R4, but was greater than two calendar quarters and less than or equal to three calendar quarters late.	The responsible entity performed at least one investigative action in accordance with Requirement R4, but was more than three calendar quarters late.  OR The responsible entity failed to perform investigative action(s) in accordance with Requirement R4.

VRF and VSL Justifications – PRC-004-3, R4	
NERC VSL Guidelines	Meets NERC’s VSL Guidelines—There is an incremental aspect to the VSL for tardiness and a binary aspect for failure. The VSL is entity size-neutral because performance is event-driven and not by individual assets.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	<p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO). The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan.” The VSLs are based on the three components and not individually as presented in the proposed PRC-004-3 standard.</p> <p>This VSL does not lower the current level of compliance because the former VSL was comingled with the other activities. This VSLs appropriately assess the severity of the violation with the failure to perform investigative actions as Severe.</p>
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	<p>Guideline 2a: This requirement is not binary; therefore, this criterion does not apply.</p> <p>Guideline 2b: This VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>

## VRF and VSL Justifications – PRC-004-3, R4

FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	This VSL uses similar terminology to that used in the associated requirement, and is therefore consistent with this Requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF and VSL Justifications – PRC-004-3, R5	
Proposed VRF	Medium
NERC VRF Discussion	<p>A Violation Risk Factor of Medium is consistent with the NERC VRF Guidelines. Failure to develop a CAP for a Misoperation with an identified cause could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>An unresolved cause of a Misoperation or failing to consider other locations with similar Protection System components could <del>contribute</del> <u>affect</u> the <del>severity</del> <u>electrical state or capability</u> of <del>future disturbances affecting a wider area, or potential equipment damage.</del> <del>However, violation of this requirement is unlikely to lead to</del> <u>the</u> bulk electric system <del>instability, separation, or cascading failures</del> <u>the ability to effectively monitor, control, or restore the bulk electric system.</u></p>
FERC VRF G1 Discussion	<p>Guideline 1- Consistency w/ Blackout Report:</p> <p>The blackout report and subsequent technical analysis resulted in entities performing corrective actions; however, there were no negative reliability outcomes concerning the development of a Corrective Action Plan (CAP) associated with Protection Systems.</p>
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>This requirement has a single reliability activity associated with the reliability objective and no sub-Requirement(s) which allows a single VRF to be assigned; therefore no conflict(s) exist.</p>

VRF and VSL Justifications – PRC-004-3, R5

<p>FERC VRF G3 Discussion</p>	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO). The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan” which have a VRF of High. This requirement is consistent with Reliability Standards PRC-016-0.1, R2 (“...shall take corrective actions to avoid future Misoperations”), PRC-022-1, R1.5 (“For any Misoperation, a Corrective Action Plan...”), FAC-003, R5 (“...Transmission Owner or applicable Generator Owner shall take corrective action to ensure continued vegetation management”) all three of which have a VRF of Medium.</p>
<p>FERC VRF G4 Discussion</p>	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p> <p>Failure to develop a CAP for a Misoperation with an identified cause or failing to consider other locations with similar components could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>An unresolved cause of a Misoperation could <del>contribute</del><u>affect</u> the <del>severity</del><u>electrical state or capability</u> of <del>future disturbances affecting a wider area, or potential equipment damage.</del> <del>However, violation of this requirement is unlikely to lead to the</del> bulk electric system <del>instability, separation, or cascading failures</del><u>the ability to effectively monitor, control, or restore the bulk electric system if the same condition resulted in a future Misoperation.</u></p>



VRF and VSL Justifications – PRC-004-3, R5			
FERC VRF G5 Discussion	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>This requirement does not co-mingle reliability objectives of differing risk; therefore, the assigned VRF of Medium is consistent.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
<p>The responsible entity developed a CAP, or explained in a declaration in accordance with Requirement R5, but in more than 60 calendar days and less than or equal to 70 calendar days of first identifying a cause of the Misoperation.</p> <p>OR</p>	<p>The responsible entity developed a CAP, or explained in a declaration in accordance with Requirement R5, but in more than 70 calendar days and less than or equal to 80 calendar days of first identifying a cause of the Misoperation.</p> <p>OR</p>	<p>The responsible entity developed a CAP, or explained in a declaration in accordance with Requirement R5, but in more than 80 calendar days and less than or equal to 90 calendar days of first identifying a cause of the Misoperation.</p> <p>OR</p> <p>The responsible entity developed an evaluation in accordance with Requirement R5, but in more than 80 calendar days and less than or equal to 90 calendar days of first identifying a cause of the Misoperation.</p>	<p>The responsible entity developed a CAP, or explained in a declaration in accordance with Requirement R5, but in more than 90 calendar days of first identifying a cause of the Misoperation.</p> <p>OR</p> <p>The responsible entity failed to develop a CAP or explain in a declaration in accordance with Requirement R5.</p> <p>OR</p>

VRF and VSL Justifications – PRC-004-3, R5			
<p>The responsible entity developed an evaluation in accordance with Requirement R5, but in more than 60 calendar days and less than or equal to 70 calendar days of first identifying a cause of the Misoperation.</p>	<p>The responsible entity developed an evaluation in accordance with Requirement R5, but in more than 70 calendar days and less than or equal to 80 calendar days of first identifying a cause of the Misoperation.</p>		<p>The responsible entity developed an evaluation in accordance with Requirement R5, but in more than 90 calendar days of first identifying a cause of the Misoperation.</p> <p>OR</p> <p>The responsible entity failed to develop an evaluation in accordance with Requirement R5.</p>
<p>NERC VSL Guidelines</p>	<p>Meets NERC’s VSL Guidelines—There is an incremental aspect to the VSL for tardiness and a binary aspect for failure. Varying VSLs are provided for the omission of the evaluation when developing the Corrective Action Plan and for failure to develop the evaluation.</p>		
<p>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO). The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan” which have varying VSLs.</p> <p>This VSL does not lower the current level of compliance because the former VSL in PRC-004-2.1a was comingled with the other activities. This Requirement has a Severe VSL for failure to develop the CAP with the other VSLs being based on tardiness of the development.</p>		

VRF and VSL Justifications – PRC-004-3, R5	
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>This requirement is not binary; therefore, this criterion does not apply.</p> <p>Guideline 2b:</p> <p>This VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>This VSL uses similar terminology to that used in the associated requirement, and is therefore consistent with this Requirement.</p>
<p>FERC VSL G4</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF and VSL Justifications – PRC-004-3, R5

<p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	
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VRF and VSL Justification – PRC-004-3, R6

Proposed VRF	Medium
<p>NERC VRF Discussion</p>	<p>A Violation Risk Factor of Medium is consistent with the NERC VRF Guidelines. Failure to implement a CAP for a Misoperation with an identified cause could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>An uncorrected cause of a Misoperation as a result of not implementing a Corrective Action Plan, could <del>contribute to the severity of future disturbances affecting a wider area, or potential equipment damage. However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del> <u>affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system since the condition could occur again.</u></p>

VRF and VSL Justification – PRC-004-3, R6	
FERC VRF G1 Discussion	<p>Guideline 1- Consistency w/ Blackout Report:</p> <p>The blackout report and subsequent technical analysis resulted in entities performing corrective actions; however, there were no negative reliability outcomes concerning the implementation of a Corrective Action Plan (CAP) associated with Protection Systems.</p>
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>This requirement has a single reliability activity associated with the reliability objective and no sub-Requirement(s) which allows a single VRF to be assigned; therefore no conflict(s) exist.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>This requirement replaces one of the three performance components of PRC-004-2.1a, R1 (TO &amp; DP) and R2 (GO<del>+</del>), <del>which both have a VRF of High.</del> The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan” <del>which both have a VRF of High.</del> This requirement is consistent with Reliability Standards PRC-016-0.1, R2 (“...shall take corrective actions to avoid future misoperations.”) and PRC-022-1, R1.5 (“For any Misoperation, a Corrective Action Plan...”) which both have a VRF of Medium.</p> <p>The proposed VRF of Medium does not inadvertently lower the current VRF of High in the former PRC-004-2.1a, Requirements R1 and R2, because this Requirement now provides a clear and concise single reliability activity whereas the former Requirement contained multiple activities and is ambiguous.</p>

VRF and VSL Justification – PRC-004-3, R6

<p>FERC VRF G4 Discussion</p>	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p> <p>Failure to implement a Corrective Action Plan for a Misoperation with an identified cause could in the planning time frame, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. <del>However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del></p> <p>An uncorrected cause of a Misoperation could contribute to the severity of future disturbances affecting a wider area, or potential equipment damage. <del>However, violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</del></p>
<p>FERC VRF G5 Discussion</p>	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>This requirement does not co-mingle reliability objectives of differing risk; therefore, the assigned VRF of Medium is consistent.</p>

VRF and VSL Justification – PRC-004-3, R6			
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity implemented, but failed to update a CAP, when actions or timetables changed, in accordance with Requirement R6.	N/A	N/A	The responsible entity failed to implement a CAP in accordance with Requirement R6.
NERC VSL Guidelines			
Meets NERC’s VSL Guidelines—The VSLs cover aspects of this Requirement that are not equal in importance and performance.			
FERC VSL G1			
Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>This requirement replaces one of the three performance components of PRC-004-2a, R1 (TO &amp; DP) and R2 (GO). The three performance components (paraphrased) are “analyze Protection System Misoperations,” “develop a Correction Action Plan,” and “implement a Corrective Action Plan.” The VSLs are based on the three components and not individually as presented in the proposed PRC-004-3 standard.</p> <p>The proposed VSL does not lower the current level of compliance because the former VSL was comingled with the other activities. The proposed Requirement is a Severe VSL for failure to implement the CAP with the Lower VSL being based on the failure of updating the CAP when actions or timetables change which is administrative in nature.</p>		

VRF and VSL Justification – PRC-004-3, R6	
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>This requirement is not binary; therefore, this criterion does not apply.</p> <p>Guideline 2b:</p> <p>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses similar terminology to that used in the associated requirement, and is therefore consistent with this Requirement.</p>
<p>FERC VSL G4</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>



## VRF and VSL Justification – PRC-004-3, R6

Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	
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