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**Attachment B - “Relay Test Summary,” computerized spreadsheets, printouts of relay test sheets, and “Relay Test Guidelines,” submitted to MRO on April 18, 2008** [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

**Attachment C - “WPSC/UPCO Relay Maintenance and Testing Policy,” RC30-13, dated October 22, 2002** [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

**Attachment D – “WPSC/UPPCO Protection System Maintenance and Testing Program,” RC30-13, dated October 31, 2005 revised June 11, 2009; and “WPSC/UPPCO Substation Battery Maintenance and Testing Program,” RC30-18, dated January 29, 2009** [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

**Attachment E – “WPSC Maintenance and Testing Dates,” submitted to MRO on June 12, 2009** [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

**Attachment F – “MRO Reliability Standards Self-Certification Data Request,” submitted to MRO on December 27, 2007** [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

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**Attachment I – Supplemental Record Information Notices issued on October 16, 2008 and November 12, 2008, by Midwest Reliability Organization [*This Attachment contains Privileged and Confidential Information that has been removed from this public version.*]**

## **I. INTRODUCTION**

The North American Electric Reliability Corporation (“NERC”) and the Midwest Reliability Organization (“MRO”) respectfully submit this Response to the Federal Energy Regulatory Commission’s (“FERC” or the “Commission”) May 29, 2009 Order (“May 29 Order”) in the above captioned proceeding,<sup>1</sup> regarding NERC's May 1, 2009 Notice of Penalty filing regarding Wisconsin Public Service Corporation (“WPSC”) in the MRO Region. The Notice of Penalty involves a zero dollar (\$0) penalty assessed by MRO to WPSC for violations of Reliability Standard PRC-005-1, Requirements 1 and 2. The May 29 Order requests additional data from NERC and MRO to help FERC Staff with its analysis of the May 1, 2009 Notice of Penalty filing. This filing responds to the May 29 Order requesting supplemental documentation to ensure that sufficient facts and evidence are provided in support of the Notice of Penalty regarding WPSC filed with the Commission on May 1, 2009.

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<sup>1</sup> *North American Electric Reliability Corporation*, “Order Extending the Time Period for Consideration,” 127 FERC ¶ 61,198 (2009) (“May 29 Order”).

## **II. NOTICES AND COMMUNICATIONS**

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## **III. RESPONSES TO THE MAY 29 ORDER**

Information set forth in Attachments A-F and I to the instant filing includes privileged and confidential information and critical energy infrastructure information as defined by the Commission's regulations at 18 C.F.R. Part 388 and orders, as well as NERC Rules of Procedure including the NERC CMEP Appendix 4C to the Rules of Procedure. Specifically, the information pertains to proprietary or business design information, including design information related to vulnerabilities of critical energy infrastructure information, that is not publicly

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available. Accordingly, the information set forth in the Attachments A-F and I has been redacted from the public filing. In accordance with the Commission's Rules of Practice and Procedure, 18 C.F.R. § 388.112, a non-public version of the information redacted from the public filing is being provided under separate cover. NERC requests that the confidential, non-public information be provided special treatment in accordance with the above regulation.

**A. *Request No. 1: Provide the Supplemental Record Information Notices Issued on October 16, 2008 and November 12, 2008 by MRO***

Please see the attached public versions of Attachment I. [*This Attachment contains Privileged and Confidential Information that has been removed from this public version.*]

**B. *Request No. 2: Provide the documentation provided by WPSC to MRO to demonstrate completion of Mitigation Plan MT-07-0448***

WPSC's Mitigation Plan for Violation ID Tracking Numbers MRO200700042 and MRO200700044 was accepted by MRO on March 13, 2008, and approved by NERC on March 18, 2008. The Mitigation Plan for the violations listed is designated as MIT-07-0448 and was submitted as non-public information to FERC on March 18, 2008 in accordance with FERC orders.

On March 27, 2008, WPSC notified MRO of the completion of its Mitigation Plan and indicated that it was ready to provide verification data upon request. MRO requested the verification data on April 2, 2008. On April 18, 2008, WPSC provided documentation including its Relay Maintenance and Testing Program, Relay Test Summary, computerized spreadsheets indicating when each relay had been tested, sample relay test reports, and Relay Test Guidelines. MRO reviewed the submitted documentation and notified WPSC on April 28, 2008 that the mitigation plan was deemed complete with regard to Standard PRC-005-1, R1 and R2.

The following documents were reviewed by MRO to verify completion of the Mitigation Plan:

- Attachment A, "WPSC/UPPCO Relay Maintenance and Testing Policy," RC30-13-01, dated October 31, 2005 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]
- Attachment B, "Relay Test Summary," computerized spreadsheets, printouts of relay test sheets, and "Relay Test Guidelines," submitted to MRO on April 18, 2008 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

**C. Request No. 3: Provide the documentation of WPSC's Protection System Maintenance and Testing Program from (a) before WPSC's October 23, 2007 self-certification; (b) before the Mitigation Plan was completed; and (c) after the completion of the Mitigation Plan**

The WPSC Protection System Maintenance and Testing Program in place prior to the self-certification of non-compliance indicated that "relays located in power plants are tested once a year, usually during plant shutdown periods." This Program document had been in place since October 2002 and was considered by WPSC to be a workplan document to provide guidance related to maintenance and testing of protection systems. The document existed prior to the mandatory enforcement of PRC-005-1 and had not been updated to reflect the requirements of the mandatory NERC Reliability Standards.

As evidence of completion of its Mitigation Plan, WPSC submitted its revised Protection System Maintenance and Testing Program to MRO on December 27, 2007.<sup>2</sup> Since this revised Program document was implemented, WPSC has updated its Protection System Maintenance and Testing Program to comprehensively address the basis, intervals, and summary of maintenance and testing procedures for all elements included in its protection system program. The following documents demonstrate the evolution of the WPSC program:

- Attachment C, "WPSC/UPCO Relay Maintenance and Testing Policy," RC30-13, dated October 22, 2002 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]
- Attachment A, "WPSC/UPPCO Relay Maintenance and Testing Policy," RC30-13-01, dated October 31, 2005 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]
- Attachment D, "WPSC/UPPCO Protection System Maintenance and Testing Program," RC30-13, dated October 31, 2005 revised June 11, 2009; and "WPSC/UPPCO Substation Battery Maintenance and Testing Program," RC30-18, dated January 29, 2009 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

Based on the revisions to the 2002 Relay Maintenance and Testing Policy document, MRO determined that WPSC had identified the relay maintenance and testing intervals and their basis and had provided a summary of the maintenance and testing procedures as required by PRC-005-1, R1. WPSC's revised Protection System Maintenance and Testing Policy established a planning criteria and a "not-to-exceed" criteria for scheduling testing intervals. The planning criteria is used to develop the annual work plan and schedule for the testing of generation protection. The "not-to-exceed" criteria provides the flexibility needed in the work plan to accommodate a variety of conditions that influence a unit's availability for testing by setting a

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<sup>2</sup> Due to an administrative oversight, WPSC self certified non-compliant with PRC-005-1 R1 on January 10, 2008, after it had submitted its revised Protection System Maintenance and Testing Program on December 27, 2007.

maximum allowed duration between tests based on the experience with and performance of each type of relay. On April 28, 2008, MRO verified that WPSC had completed the mitigation of this violation as of December 27, 2007, the date WPSC provided the updated Relay Maintenance and Testing Policy.

**D. *Request No. 4: Provide any additional, available documentation about WPSC's Protection System Maintenance and Testing program, including information about the devices covered under the program***

The FERC order includes a request for any additional, available documentation about WPSC's Protection System Maintenance and Testing Program. Several of the Attachments to this document are responsive to this request, including:

- Attachment D, "WPSC/UPPCO Protection System Maintenance and Testing Program," RC30-13, dated October 31, 2005 revised June 11, 2009; and "WPSC/UPPCO Substation Battery Maintenance and Testing Program," RC30-18, dated January 29, 2009 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]
- Attachment E, "WPSC Maintenance and Testing Dates," submitted to MRO on June 12, 2009 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]
- Attachment F, "MRO Reliability Standards Self-Certification Data Request," submitted to MRO on December 17, 2007 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]

**E. *Request No. 5: Provide information about the devices covered under the program, including, if available, the number of protection elements covered by the program, the last two dates on which they were most recently tested and the number of protection elements which were associated with the 22 unites identified in the filing***

Through the Self Certification process, WPSC reported non-compliance with Standard PRC-005-1, Requirement 2 on October 23, 2007.<sup>3</sup> WPSC reported that the testing of the generator protection systems was behind schedule. At the time of the self-certification, WPSC's documented testing interval for protection system relays located in power plants required annual testing, and the maintenance and testing had only been performed according to this interval for 102 relays, representing approximately 1/4 of the total relays subject to compliance with Reliability Standard PRC-005-1.

WPSC's documented program in place at the time of the Self Certification contained conflicting statements about the defined testing intervals. The document clearly states that "relays located in

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<sup>3</sup> The Notice of Alleged Violation and Proposed Penalty and Sanction incorrectly states the date of Self-Certification as October 24, 2007. The Self-Certification was due on October 24, 2007; WPSC certified to its non-compliance on October 23, 2007.



power plants are tested once a year, usually during plant shutdown periods.” The document goes on to require electromechanical relays be tested once every four years and solid state, digital, and microprocessor based relays be tested once every five years. Although these defined intervals for the specific relay types had not been exceeded, the “once a year” requirement for relays located in power plants had been exceeded which resulted in the Self Certification of non-compliance with PRC-005-1, R2.

WPSC owns an estimated total of 767 protection system devices that are subject to compliance with Reliability Standard PRC-005-1. The 319 relays that were noncompliant with the established WPSC maintenance and testing “once a year” interval represent less than half of the total WPSC protection system devices.

In response to the FERC order, WPSC provided spreadsheets indentifying the protection system devices and the maintenance and test dates for at least the last two dates on which each device was tested. WPSC provided a separate tab for each generation plant with a separate section for each of the 22 generating units identified in its Mitigation Plan. These comprehensive records provide further verification that the maintenance and testing was completed by the March 31, 2008 Mitigation Plan deadline. The records also reflect that WPSC is meeting its maintenance and testing intervals. These records are provided as:

- Attachment B, “Relay Test Summary,” computerized spreadsheets, printouts of relay test sheets, and “Relay Test Guidelines,” submitted to MRO on April 18, 2008 [*Privileged and Confidential Information and Critical Energy Infrastructure Information have been removed from this public version.*]
- Attachment E, “WPSC Maintenance and Testing Dates,” submitted to MRO on June 12, 2009. [*Privileged and Confidential Information and Critical Energy Infrastructure Information have been removed from this public version.*]

**F. *Request No. 6: Provide any additional, available documentation regarding the decision by WPSC management to delay generation protection system maintenance and testing***

In its Mitigation Plan, WPSC explained that it made the decision to delay the 2006/2007 relay testing in order to respond to system conditions and the competing priorities of work associated with the construction of a new 525 MW coal fired power plant, and therefore was non-compliant with its established testing intervals as required by PRC-005-1, R2.1.

In response to a request from MRO for additional information regarding the reason for delaying the 2006/2007 relay testing, WPSC provided a document entitled “MRO Reliability Standards Self-Certification Data Request Standard PRC-005-1 R2” on December 27, 2007. In this document, WPSC explained that “the primary reason the 1 year target was exceeded in the 2006/2007 test cycle was a heavy, unanticipated work load.” WPSC further stated, “Historically the one year target duration between tests has been just that, an operational target.” These statements demonstrate that the decision to delay the testing was based on workload priorities and the past practice in the application and use of the Protection System Maintenance and Testing Policy as a guideline, rather than a mandatory requirement.

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In response to the FERC Order, WPSC further discussed this matter with MRO staff and attributed the decision to delay the testing to the following two causes:

1. WPSC points to the number of significant construction projects designed to improve the reliability of the bulk electric system that were underway as a contributing factor to the delay in the 2006/2007 testing. During 2006 and 2007, five major construction projects<sup>4</sup> were being supported by the WPSC Substation Engineering group. Therefore, workload priority was a cause.
2. Lack of clarity and understanding by the Substation Engineering group of the need to strictly follow the WPSC Relay Maintenance and Testing Policy due to the nature of mandatory requirements for PRC-005-1. Based on past practice, the duration between tests was considered a target, rather than a requirement. Consistent with past practice, the relay testing was prioritized with other reliability-based work and testing was delayed. Therefore, WPSC Substation Engineering group staff relied on “past practice” (pre-June 18, 2007) to reschedule protection system calibration and testing. Since the rescheduling was not allowed by the WPSC Relay Maintenance and Testing Policy, the use of past practice caused a violation of PRC-005-1, R2.

Therefore, the “decision” to delay was more the application of prior practice and the misunderstanding that the intervals were “targets,” rather than a formal decision to delay the testing. Workload priorities were a contributing cause of the violation, but lack of understanding of the strict application of the testing program is the primary cause. Because this violation was discovered in the 2007 self certification process conducted four months after the NERC Reliability Standards became mandatorily enforceable, WPSC had not yet reviewed and updated its Protection System Maintenance and Testing Program to address the requirements of PRC-005-1.

This information is reflected in the following documents:

- Attachment F, “MRO Reliability Standards Self-Certification Data Request,” submitted to MRO on December 17, 2007 [*This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.*]
- Attachment G, “MRO Request #4,” submitted to MRO on June 5, 2009

**G. Request No. 7: Provide any available documentation about WPSC’s relay testing relevant to the Western Power Plant, including information about when the system test status was “Red”**

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<sup>4</sup> The construction projects included: (1) Arrowhead to Weston transmission line; (2) Construction of a 535 MW base load power plant, the Weston 4 generator; (3) Construction of the Gardner Park substation, tie lines between Gardner Park and the Weston substation; (4) Reconstruction of the 115 KV Weston substation; and (5) Due to the reinforcement of the transmission system described by the previous bullets, several line terminals within the central Wisconsin area were upgraded.

Section D.1 of the WPSC Mitigation Plan describes the action plan for mitigation and provides an explanation of the steps that WPSC had completed as of February 8, 2008, the date it submitted the mitigation plan. This section of the Mitigation Plan explains that the maintenance and testing had been completed at each of the generating plants with the exception of units at the Weston Power Plant. WPSC explained that testing would be completed at the Weston Power Plant by March 31, 2008. The Mitigation Plan stated that “no relay testing was permitted when the system status was ‘Red.’”

In response to the FERC Order, MRO asked WPSC for additional information regarding the Weston Power Plant testing and the system test status of “Red.” WPSC explained that the outage of Weston Unit 3 was not related to the self-certification of noncompliance with PRC-005-1, R2, but rather an explanation of the delay in meeting the original proposed mitigation deadline of December 21, 2007. In its self-certification, WPSC had indicated that the maintenance and testing would be completed by December 21, 2007. However, it was not possible to meet this date due to a forced outage at the Weston Power Plant.

WPSC explained that on October 6, 2007, the Weston generating station sustained multiple forced outages following a lightning strike<sup>5</sup> to a transmission facility. Early indications were that Weston Unit 3, a 330 MW coal plant, sustained significant damage and may not return to service for several weeks. Ultimately, Weston Unit 3 was out of service until January 15, 2008. On October 8, 2007, the Weston generating site was placed in test restriction condition red. The test restriction condition was subsequently changed to yellow which required prior approval for any testing. Given the limited transmission capability in the Weston area, the test restrictions served to mitigate potential adverse reliability consequences from an outage of one of the remaining Weston generating units.

This information is reflected in the following document:

- Attachment H, “MRO Request #5,” discussing the test status “Red,” submitted to MRO on June 5, 2009

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<sup>5</sup> MRO corroborated that the lightning strike was widely reported in various news outlets.

**IV. CONCLUSION**

The North American Electric Reliability Corporation respectfully requests that the Commission accept this filing as compliant with the May 27, 2009 Order.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 18th day of June, 2009.

*/s/ Holly A. Hawkins*

Holly A. Hawkins

*Attorney for North American Electric  
Reliability Corporation*

## **Attachment A**

**“WPSC/UPPCO Relay Maintenance and Testing Policy,” RC30-13-01, dated October 31, 2005**

*[This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.]*

## **Attachment B**

**“Relay Test Summary,” computerized spreadsheets, printouts of relay test sheets, and “Relay Test Guidelines,” submitted to MRO on April 18, 2008**

*[This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.]*

## **Attachment C**

**“WPSC/UPCO Relay Maintenance and Testing Policy,” RC30-13, dated October 22, 2002**

*[This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.]*



## **Attachment D**

**“WPSC/UPPCO Protection System Maintenance and Testing Program,” RC30-13, dated October 31, 2005 revised June 11, 2009; and “WPSC/UPPCO Substation Battery Maintenance and Testing Program,” RC30-18, dated January 29, 2009**

*[This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.]*

## **Attachment E**

**“WPSC Maintenance and Testing Dates,” submitted  
to MRO on June 12, 2009**

*[This Attachment contains Privileged and Confidential  
Information and Critical Energy Infrastructure  
Information that have been removed from this public  
version.]*

## **Attachment F**

**“MRO Reliability Standards Self-Certification Data Request,” submitted to MRO on December 27, 2007**

*[This Attachment contains Privileged and Confidential Information and Critical Energy Infrastructure Information that have been removed from this public version.]*

## **Attachment G**

**“MRO Request #4,” discussing the delay in 2006/2007 testing, submitted to MRO on June 5, 2009**



## Attachment G

"MRO Request #4," discussing the delay in  
2006/2007 testing

Submitted to MRO on June 5, 2009



MRO Request #4:

“With regard to the 2 issues we discussed earlier today, MRO has identified a document submitted by Neal Balu on 12/27/2007 which provides additional description of the decision to delay testing due to the competing priorities associated with the new Weston 4 unit. I have attached that document for your review. Any additional information you may be able to provide to explain or document the decision to delay testing would be helpful.”

WPSC Response:

**Sequence of Events:**

Late 2006/early 2007: The Substation Engineering group begins reprioritizing protection system testing to address increased work load related to construction of the Weston 4 generator and multiple ATCLLC transmission projects, most notably the Arrowhead – Weston 345 kV project. The reprioritization resulted in protection systems exceeding their test schedule as set forth in RC-30-13, “WPSC/UPPCo Relay Maintenance and Testing Program”, during 2007. The reprioritization of relay testing is consistent with “past practice” during the voluntary compliance to PRC-005-1. The Substation Engineering Group views the calibration schedule as a target date that can be moved if sound engineering judgment is used. However the process to reprioritize is not set forth in RC-30-13

18 June 2007: Mandatory effective date for NERC Electric Reliability Standard PRC-005-1.

Mid October 2007: During preparation for the October 2007 self-certification, WPSC senior management identifies the use of “past practice” to reprioritize protection system test and calibration violates RC-30-13 and thereby requirement 2 of PRC-005-1.

23 October 2007: WPSC identifies a noncompliance with R2 of PRC-005-1 and self-reports that violation. (Reference: Letter from: SE Patrick (MRO) to: CT Plante (WPSC) date: 12 November 2008, Attachment A)

In the “MEMBER COMMENTS” section of the October 23 noncompliance notification, WPSC states: “WPSC has in place a protection system maintenance and testing procedures, however the testing of protection systems of generators is running behind schedule. WPSC plans to catch up with testing by 12/21/2007”

Oct/Nov/Dec 2007: Based on subsequent communications, it appears WPSC Communicates to MRO that relay testing would be completed by a 12/31/2007. It is not clear how this is communicated.

17 December 2007: MRO requests additional information regarding the mitigation plan for WPSC and UPPCo. (Reference: Email from: SE Patrick (MRO) to: TJ Webb (WPSC) date: 06/01/2009, second attachment)

27 December 2007: WPSC responds to MRO's December 17 data request. (Reference: Email from: SE Patrick (MRO) to: TJ Webb (WPSC) date: 06/01/2009, second attachment)

MRO question "How far behind schedule is the testing for each of these units, and what are the reasons for being behind schedule?"

In response, WPSC addresses both the cause of the non-compliance and the cause of the delay in the self imposed deadline of 12/31/2007.

In response to the delay in the self imposed deadline, WPSC states:

"As the data shows, the generator relay testing has been completed ahead of the 12/31/07 commitment called for in the Mitigation Plan Summary. The smaller units at Weston can not be tested until Unit 3 returns to service in January 2007 due to system conditions. It should be noted that although not all of the relays for each unit were tested at Weston in 2007, the generator breakers for all units that tie into the 115 kv substation were replaced this year. As part of this project several relays were upgraded or had new settings programmed, which were then fully tested before returning to service."

In response to the cause of the violation WPSC states:

"The primary reason the 1 year target was exceeded in the 2006107 test cycle was that a heavy, unanticipated, work load for our relay test group forced us to reprioritize this cycle. Relay testing and programming for the new Weston 4 unit and for ATC1s many transmission projects in central Wisconsin that support the W4 project were much higher than planned. WPSC believes its overall relay test and maintenance plan for generators and other relays is very conservative relative to common practice found in the utility industry. Historically the one year target duration between tests has been just that, an operational target. Having a conservative target assured we returned to these relays frequently and maintained a good understanding of how they were performing. This understanding allowed us to manage the overall 200612007 substation maintenance plan and shift our priorities for testing with a full knowledge of risks and benefits. WPSC realizes this historical approach is no longer adequate given the EROIMRO reliability standards we have now committed to meeting. It took the remainder of 2007 to get our generation relay testing caught up and to establish an appropriate long term policy under this standard, one that worked for both WPSC and UPPCO.



Future relay test and maintenance resources will be allocated in accordance with our new standard. “

08 February 2008: WPSC files a formal mitigation plan with MRO. (Reference letter From CA Schrock (WPSC) to DR Schoenecker (MRO) Dated 02/08/2008)

In section “C.3 Identify the causes for the violation(s) above”

WPSC states:

“The one-year test cycle target defined in the generation protection system maintenance and testing program was delayed due to additional efforts required by the WPSC Relay Test Group in conjunction with the construction of Weston Unit 4 project. The Weston Unit 4 project demanded more commitment from the Relay Test Group than was originally scheduled in the Weston 4 project plan. In addition, the relay testing associated with the ATCLLC transmission projects related to the Weston 4 construction was also assigned to the Relay Test Group due to limited availability of other qualified external/internal resources. Since these activities were not anticipated by the Relay Test Group, they were not included in the Relay Test Group work plan.”

In section “C.4 *[Optional/Provide any relevant additional information regarding the violations associated with this Mitigation Plan:]*”

WPSC states:

“The WPSC one-year test cycle in the generation protection system maintenance and testing program is more stringent than the customary utility industry practice, as illustrated by the IEEE survey of January 2002, titled “ Survey of Relaying Testing Practices”. Although WPSC had a one-year maintenance and testing frequency, the decision to extend the frequency beyond one year was based on sound engineering judgment, along with the above factors, to manage the timing of the generation protection system maintenance and testing program. Based on its judgment, WPSC made the decision to delay the 2006-2007 relay testing in order to respond to system conditions and the competing priorities of work associated with putting the Weston Unit 4 project on line. In summary, based upon this review, WPSC believes the testing frequency originally specified by its Relay Maintenance and Test Policy was overly restrictive, and that the decision to delay testing of the subject relays slightly beyond the specified test cycle did not have a negative impact on BES reliability.”

In section “D.1” of “Mitigation Plan Contents” WPSC states:



“WPSC has completed a revised generation protection system maintenance and testing program for all generator protection systems that could impact the performance of the Bulk Electric System. As part of the self-certification process for compliance with this standard, WPSC stated that it was not in compliance with the standard since the testing of the protection systems of generators was behind schedule. To mitigate this non-compliant condition, WPSC has completed its generation protection system testing for all its generating units with the exception of units at the Weston Power Plant. Since Weston Unit 3 was on forced outage from October 6, 2007, until January 14, 2008, it was decided that no relay testing would be performed until Weston Unit 3 was back in service to avoid the potential risk of further outages of Weston units and potential customer service interruptions. WPSC also had to pay close attention to the daily system test code status at the Weston Plant and no relay testing was permitted when the system status was "Red". This impacted the testing of protection systems on Weston units 1 and 2, and CT units 31 and 32 at the Plant. WPSC's plan is to complete the protection system testing of the units at the Weston Power Plant by March 31, 2008.”

**Causes of the violation:**

The decision to delay the testing can be attributed to two causes.

- The most significant cause was a lack of understanding by the Substation Engineering group of the need to follow RC-30-13 to the letter and the nature of mandatory requirements for PRC-005-1. As a result they relied on “past practice” to reschedule protection system calibration and testing. Since the rescheduling was not allowed by RC-30-13, the use of past practice unintentionally caused a violation of NERC standards. Based on past-practice, the duration between tests was considered a target, rather than a requirement. Consistent with past-practice, the relay testing was prioritized with other reliability-based work (discussed in the second bullet) and testing was delayed. Since WPSC’s scheduled maintenance and test cycle was more stringent than industry standards, the individuals prioritizing the work were confident the delay would not adversely affect the reliability of the protection equipment. Subsequent to this decision, WPSC identified the compliance implications of its decision to delay relay testing and self-reported its violation of PRC-005 on October 23, 2007.
- The number of significant construction projects designed to improve the reliability of the bulk electric system (BES) required re-prioritizing projects and resources that resulted in the testing delay. During 2006 and 2007, five major construction projects were being supported by the WPSC Substation Engineering group. The projects were:
  - The Arrowhead to Weston 345 kV transmission line.
  - Construction of a 535 MW base load power plant, the Weston 4 generator.

- Construction of the Gardner Park substation, tie lines between Gardner Park and the Weston substation,
- Reconstruction of the 115 KV Weston substation.
- Due to the reinforcement of the transmission system described by the previous bullets, several line terminals within the central Wisconsin area were upgraded.

These five projects, when completed, relieved one of the most constrained transmission lines in the eastern Interconnect (the Eau Claire – Arpin 345 kV line) and avoided the need to re-dispatching generators throughout the Midwest.

**Summary:**

The failure to understand the NERC requirements in conjunction with past-practices, which were not described in writing, the need to prioritize finite resources, and a desire to complete high priority projects lead to a decision to delay testing which resulted in the unintentional violation of NERC standards.

This violation was recognized by WPSC during internal discussion in preparation for self-certification in October 2007. During these discussions, the relay protection group came to understand their compliance requirements and that WPSC had not been in compliance since the start of mandatory compliance in June 18, 2007.

**Action Taken since the Self Report:**

Since reporting the non-compliance, WPSC has taken a number of steps to assure individuals understand their roles and responsibilities in assuring compliance with NERC Electric Reliability Standards. These include but are not limited to:

- Individuals responsible for complying with NERC standards or requirements have received additional information and coaching on compliance.
- The hiring of Director Electric Reliability Compliance.
- The retention of an additional relay test technician.
- Performing self-assessments on selected NERC Electric Reliability Standards.
- Performing and scheduling performance of external audits of selected NERC Electric Reliability Standards.
- Development of a compliance plan to assure sustainable compliance.

## **Attachment H**

**“MRO Request #5,” discussing the test status “Red,”  
submitted to MRO on June 5, 2009**



## Attachment H

"MRO Request #5," discussing the test status "Red"

Submitted to MRO on June 5, 2009





**MRO Request # 5:**

“Finally, the FERC Order requests documentation about WPSC’s relay testing related to the Weston Power Plant when the system test status was “Red.” Section D.1 of the Mitigation Plan states “WPSC also had to pay close attention to the daily system test code status at the Weston Plant and no relay testing was permitted when the system status was ‘Red.’” You had indicated that this may be related to a lightning strike that occurred during the timeframe in question. Any additional information or documentation you can provide on this issue would be helpful.”

**WPSC Response:**

In section D1 “Mitigation Plan Contents” of the WPSC’s “Mitigation Plan Submittal” dated 8 February 2008 WPSC states:

“Since the Weston 3 unit was on forced outage from October 6 2007, until January 14 2008, it was decided that no relay testing would be performed until the Weston 3 unit was back in service to avoid the potential risk of further outages of Weston units and potential customer service interruptions. WPSC also had to pay close attention to the daily system test code status at the Weston Plant and no relay testing was permitted when the system status was “Red’.”

It is important to note that this statement does not relate to the causes of the violation. WPSC included this information as an explanation of the scheduled completion date of the mitigation plan. For an overview of the sequence of events, please see the response to MRO Request #4.

After realizing that there was a violation of standard PRC-005 R2 during self-certification on October 23, 2007, WPSC set a goal for itself to have all delayed relay tests completed by December 21, 2007. This goal was set assuming that the Weston generating station would be fully operational for a sufficiently long period before year end. The discussion in section D1 for the “Mitigation Plan Submittal” that described the Weston Unit 3 forced outage and the resulting test restrictions is related to WPSC’s failure to meet its self-imposed year-end goal for relay testing. The outage of Weston Unit 3 was not related to the October 23, 2007 self-reported violation, but instead was pivotal in determining when the relay tests required in the mitigation plan could be performed. Ultimately the mitigation plan set a date of March 31, 2008. This date was met. The following information expands on the circumstances related the Weston Unit 3 forced outage.

On Saturday October 6, 2007 the Weston generating station sustained multiple forced outages following a lightning strike to a transmission facility. Within 2 minutes of the event, MISO declared a transmission emergency while it re-dispatched the system. Weston personnel began to assess the damage and subsequently returned to service the smaller Weston 31 and 2 units, which were

affected by the event. However, early indications were that Unit 3, a 330 MW coal plant, sustained significant damage and may not return to service for several weeks. Within the first few weeks of the lightning strike, it became apparent that the Weston Unit 3 outage would last longer, perhaps until early December. Ultimately, Weston Unit 3 was out of service until the middle of January 2008; the result of longer-than-expected repair times on the turbine and generator.

With the weekend of October 6 ending, WPSC's Energy Supply and Control placed the Weston generating site in "test restriction condition red" on Monday October 8, 2007. On Tuesday October 9, 2007 Energy Supply and Control moved the test restriction condition to yellow. Under this condition Weston was asked to get prior approval for any testing. This test restriction was kept in place for the duration of the Unit 3 forced outage, which lasted until January 15, 2008. During the Unit 3 forced outage there were two small coal units and two small combustion turbines available on site. Given the extremely limited transmission capability in the Weston area prior to the new Arrowhead to Weston 345 kV line put in service in late January 2008, the test restrictions served to mitigate potential adverse reliability consequences from an outage of one of the remaining Weston generating units.

## **Attachment I**

**Supplemental Record Information Notices issued on  
October 16, 2008 and November 12, 2008, by Midwest  
Reliability Organization**

*[This Attachment contains Privileged and Confidential  
Information that has been removed from this public  
version.]*



October 16, 2008

Mr. Christopher Plante  
Wisconsin Public Service Corporation  
600 N. Adams Street  
Green Bay, WI 54301

**Re: Supplemental Record Information to Support Notice of Penalty filing regarding Wisconsin Public Service Corporation, Violation ID Tracking Numbers MRO200700042 and MRO200700044**

Dear Mr. Plante:

In accordance with the Federal Energy Regulatory Commission's Guidance Order on Filing Reliability Notices of Penalty submissions issued on July 3, 2008,<sup>1</sup> Midwest Reliability Organization (MRO) provides the following supplemental information in support of the violation and proposed penalty findings regarding the referenced matter. This supplemental record information and its attachments will be submitted to the North American Electric Reliability Corporation for submittal to the Commission as part of the record of the proceeding.

To date, MRO has issued a Notice of Alleged Violation and Proposed Penalty or Sanction dated January 11, 2007<sup>2</sup> and a Notice of Confirmed Violation and Proposed Penalty or Sanction dated April 16, 2008. Wisconsin Public Service Corporation (WPSC) responded with its agreement to the alleged violations and proposed penalty via letter dated February 8, 2008. In accordance with the NERC Rules of Procedure and the Commission's orders and regulations, the next step is the filing of the Notice of Penalty with the Commission. The purpose of the instant document is to supplement the record to ensure that sufficient facts and evidence are provided in support of the Notice of Penalty and the violation and the proposed penalty findings to be included therein.

This document supplements the record information regarding: (1) the apparent relative seriousness of the referenced violation at issue, as evidenced by the combination of violation risk factor and violation severity level that are assigned for the particular requirements at issue in the notice; (2) the potential risk the violation posed to Bulk-Power System reliability, as well as any actual harm, presented by the factual pattern relating to the violation; (3) the determination of the penalty; and (4) the improvement in compliance and consequent increase in Bulk-Power System reliability that the penalty would provide.

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<sup>1</sup> *Guidance on Filing Reliability Notices of Penalty*, 124 FERC ¶ 61,015 (2008) (NOP Order).

<sup>2</sup> The Notice of Alleged Violation and Proposed Penalty or Sanction was incorrectly dated January 11, 2007. The correct date should be January 11, 2008.







MRO hereby provides notice that WPSC may provide a supplemental statement to NERC, with a copy to MRO, within five (5) business days after the date of this Supplemental Record Information to Support Notice of Penalty, to accompany the report when posted by NERC.

### **Supplemental Statement of Findings Underlying the Violations**

The details of the findings and basis for the penalty are discussed below.

#### **Violation ID Tracking Number MRO 200700044**

Reliability Standard PRC-005-1, Transmission and Generation Protection System Maintenance and Testing, ensures that all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested.

Requirement 1 of the Standard requires each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System to have a Protection System maintenance and testing program for Protection Systems that affect the reliability of the BES. Requirement 1 further provides that the Protection System maintenance and testing program must include 1. the maintenance and testing intervals and their basis; and 2. a summary of maintenance and testing procedures.

WPSC is a natural gas and electric utility serving northeastern and central Wisconsin and an adjacent portion of Upper Michigan. WPSC operates four coal fired power plants which generate the majority of its electricity. WPSC also owns and operates 15 hydroelectric plants on the Wisconsin, Tomahawk, Peshtigo and Menominee Rivers. In addition, WPSC utilizes peaking plants to provide power at times when customers' needs for electricity reach a peak that cannot be supplied by base load generation. WPSC is registered on the NERC Compliance Registry with a number of different functions, including Generator Owner and Distribution Provider. In order for a Generator Owner to be subject to registration and compliance with the Reliability Standards, it must operate generating units with a minimum 20 MVA base rating. WPSC operates 20 generating units, the majority of which have sufficient MVA base ratings to require compliance with the Reliability Standards. Therefore, WPSC is responsible for protection systems installed for BES reliability.

Through the Self Certification process, WPSC reported non-compliance with Standard PRC-005-1 Requirement 1 on January 10, 2008. WPSC reported that its documented Protection System Maintenance and Testing Program did not include maintenance and testing intervals or their basis and also lacked a summary of maintenance and testing procedures. WPSC submitted its revised Protection System Maintenance and Testing Program to MRO on December 27, 2007. MRO reviewed the submitted documentation and notified WPSC on April 28, 2008 that it was fully compliant with Standard PRC-005-1, R1.

Reliability Standard PRC-005-1, Requirement 1 has a "High" VRF. **[BEGIN CONFIDENTIAL INFORMATION]**

**[END CONFIDENTIAL INFORMATION]** WPSC had a documented Protection System Maintenance and Testing Program





but it was incomplete, as it did not address all the necessary elements of a compliant plan. **[BEGIN CONFIDENTIAL INFORMATION]**

**[END CONFIDENTIAL INFORMATION]**

Pursuant to Section 4.2.2 of the NERC Sanction Guidelines, MRO assigned a zero financial penalty for this violation. MRO judged the actual or foreseen impact of the violation to be minimal as WPSC had a documented program, but had not adequately incorporated the testing intervals and their basis or a summary of the maintenance and testing procedures as required by Reliability Standard PRC-005-1, R1. Further, MRO determined that this was the first incidence of violation by WPSC for Reliability Standard PRC-005-1, Requirement 1. Therefore, in the exercise of its discretion, MRO assigned a zero financial penalty to these violations.

### **Violation ID Tracking Number MRO 200700042**

Reliability Standard PRC-005-1, Transmission and Generation Protection System Maintenance and Testing, ensures that all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested.

Requirement 2 of the Standard requires each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System to provide documentation of its Protection System maintenance and testing program and the implementation of that program to its Regional Reliability Organization on request (within 30 calendar days). Requirement 2 further provides that the documentation of the program implementation must include: 1. evidence that Protection System devices were maintained and tested within the defined intervals; and 2. the date each Protection System device was last tested/maintained.

Through the Self Certification process, WPSC also reported non-compliance with Standard PRC-005-1, Requirement 2 on October 23, 2007. WPSC reported that although it had a protection system maintenance and testing program, the testing of the generator protection systems was behind schedule. WPSC further stated that all testing would be complete by December 21, 2007. According to the WPSC Protection System and Maintenance program, testing was scheduled at one year intervals, which is a more stringent requirement than the customary utility industry practice. WPSC made the decision to delay the 2006/2007 relay testing in order to respond to system conditions and the competing priorities of work associated with the construction of a new 525MW coal fired power plant.

On December 27, 2007, WPSC provided MRO documentation of its revised Protection System Maintenance and Testing Policy, as well as evidence of the testing dates for each relay. The testing schedule includes 20 generating units; 7 units with base ratings of about 15MW to 25MW, 4 units with base ratings of about 45MW to 60MW, 4 units with base ratings of about 65MW to 85MW, 3 units with base ratings of about 95MW to 125MW, 1 unit with a base rating of about 188 MW, and 1 unit with a base rating of about 390MW. The testing schedule indicated that 12 of the 20 units had been tested between October 22, 2007 and December 21, 2007. Of the remaining 8 units, 3 were scheduled for testing in December 2007 and 5 were scheduled for testing after the Weston Unit 3





generator was returned to service in January 2008. WPSC indicated in its Mitigation Plan that all remaining units would be tested by March 31, 2008.

WPSC's revised Protection System Maintenance and Testing Policy establishes a planning criteria and a "not-to-exceed" criteria for scheduling testing intervals. The planning criteria is used to develop the annual work plan and schedule for the testing of generation protection. The "not-to-exceed" criteria provides the flexibility needed in the work plan to accommodate a variety of conditions that influence a unit's availability for testing by setting a maximum allowed duration between tests based on the experience with and performance of each type of relay. Additionally, WPSC developed a computerized maintenance work order tracking system and database to better document and track testing deadlines.

On March 27, 2008, WPSC notified MRO of the completion of its Mitigation Plan and indicated that it was ready to provide verification data upon request. MRO requested the verification data on April 2, 2008. On April 18, 2008, WPSC provided documentation including its Relay Maintenance and Testing Program, Relay Test Summary, computerized spreadsheets indicating when each relay had been tested, sample relay test reports, and Relay Test Guidelines. MRO reviewed the submitted documentation and notified WPSC on April 28, 2008 that it was fully compliant with Standard PRC-005-1, R2.

Reliability Standard PRC-005-1, Requirement 2 has a "High" VRF with regard to providing dates of testing and maintenance. **[BEGIN CONFIDENTIAL INFORMATION**

**[END**

**CONFIDENTIAL INFORMATION]** WPSC had a documented program and testing was being conducted, but the testing was behind schedule due to system conditions and competing priorities related to the construction of a new coal fired power plant. **[BEGIN CONFIDENTIAL INFORMATION**

**[END CONFIDENTIAL INFORMATION]**

Pursuant to Section 4.2.2 of the NERC Sanction Guidelines, MRO assigned a zero financial penalty for this violation. MRO judged the actual or foreseen impact of the violation to be minimal as this violation concerned testing that was behind schedule based on a conservative one year interval. WPSC exercised professional judgment in delaying the testing schedule based on its construction of a new 525MW coal fired power plant and system conditions. Further, MRO determined that this was the first incidence of violation by WPSC for Reliability Standard PRC-005-1 Requirement 2. Therefore, in the exercise of its discretion, MRO assigned a zero financial penalty to these violations.

### **Supplemental Statement regarding the Mitigation Plan**

WPSC's Mitigation Plan for Violation ID Tracking Numbers MRO200700042 and MRO200700044 were accepted by MRO on March 13, 2008, and approved by NERC on March 18, 2008. The Mitigation Plan for the violations listed is designated as MIT-07-0448 and was submitted as non-public information to FERC on March 18, 2008 in accordance with FERC orders.





WPSC certified to MRO on March 27, 2008 that its Mitigation Plan for Violation ID Tracking Numbers MRO200700042 and MRO200700044 was complete. MRO reviewed the Relay Maintenance and Testing Program and associated documents to determine compliance with Reliability Standard PRC-005-1, Requirement 1. MRO also reviewed the relay test schedule and sample test reports to determine compliance with Reliability Standard PRC-005-1, Requirement 2. On April 28, 2008, MRO verified that WPSC mitigation plan number MIT-07-0448 was completed in accordance with its terms.

## **Supplemental Statement Describing the Proposed Penalty, Sanction or Enforcement Action Imposed**

### **Basis for Determination**

MRO exercised its discretion in assessing a zero dollar penalty based on a number of factors. WPSC identified the violations during the Self Certification process. The violation of Reliability Standard PRC-005-1, Requirement 1 was a document deficiency as WPSC had a documented Relay Maintenance and Testing procedure, but it did not contain all of the required elements. The violation of Reliability Standard PRC-005-1, Requirement 2 was the result of a conservative one year testing interval and the construction of a new coal fired power plant. The competing priorities forced WPSC to make the decision to delay its relay testing schedule in order to complete the construction of the new plant. In addition, with the operation of the new plant, the system conditions were not conducive to conducting all relay testing according to the schedule. WPSC cooperated with MRO and worked diligently to overcome the identified compliance concerns, all of which had very minimal impact on the reliability of the BES. These violations were the first violations for WPSC, were corrected by WPSC through its Mitigation Plan, and did not have any actual or foreseen impact on the Bulk Power System. Therefore, MRO determined a zero dollar penalty was appropriate.

### **Supplemental Record Materials**

The previously submitted Notice of Confirmed Violation contained supporting documentation including the Notice of Alleged Violation and Proposed Penalty or Sanction.

The supplemental record includes the following additional documents and material, which are set forth in the Attachments below:

- A. 2007 Self Certification Worksheet, dated October 23, 2007
- B. 2007 Self Certification Worksheet, dated January 10, 2008
- C. WPSC's response to the Notice of Alleged Violation and Proposed Penalty or Sanction, dated February 8, 2008
- D. WPSC's Mitigation Plan Submittal Form, dated February 8, 2008
- E. WPSC's Notice of Completion of Mitigation Plan, dated March 27, 2008
- F. MRO's Notice of Verification of Completion of Mitigation Plan, dated April 28, 2008

Record attachments must be divided into separate volumes of CEII, Privileged/Confidential information and/or Public information as applicable. These should be divided and marked in accordance with the FERC regulations and guidance posted on the FERC website. Any comments on these confidential and non-public volumes must be submitted by the registered entity to the





Regional Entity and NERC within five (5) business days after the date of this Supplemental Record Information to Support Notice of Penalty. .

## **Conclusion**

MRO has attempted to capture all of the relevant information related to this violation of NERC Standards in order to develop an accurate record of the violation. MRO hereby provides notice that WPSC may provide a statement to NERC, with a copy to MRO, within five (5) business days after the date of this letter of supplemental information, to accompany the report when posted by NERC. WPSC's statement must be on WPSC's letterhead and must include the name, title, and signature of an officer, employee, attorney or other authorized representative of WPSC.

NERC will publicly post each report of a Confirmed Violation, together with any statement submitted by WPSC, no sooner than five (5) business days after the report is provided by MRO to NERC and WPSC. NERC will include, with the Notice of Penalty filed with FERC, the statement provided by WPSC.

Respectfully submitted,

Sara E. Patrick  
Director of Regulatory Affairs & Legal Counsel

cc: David Hilt  
Tim Kucey  
Thomas Webb

Attachments A through F





November 12, 2008

Mr. Christopher Plante  
Wisconsin Public Service Corporation  
600 N. Adams Street  
Green Bay, WI 54301

**Re: Supplemental Record Information to Support Notice of Penalty filing regarding Wisconsin Public Service Corporation, Violation ID Tracking Numbers MRO200700042 and MRO200700044**

Dear Mr. Plante:

In accordance with the Federal Energy Regulatory Commission's Guidance Order on Filing Reliability Notices of Penalty submissions issued on July 3, 2008,<sup>1</sup> Midwest Reliability Organization (MRO) provides the following supplemental information in support of the violation and proposed penalty findings regarding the referenced matter. This supplemental record information and its attachments will be submitted to the North American Electric Reliability Corporation for submittal to the Commission as part of the record of the proceeding.

To date, MRO has issued a Notice of Alleged Violation and Proposed Penalty or Sanction dated January 11, 2007<sup>2</sup> and a Notice of Confirmed Violation and Proposed Penalty or Sanction dated April 16, 2008. Wisconsin Public Service Corporation (WPSC) responded with its agreement to the alleged violations and proposed penalty via letter dated February 8, 2008. In accordance with the NERC Rules of Procedure and the Commission's orders and regulations, the next step is the filing of the Notice of Penalty with the Commission. The purpose of the instant document is to supplement the record to ensure that sufficient facts and evidence are provided in support of the Notice of Penalty and the violation and the proposed penalty findings to be included therein.

This document supplements the record information regarding: (1) the apparent relative seriousness of the referenced violation at issue, as evidenced by the combination of violation risk factor and violation severity level that are assigned for the particular requirements at issue in the notice; (2) the potential risk the violation posed to Bulk-Power System reliability, as well as any actual harm, presented by the factual pattern relating to the violation; (3) the determination of the penalty; and (4) the improvement in compliance and consequent increase in Bulk-Power System reliability that the penalty would provide.

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<sup>1</sup> *Guidance on Filing Reliability Notices of Penalty*, 124 FERC ¶ 61,015 (2008) (NOP Order).

<sup>2</sup> The Notice of Alleged Violation and Proposed Penalty or Sanction was incorrectly dated January 11, 2007. The correct date should be January 11, 2008.



MRO hereby provides notice that WPSC may provide a supplemental statement to NERC, with a copy to MRO, within five (5) business days after the date of this Supplemental Record Information to Support Notice of Penalty, to accompany the report when posted by NERC.

### **Supplemental Statement of Findings Underlying the Violations**

The details of the findings and basis for the penalty are discussed below.

#### **Violation ID Tracking Number MRO 200700044**

Reliability Standard PRC-005-1, Transmission and Generation Protection System Maintenance and Testing, ensures that all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested.

Requirement 1 of the Standard requires each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System to have a Protection System maintenance and testing program for Protection Systems that affect the reliability of the BES. Requirement 1 further provides that the Protection System maintenance and testing program must include 1. the maintenance and testing intervals and their basis; and 2. a summary of maintenance and testing procedures.

WPSC is a natural gas and electric utility serving northeastern and central Wisconsin and an adjacent portion of Upper Michigan. WPSC operates four coal fired power plants which generate the majority of its electricity. WPSC also owns and operates 15 hydroelectric plants on the Wisconsin, Tomahawk, Peshtigo and Menominee Rivers. In addition, WPSC utilizes peaking plants to provide power at times when customers' needs for electricity reach a peak that cannot be supplied by base load generation. WPSC is registered on the NERC Compliance Registry with a number of different functions, including Generator Owner and Distribution Provider. In order for a Generator Owner to be subject to registration and compliance with the Reliability Standards, it must operate generating units with a minimum 20 MVA base rating. WPSC operates 20 generating units, the majority of which have sufficient MVA base ratings to require compliance with the Reliability Standards. Therefore, WPSC is responsible for protection systems installed for BES reliability.

Through the Self Certification process, WPSC reported non-compliance with Standard PRC-005-1, Requirement 1 on January 10, 2008.<sup>3</sup> WPSC reported that its documented

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<sup>3</sup>Although WPSC responded to the Self Certification request on October 23, 2007 for the other Standards and Requirements, it did not self-certify to this violation until January 10, 2008. The Notice of Alleged Violation and Proposed Penalty and Sanction incorrectly states the date of this self certification as October 24, 2007.

Protection System Maintenance and Testing Program did not include maintenance and testing intervals or their basis and also lacked a summary of maintenance and testing procedures. WPSC submitted its revised Protection System Maintenance and Testing Program to MRO on December 27, 2007.<sup>4</sup> MRO reviewed the submitted documentation and notified WPSC on April 28, 2008 that it was fully compliant with Standard PRC-005-1, R1.

### **Basis for Penalty Determination**

Reliability Standard PRC-005-1, Requirement 1 has a "High" VRF. **[BEGIN CONFIDENTIAL INFORMATION]**

**[END CONFIDENTIAL INFORMATION]** WPSC had a documented Protection System Maintenance and Testing Program but it was incomplete, as it did not address all the necessary elements of a compliant plan.

Upon review of the evidence, MRO determined that the violation of PRC-005-1, Requirement 1 began on June 18, 2007, the mandatory and effective date of the applicable NERC reliability standard and continued until December 27, 2007, the date the violation was completely mitigated. Although WPSC submitted its Mitigation Plan on February 8, 2008, the mitigation was complete as of December 27, 2007. Therefore, MRO calculated the duration of the violation based on the date the violation started and the date the mitigation of the violation was complete. Accordingly, the duration of the violation was 165 days.

**[BEGIN CONFIDENTIAL INFORMATION]**

**[END CONFIDENTIAL INFORMATION]**

Pursuant to Section 4.2.2 of the NERC Sanction Guidelines, MRO assigned a zero financial penalty for this violation. MRO judged the actual or foreseen impact of the violation to be minimal as WPSC had a documented program, but had not adequately incorporated the testing intervals and their basis or a summary of the maintenance and testing procedures as required by Reliability Standard PRC-005-1, R1. Further, MRO determined that this was the first incidence of violation by WPSC for Reliability Standard PRC-005-1, Requirement 1. Therefore, in the exercise of its discretion, MRO assigned a zero financial penalty to these violations.

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<sup>4</sup> Due to an administrative oversight, WPSC self certified non-compliant with PRC-005-1 R1 on January 10, 2008, after it had submitted its revised Protection System Maintenance and Testing Program on December 27, 2007.



## **Violation ID Tracking Number MRO 200700042**

Reliability Standard PRC-005-1, Transmission and Generation Protection System Maintenance and Testing, ensures that all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested.

Requirement 2 of the Standard requires each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System to provide documentation of its Protection System maintenance and testing program and the implementation of that program to its Regional Reliability Organization on request (within 30 calendar days). Requirement 2 further provides that the documentation of the program implementation must include: 1. evidence that Protection System devices were maintained and tested within the defined intervals; and 2. the date each Protection System device was last tested/maintained.

Through the Self Certification process, WPSC reported non-compliance with Standard PRC-005-1, Requirement 2 on October 23, 2007.<sup>5</sup> WPSC reported that although it had a protection system maintenance and testing program, the testing of the generator protection systems was behind schedule. WPSC further stated that all testing would be complete by December 21, 2007. According to the WPSC Protection System and Maintenance program, testing was scheduled at one year intervals, which is a more stringent requirement than the customary utility industry practice. WPSC made the decision to delay the 2006/2007 relay testing in order to respond to system conditions and the competing priorities of work associated with the construction of a new 525MW coal fired power plant, and therefore was non-compliant with its established testing intervals as required by PRC-005-1, R2.1.

On December 27, 2007, WPSC provided MRO documentation of its revised Protection System Maintenance and Testing Policy, as well as evidence of the testing dates for each relay. The testing schedule includes 20 generating units; 7 units with base ratings of about 15MW to 25MW, 4 units with base ratings of about 45MW to 60MW, 4 units with base ratings of about 65MW to 85MW, 3 units with base ratings of about 95MW to 125MW, 1 unit with a base rating of about 188 MW, and 1 unit with a base rating of about 390MW. The testing schedule indicated that 12 of the 20 units had been tested between October 22, 2007 and December 21, 2007. Of the remaining 8 units, 3 were scheduled for testing in December 2007 and 5 were scheduled for testing

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<sup>5</sup> The Notice of Alleged Violation and Proposed Penalty and Sanction incorrectly states the date of Self-Certification as October 24, 2007. The Self-Certification was due on October 24, 2007; WPSC certified to its non-compliance on October 23, 2007.



after the Weston Unit 3 generator was returned to service in January 2008. WPSC indicated in its Mitigation Plan that all remaining units would be tested by March 31, 2008.

WPSC's revised Protection System Maintenance and Testing Policy establishes a planning criteria and a "not-to-exceed" criteria for scheduling testing intervals. The planning criteria is used to develop the annual work plan and schedule for the testing of generation protection. The "not-to-exceed" criteria provides the flexibility needed in the work plan to accommodate a variety of conditions that influence a unit's availability for testing by setting a maximum allowed duration between tests based on the experience with and performance of each type of relay. Additionally, WPSC developed a computerized maintenance work order tracking system and database to better document and track testing deadlines.

On March 27, 2008, WPSC notified MRO of the completion of its Mitigation Plan and indicated that it was ready to provide verification data upon request. MRO requested the verification data on April 2, 2008. On April 18, 2008, WPSC provided documentation including its Relay Maintenance and Testing Program, Relay Test Summary, computerized spreadsheets indicating when each relay had been tested, sample relay test reports, and Relay Test Guidelines. MRO reviewed the submitted documentation and notified WPSC on April 28, 2008 that it was fully compliant with Standard PRC-005-1, R2.1.

### **Basis for Penalty Determination**

Reliability Standard PRC-005-1, Requirement 2.1 has a "High" VRF with regard to providing evidence that devices were maintained and tested within established intervals. **[BEGIN CONFIDENTIAL INFORMATION]**

**[END CONFIDENTIAL INFORMATION]**

WPSC had a documented program and testing was being conducted, but the testing was behind schedule due to system conditions and competing priorities related to the construction of a new coal fired power plant. **[BEGIN CONFIDENTIAL INFORMATION]**

**[END CONFIDENTIAL INFORMATION]**

Upon review of the evidence, MRO determined that the violation of PRC-005-1, Requirement 2.1 began on June 18, 2007, the mandatory and effective date of the applicable NERC reliability standard and continued until WPSC submitted an acceptable Mitigation Plan on February 8, 2008. Accordingly, the duration of the violation was 207 days.

**[BEGIN CONFIDENTIAL INFORMATION]**



**[END CONFIDENTIAL INFORMATION]**

Pursuant to Section 4.2.2 of the NERC Sanction Guidelines, MRO assigned a zero financial penalty for this violation. MRO judged the actual or foreseen impact of the violation to be minimal as this violation concerned testing that was behind schedule based on a conservative one year interval. WPSC exercised professional judgment in delaying the testing schedule based on its construction of a new 525MW coal fired power plant and system conditions. Further, MRO determined that this was the first incidence of violation by WPSC for Reliability Standard PRC-005-1 Requirement 2.1. Therefore, in the exercise of its discretion, MRO assigned a zero financial penalty to these violations.

**Supplemental Statement regarding the Mitigation Plan**

WPSC's Mitigation Plan for Violation ID Tracking Numbers MRO200700042 and MRO200700044 were accepted by MRO on March 13, 2008, and approved by NERC on March 18, 2008. The Mitigation Plan for the violations listed is designated as MIT-07-0448 and was submitted as non-public information to FERC on March 18, 2008 in accordance with FERC orders.

WPSC certified to MRO on March 27, 2008 that its Mitigation Plan for Violation ID Tracking Numbers MRO200700042 and MRO200700044 was complete. MRO reviewed the Relay Maintenance and Testing Program and associated documents to determine compliance with Reliability Standard PRC-005-1, Requirement 1. MRO also reviewed the relay test schedule and sample test reports to determine compliance with Reliability Standard PRC-005-1, Requirement 2. On April 28, 2008, MRO verified that WPSC mitigation plan number MIT-07-0448 was completed in accordance with its terms and that WPSC was fully compliant with Reliability Standard PRC-005-1, R1 and R2.

**Supplemental Statement Describing the Proposed Penalty, Sanction or Enforcement Action Imposed**

MRO exercised its discretion in assessing a zero dollar penalty for each of these violations based on a number of factors. WPSC identified the violations during the Self Certification process. The violation of Reliability Standard PRC-005-1, Requirement 1 was a document deficiency as WPSC had a documented Relay Maintenance and Testing procedure, but it did not contain all of the required elements. The violation of Reliability Standard PRC-005-1, Requirement 2 was the result of a conservative one year testing interval and the construction of a new coal fired power plant. The competing priorities forced WPSC to make the decision to delay its relay testing schedule in order to complete the construction of the new plant. In addition, with the operation of the new plant, the system conditions were not conducive to conducting all



relay testing according to the schedule. WPSC cooperated with MRO and worked diligently to overcome the identified compliance concerns, all of which had an inconsequential impact on the reliability of the BES. These violations were the first violations for WPSC, were corrected by WPSC through its Mitigation Plan, and were judged to have had an inconsequential impact on the Bulk Power System. Therefore, MRO determined a zero dollar penalty was appropriate.

### **Supplemental Record Materials**

The previously submitted Notice of Confirmed Violation contained supporting documentation including the Notice of Alleged Violation and Proposed Penalty or Sanction.

The supplemental record includes the following additional documents and material, which are set forth in the Attachments below:

- A. 2007 Self Certification Worksheet, dated October 23, 2007
- B. 2007 Self Certification Worksheet, dated January 10, 2008
- C. WPSC's response to the Notice of Alleged Violation and Proposed Penalty or Sanction, dated February 8, 2008
- D. WPSC's Mitigation Plan Submittal Form, dated February 8, 2008
- E. WPSC's Notice of Completion of Mitigation Plan, dated March 27, 2008
- F. MRO's Notice of Verification of Completion of Mitigation Plan, dated April 28, 2008

Record attachments must be divided into separate volumes of CEII, Privileged/Confidential information and/or Public information as applicable. These should be divided and marked in accordance with the FERC regulations and guidance posted on the FERC website. Any comments on these confidential and non-public volumes must be submitted by the registered entity to the Regional Entity and NERC within five (5) business days after the date of this Supplemental Record Information to Support Notice of Penalty.

### **Conclusion**

MRO has attempted to capture all of the relevant information related to this violation of NERC Standards in order to develop an accurate record of the violation. MRO hereby provides notice that WPSC may provide a statement to NERC, with a copy to MRO, within five (5) business days after the date of this letter of supplemental information, to accompany the report when posted by NERC. WPSC's statement must be on WPSC's letterhead and must include the name, title, and signature of an officer, employee, attorney or other authorized representative of WPSC.

NERC will publicly post each report of a Confirmed Violation, together with any statement submitted by WPSC, no sooner than five (5) business days after the report



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is provided by MRO to NERC and WPSC. NERC will include, with the Notice of Penalty filed with FERC, the statement provided by WPSC.

Respectfully submitted,

Sara E. Patrick  
Director of Regulatory Affairs & Legal Counsel

cc: David Hilt  
Tim Kucey  
Thomas Webb

Attachments A through F

