

May 30, 2012

Ms. Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, DC 20426

**Re: NERC Full Notice of Penalty regarding American Electric Power Service Corporation,<sup>1</sup>  
FERC Docket No. NP12-\_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty<sup>2</sup> regarding American Electric Power Service Corporation<sup>3</sup> (AEP), NERC Registry ID# NCR00682, NRC01056, and NRC04006,<sup>4,5</sup> in accordance with the Federal Energy Regulatory Commission's (Commission or FERC) rules, regulations and orders, as well as NERC Rules of Procedure including Appendix 4C (NERC Compliance Monitoring and Enforcement Program (CMEP)).<sup>6</sup>

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<sup>1</sup> The Settlement Agreement contains the full names of the three registered entities.

<sup>2</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards* (Order No. 672), III FERC Stats. & Regs. ¶ 31,204 (2006); *Notice of New Docket Prefix "NP" for Notices of Penalty Filed by the North American Electric Reliability Corporation*, Docket No. RM05-30-000 (February 7, 2008). See also 18 C.F.R. Part 39 (2011). *Mandatory Reliability Standards for the Bulk-Power System*, FERC Stats. & Regs. ¶ 31,242 (2007) (Order No. 693), *reh'g denied*, 120 FERC ¶ 61,053 (2007) (Order No. 693-A). See 18 C.F.R § 39.7(c)(2).

<sup>3</sup> American Electric Power Service Corporation as agent for: Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, and Wheeling Power Company (NRC00682); Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. (NCR01056); and AEP Texas North Co, AEP Texas Central Co, and Public Service of Oklahoma (NRC04006).

<sup>4</sup> *Id.*

<sup>5</sup> In the ReliabilityFirst Corporation's region, AEP is registered under NCR00682 on the NERC Compliance Registry as a Distribution Provider (DP), Generator Owner (GO), Generator Operator (GOP), Purchasing-Selling Entity (PSE), Load Serving Entity (LSE), Resource Planner (RP), Transmission Owner (TO), and Transmission Operator (TOP). In the Southwest Power Pool Regional Entity's region, AEP is registered under NCR01056 as a Balancing Authority (BA), DP, GO, GOP, LSE, PSE, RP, TO, TOP, and Transmission Planner (TP). In the Texas Reliability Entity, Inc.'s region, AEP is registered under NCR04006 on the NERC Compliance Registry as a DP, GO, GOP, LSE, PSE, TO, TOP, and TP. Because AEP is registered for the above-listed functions, AEP is subject to the requirements of NERC Reliability Standards PRC-008-0 R2 and PRC-005-1 R2.

<sup>6</sup> See 18 C.F.R § 39.7(c)(2).

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AEP is engaged in the generation and transmission of electricity throughout the U.S. AEP is one of the nation's largest generators of electricity and owns nearly 38,000 MW of generating capacity in the U.S. AEP also owns the nation's largest electricity transmission system, a nearly 39,000-mile network that includes more 765 kV extra-high voltage transmission lines than all other U.S. transmission systems combined. AEP's transmission system directly or indirectly serves about 10 % of the electricity demand in the Eastern Interconnection, the interconnected transmission system that covers 38 eastern and central U.S. states and eastern Canada, and approximately 11 % of the electricity demand within the Electric Reliability Council of Texas, Inc. (ERCOT), the transmission system that covers much of Texas.

This Notice of Penalty is being filed with the Commission because the ReliabilityFirst Corporation (ReliabilityFirst), the Southwest Power Pool Regional Entity (SPP RE) and the Texas Reliability Entity, Inc. (Texas RE) (collectively referred to as the Regions) and AEP have entered into a Settlement Agreement to resolve all outstanding issues arising from the Regions' determination and findings of the violations<sup>7</sup> of PRC-008-0 R2 and PRC-005-1 R2. According to the Settlement Agreement, AEP admits that the facts stipulated in the Settlement Agreement constitute violations, and it has agreed to the assessed penalty of fourteen thousand three hundred thirty-three dollars (\$14,333) to each of the three Regions involved, which equals a total penalty amount of forty-two thousand nine hundred ninety-nine dollars (\$42,999). This monetary penalty is in addition to other remedies and actions used to mitigate the instant violations and facilitate future compliance under the terms and conditions of the Settlement Agreement. Accordingly, the violations identified as NERC Violation Tracking Identification Numbers ID(s) RFC201000331, RFC201000668, SPP200900150, SPP200900137, SPP201000448, SPP201100449,<sup>8</sup> TRE20110030 and TRE201100301 are being filed in accordance with the NERC Rules of Procedure and the CMEP.

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

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement entered into as of April 11, 2012, by and between the Regions and AEP, which is included as Attachment a. The details of the findings and basis for the penalty are set forth in the Settlement Agreement and herein. This Notice of Penalty filing contains the basis for approval of the Settlement Agreement by the NERC Board of Trustees Compliance Committee (NERC BOTCC). In accordance with Section 39.7 of the Commission's regulations, 18 C.F.R. § 39.7 (2011), NERC provides the following

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<sup>7</sup> For purposes of this document, each violation at issue is described as a "violation," regardless of its procedural posture and whether it was a possible, alleged or confirmed violation.

<sup>8</sup> The Settlement Agreement states the Violation Tracking Identification Number as SPP201000449.

summary table identifying each violation of a Reliability Standard resolved by the Settlement Agreement, as discussed in greater detail below.

Region	Registered Entity	NOC ID	NERC Violation ID	Reliability Std.	Req. (R)	VRF	Total Penalty
ReliabilityFirst, SPP RE, and Texas RE	AEP	1255	RFC201000331, SPP200900150, SPP201000448, TRE201100301	PRC-008-0	2	Medium	42,999
			RFC201000668, SPP201100449, SPP200900137, TRE201100300	PRC-005-1	2	High <sup>9</sup>	

#### **PRC-008-0 R2 (RFC201000331, SPP200900150, SPP201000448 and TRE201100301)**

The purpose statement of Reliability Standard PRC-008-0 R2 provides: "Provide last resort system preservation measures by implementing an Under Frequency Load Shedding (UFLS) program."

PRC-008-0 R2 provides: "The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days)."

PRC-008-0 R2 has a "Medium" Violation Risk Factor (VRF) and a "Severe/High/Lower"<sup>10</sup> Violation Severity Level (VSL). The subject violation applies to AEP's TO and DP functions.

<sup>9</sup> PRC-005-1 R2 has a Lower VRF; R2.1 and R2.2 each have a High VRF. During a final review of the standards subsequent to the March 23, 2007 filing of the Version 1 VRFs, NERC identified that some standards requirements were missing VRFs; one of these include PRC-005-1 R2.1. On May 4, 2007, NERC assigned PRC-005 R2.1 a High VRF. In the Commission's June 26, 2007 Order on Violation Risk Factors, the Commission approved the PRC-005-1 R2.1 High VRF as filed. Therefore, the High VRF was in effect from June 26, 2007.

<sup>10</sup> Applying the Violation Severity Level Matrix promulgated by NERC, ReliabilityFirst, SPP RE, and Texas RE determined that the facts and circumstances of (a) RFC201000331 warranted a "High" VSL; (b) SPP200900150 warranted a "Severe" VSL, (c) SPP201000448 warranted a "Lower" VSL, and (d) TRE201100301 warranted a "Lower" VSL.

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AEP discovered<sup>11</sup> that it missed several maintenance and testing intervals on various UFLS Protection System devices within the Regions' footprints.

Based on these findings, on February 12, 2010, AEP self-reported a violation of PRC-008-0 R2 to ReliabilityFirst. AEP failed to test 81 of its 706 (11.5%) total UFLS station batteries at all frequency set points within the defined intervals, which constitute 4.0% of its 2,021 total UFLS Protection System relays and batteries. Within the ReliabilityFirst region, AEP is capable of tripping 7,854 MW of load pursuant to its automatic UFLS program.

Based on the same findings, on October 5, 2009, AEP submitted a Self-Report to SPP RE identifying a possible violation of PRC-008-0 R2. In SPP RE, AEP failed to test three of its 197 (1.5%) UFLS relays, and 42 of its 171 (24.6%) total UFLS station batteries within the defined intervals, which constitute 12.2% of its 368 total UFLS Protection System relays and batteries. The three UFLS relays would trip 31.6 MW of load at the 59 Hz and 58.7 Hz frequency set points, or 1.3% of AEP's UFLS program in SPP RE. On December 16, 2010, AEP submitted another Self-Report to SPP RE identifying an additional violation of PRC-008-0 R2 because AEP failed to test one of its 197 (0.5%) UFLS relays within the defined interval, which constitutes 0.3% of its 368 total UFLS Protection System relays and batteries. The relay at issue would trip 19 MW of load at the 59.3 Hz frequency set point, or 0.63% of AEP's UFLS program in SPP RE.

On March 15, 2011, AEP submitted a Self-Report to Texas RE identifying a violation of PRC-008-0 R2. In Texas RE, AEP failed to test six of its 184 (3.3%) UFLS relays within the defined interval, which constitutes 1.8% of its 327 total UFLS Protection System relays and batteries. The relays at issue would trip approximately 40.87 MW of load at the 59.3 Hz and 58.9 Hz frequency set points, or 0.91 % of AEP's UFLS program in Texas RE.

The Regions determined that by failing to test the equipment in question, AEP violated PRC-008-0 R2 because it failed to implement its UFLS equipment maintenance and testing program and failed to provide UFLS maintenance and testing results to the Regions.

The duration of this violation in the ReliabilityFirst region is from April 26, 2008, the date AEP failed to perform testing, to January 21, 2010, the date AEP completed testing on all devices. In SPP RE, the violations were from June 18, 2007, the date AEP failed to perform testing, to October 22, 2010, the date AEP completed testing on all devices. In Texas RE, the violation was from January 1, 2008, the

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<sup>11</sup> AEP discovered this issue while investigating Self-Reports for PRC-005-1 R2.

date AEP failed to perform testing, to November 21, 2008, the date AEP completed testing on all devices.

The Regions determined that this violation posed a moderate risk to the reliability of the bulk power system (BPS), but did not pose a serious or substantial risk to the reliability of the BPS. Although AEP failed to test the equipment in question, the risk to the reliability of the BPS was mitigated by several factors. In the ReliabilityFirst region, AEP is capable of shedding approximately 1,100 MW in excess of its required amount of load. In SPP RE, AEP is capable of shedding approximately 250 MW in excess of its required amount of load, and in Texas RE, AEP is capable of shedding approximately 135 MW in excess of its required amount of load. The Regions determined that these excess amounts offset the amount of load associated with the UFLS devices at issue in the alleged violations. Therefore, if the UFLS devices failed due to deficient maintenance and testing, AEP would still have met its automatic UFLS program requirements. In addition, AEP experienced no misoperations related to the equipment at issue, and when AEP tested the equipment, it found it all to be in working condition. Furthermore, AEP monitors many of the UFLS station batteries at issue through the Supervisory Control and Data Acquisition (SCADA) system, and SCADA identified no issues during the time period of the PRC-008-0 R2 violations. For those devices that are monitored by SCADA, if the device declares an issue that warrants an alarm, an alarm would be generated and communicated through the SCADA system to the operations center, thus reducing the risk to the BPS.

**PRC-005-1 R2 (RFC201000668, SPP201100449, SPP200900137, TRE201100300)**

The purpose statement of Reliability Standard PRC-005-1 R2 provides: “To ensure all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested.”

PRC-005-1 R2 provides:

Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall 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). The documentation of the program implementation shall include:

- R2.1. Evidence Protection System devices were maintained and tested within the defined intervals.
- R2.2. Date each Protection System device was last tested/maintained.

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PRC-005-1 R2 has a "High" VRF and a "Moderate/Lower"<sup>12</sup> VSL. The subject violation applies to AEP's TO, GO and DP functions.

AEP has business-unit specific Protection System maintenance and testing programs, including one for AEP Transmission and one for AEP Generation business units. The programs are identical across the three Regions. AEP's Transmission Protection System asset tracking database provides triggers to alert AEP that maintenance and testing is required.

AEP discovered that it missed several maintenance and testing intervals on various Protection System devices within the Regions' footprints. On October 18, 2010, AEP submitted a Self-Report to *ReliabilityFirst* identifying a violation of PRC-005-1 R2, and on September 29, 2011, AEP submitted another Self-Report to *ReliabilityFirst* identifying additional facts regarding the possible violation of this Standard. In *ReliabilityFirst*, AEP discovered that it failed to test 198 of its 1,964 (10.1%) Generation Protection System relays.

AEP reported to *ReliabilityFirst* that it had reviewed its asset tracking database and discovered that the database did not include some of the Transmission Protection System devices. As a result, the asset tracking database did not provide triggers to alert AEP that maintenance and testing was required on those Transmission Protection System devices. In addition, AEP erroneously recorded the last detailed inspection date of a Transmission battery as "2/1/8250" in the asset tracking database, when AEP had in fact tested the battery on February 23, 2010. Consequently, the asset tracking database did not provide a trigger to alert AEP that maintenance and testing was required on that battery. That battery was due for inspection on August 17, 2011, but AEP did not discover this discrepancy until September 28, 2011.

As a result, in *ReliabilityFirst*, AEP failed to test 31 of its 17,034 (0.2%) transmission Protection System relays, and one of its 828 (0.1 %) transmission station batteries, in violation of PRC-005-1 R2.

On October 5, 2009, AEP submitted a Self-Report<sup>13</sup> to SPP RE, identifying a violation of PRC-005-1 R2, and on April 18, 2011, AEP submitted another Self-Report to SPP RE identifying an additional violation of PRC-005-1 R2.

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<sup>12</sup>Applying the VSL Matrix promulgated by NERC, *ReliabilityFirst*, SPP RE, and Texas RE determined that the facts and circumstances of RFC201000668 warranted a "Moderate" VSL and SPP201100449, SPP200900137, and TRE201000300 each warranted a "Lower" VSL.



In SPP RE, AEP discovered that it failed to test seven of its 654 (1.1 %) Generation Protection System relays. In addition, in SPP RE, the asset tracking database paths were missing data, which caused the database to fail to flag the relays as being due for testing. Furthermore, one of the relays in SPP RE was scheduled to be replaced, so it was also missing from the asset tracking database. As a result, AEP failed to test 60 of its 5,762 (1.0%) transmission Protection System relays and 25 of its 322 (7.8%) transmission station batteries, in violation of PRC-005-1 R2.

On March 15, 2011, AEP submitted a Self-Report to Texas RE identifying a violation of PRC-005-1 R2. In the Texas RE region, AEP's asset tracking database included incorrect testing dates, and as a result, AEP failed to test 15 of its 7,844 (0.2%) transmission Protection System relays, in violation of PRC-005-1 R2.

The violation in the ReliabilityFirst region began on August 17, 2010, the date AEP failed to test its devices, and continued until March 31, 2012, the day AEP performed maintenance and testing on all missing devices. The duration of the violations in SPP RE was from June 18, 2007, the date AEP was required to comply with PRC-005-1, to May 10, 2011, the date AEP completed maintenance and testing on the missing devices. In Texas RE, the violation continued from June 18, 2007, the date AEP was required to comply with PRC-005-1, to March 25, 2011, the date AEP performed maintenance and testing on the missing devices.

The Regions determined that this violation posed a moderate risk to the reliability of the bulk BPS, but did not pose a serious or substantial risk because the risk was mitigated by several factors. AEP has backup protection in place for all devices, and redundant protection in place at certain locations. The Regions determined that thus far, AEP tested all of the missing devices except four and found them all to be correctly set and in working condition. Furthermore, AEP experienced no misoperations during the relevant time period. AEP has SCADA alarms that monitor many of the batteries, and SCADA identified no issues during the time period of the alleged violations. In addition, regarding the missed battery inspection in ReliabilityFirst, AEP performed maintenance and testing on the battery at issue only forty days after maintenance and testing was due.

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<sup>13</sup> On October 5, 2009, AEP submitted a Self-Report to ReliabilityFirst identifying a violation of PRC-005-1 R2.1. ReliabilityFirst and AEP entered into a Settlement Agreement disposing of this violation, which is similar to the instant violation in SPP RE.

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#### Regional Entity's Basis for Penalty

According to the Settlement Agreement, the Regions have assessed a penalty of forty-two thousand nine hundred ninety-nine dollars (\$42,999) for the referenced violations. In reaching this determination, the Regions considered the following factors:

1. The Regions considered certain aspects of AEP's Internal Compliance Program (ICP) as mitigating factors. For example, AEP's Compliance Officer has independent access to the CEO, Executive Committee and Board of Directors. AEP's ICP provides an annual schedule of standards to review and internal assessments of compliance by each affected business unit and by independent staff such as internal audits and regulatory services. AEP utilizes a compliance management software program;
2. The Regions considered as a mitigating factor that AEP self-reported all of the violations;
3. The Regions also considered as a mitigating factor the positive degree and quality of AEP's cooperation and remedial action during the enforcement process. AEP was cooperative throughout its interactions with the Regions in connection with the instant violations and also promptly submitted effective Mitigation Plans to remediate the violations;
4. There was no evidence of any attempt to conceal a violation nor evidence of intent to do so;
5. The Regions determined that the violations did not pose a serious or substantial risk to the reliability of the BPS, as discussed above;
6. AEP previously violated PRC-005-1 R2.1 twice in the ReliabilityFirst region and once in SPP RE.<sup>14</sup> Therefore, the Regions considered the instant violation of PRC-005-1 R2 as repetitive conduct and as an aggravating factor in the penalty determination; and
7. The Regions reported that there were no other mitigating or aggravating factors or extenuating circumstances that would affect the assessed penalty.

<sup>14</sup> A Settlement Agreement covering several violations, including a violation of PRC-005-1 R2.1 for AEP in the ReliabilityFirst and SPP RE regions, was filed with FERC under NP11-125-000 on February 23, 2011. On March 25, 2011, FERC issued an order stating it would not engage in further review of the Notice of Penalty. A Settlement Agreement covering several violations, including a violation of PRC-005-1 R2.1 for AEP, in the ReliabilityFirst region, was filed with FERC under NP11-164-000 on April 29, 2011. On May 27, 2011, FERC issued an order stating it would not engage in further review of the Notice of Penalty.



After consideration of the above factors, the Regions determined that, in this instance, the penalty amount of forty-two thousand nine hundred ninety-nine dollars (\$42,999) is appropriate and bears a reasonable relation to the seriousness and duration of the violations.

#### **Status of Mitigation Plan for PRC-008-0 R2<sup>15</sup>**

AEP's Mitigation Plan to address its violations of PRC-008-0 R2 was submitted to *ReliabilityFirst* (RFC201000331) and SPP RE (SPP200900150) on April 5, 2010<sup>16</sup> with a proposed completion date of July 31, 2010. The Mitigation Plan also memorialized the mitigating actions AEP took to address the violations in Texas RE (TRE201100301).<sup>17</sup> The Mitigation Plan for this violation is designated as MIT-09-2436 and was submitted as non-public information to FERC on May 29, 2012 in accordance with FERC orders.

The Mitigation Plan was accepted by *ReliabilityFirst* and SPP RE on May 3, 2010 and approved by NERC on May 29, 2012. On December 1, 2011, Texas RE accepted this Mitigation Plan for this violation in Texas RE.

On August 1, 2011, AEP submitted to SPP RE as complete its Mitigation Plan to address the additional alleged violation of PRC-008-0 R2 (SPP201000448). On August 22, 2011, SPP RE accepted this Mitigation Plan, designated as SPPMIT005829, and on September 12, 2011, NERC approved it. On September 13, 2011, NERC submitted this Mitigation Plan to FERC.

AEP's Mitigation Plans to address the violations of PRC-008-0 R2 required the following:

1. AEP brought all maintenance and testing up to date on its UFLS relays and UFLS batteries and revised and implemented AEP's Transmission Protection and Control Maintenance and Testing Guideline;
2. AEP reinstated centralized battery maintenance exception reports for both the monthly and detailed battery inspections;
3. AEP also developed and implemented improved maintenance completion reports and completed a formal root cause analysis;

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<sup>15</sup> See 18 C.F.R § 39.7(d)(7).

<sup>16</sup> On March 4, 2010, AEP submitted its Mitigation Plan to address the violation of PRC-008-0 R2. SPP RE and *ReliabilityFirst* rejected that Mitigation Plan, and on April 5, 2010, AEP submitted a revised Mitigation Plan.

<sup>17</sup> AEP submitted this Mitigation Plan to *ReliabilityFirst* and SPP RE and later determined that it was applicable to its violation in the Texas RE region. Therefore, AEP submitted the Mitigation Plan to Texas RE as well.

4. AEP issued a Workplan Development Guideline that instructed personnel to develop work plans for individual relay calibration dates; and
5. AEP Transmission issued a Transmission Data Entry Guideline that defined the relays within the AEP transmission system that AEP should include in the asset tracking database. This guideline addressed each relays by type and function and promoted consistency of relay data.

AEP certified to ReliabilityFirst and SPP RE on July 31, 2010 that the above Mitigation Plan requirements were completed on June 30, 2010 for RFC201000331 and SPP200900150.<sup>18</sup> On October 14, 2010, AEP submitted to Texas RE a certification of completion for the Mitigation Plan related to its violation in Texas RE (TRE201100301), stating that AEP completed this Mitigation Plan as of October 7, 2011.<sup>19</sup> On August 22, 2011, AEP certified to SPP RE a certification of completion for the additional PRC-008-0 R2 violation (SPP201000448), stating that AEP completed this Mitigation plan as of July 29, 2011.

As evidence of completion of its Mitigation Plans, AEP submitted the following:

1. AEP SPP Certification of a Completed Mitigation Plan PRC-008-2\_20100729.pdf, which included evidence of completion for each of the Mitigation Plan Milestones.<sup>20</sup>
2. Evidence of completion of mitigation activities addressing the specific compliance matters in the Texas RE region.<sup>21</sup>

On August 17, 2010, after ReliabilityFirst and SPP RE reviewed AEP's submitted evidence, the Regions verified that AEP's Mitigation Plan was completed on June 30, 2010. On December 1, 2011, Texas RE verified that AEP's Mitigation Plan was completed on October 7, 2011. On August 23, 2011, SPP RE

<sup>18</sup> AEP submitted its initial certification of completion on July 31, 2010; however, the certification of completion did not reference the "Violation Identification No." Therefore, ReliabilityFirst and SPP RE requested an amended certification of completion. AEP submitted an amended certification on August 24, 2010. However, this certification of completion did not list the "Date of Certification." ReliabilityFirst and SPP RE requested an additional amended certification, which AEP submitted on July 31, 2010. The Certification of Mitigation Plan Completion was signed on August 19, 2010 and dated July 30, 2010.

<sup>19</sup> The Certification of Mitigation Plan Completion was signed on October 12, 2011 and dated October 13, 2011.

<sup>20</sup> The evidence record included the following electronic documents: SPP PRC8 Milestone Evidence D1.1 Relays maintenance records Self-Report, Missed Intervals Detail; SPP PRC8 Milestone Evidence D1.1 Relays Self-Report, Missed Intervals Detail; SPP PRC8 Milestone Evidence D1.2 Reinstated battery exception reports; SPP PRC8 Milestone Evidence D1.3 AEP Battery Inspection Missed Intervals Detail; SPP PRC8 Milestone Evidence D1.4 Improved maintenance completion reports; SPP PRC8 Milestone Evidence D1.5 AEP Battery Inspection Processes Review Report; and SPP PRC8 Milestone Evidence D1.5 AEP Battery Inspection Processes Review.

<sup>21</sup> The Mitigation Plan details in SPP RE's region mitigated the reported violations in Texas RE and ReliabilityFirst regions. Therefore, the evidence of completion submitted to Texas RE and SPP RE was also accepted by ReliabilityFirst.

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verified that the Mitigation Plan for the additional PRC-008-0 R2 violation (SPP201000448) was completed on July 29, 2011.

### **Status of Mitigation Plan for PRC-005-1 R2**

AEP's Mitigation Plan to address its violation of PRC-005-1 R2 (RFC201000668) was submitted to ReliabilityFirst on June 1, 2011 with a proposed completion date of March 31, 2012. The Mitigation Plan was accepted by ReliabilityFirst on August 11, 2011 and approved by NERC on November 17, 2011. The Mitigation Plan for this violation is designated as RFCMIT005457 and was submitted as non-public information to FERC on November 18, 2011 in accordance with FERC orders.

On April 5, 2010, AEP submitted to SPP RE its Mitigation Plan, designated as MIT-09-2435, to address the violation of PRC-005-1 R2 (SPP200900137) with a proposed completion date of July 31, 2010, which also memorialized the mitigating activities AEP took to address the violation of this Standard in the Texas RE<sup>22</sup> region. On April 9, 2010, SPP RE accepted this Mitigation Plan, and on April 16, 2010, NERC approved it and submitted it to FERC. On December 1, 2011, Texas RE accepted this Mitigation Plan for AEP's violation of PRC-005-1 R2 in Texas RE.

On August 1, 2011, AEP submitted to SPP RE its Mitigation Plan designated as SPPMIT005870 to address the additional violation of PRC-005-1 R2 (SPP201100449). On August 22, 2011, SPP RE accepted this Mitigation Plan, and on September 30, 2011, NERC approved it. On October 6, 2011, NERC submitted this Mitigation Plan to FERC.

Pursuant to its Mitigation Plans to address the violations of PRC-005-1 R2, AEP:

1. Brought all maintenance and testing up to date on its relays and batteries;
2. Removed certain generation relays from service and completed testing and maintenance for Transmission relays;
3. Revised its Transmission Protection and Control Maintenance and Testing Guideline to require technicians to verify the completeness of the asset tracking database entries against the in-service equipment;
4. Implemented generation maintenance and testing work planning improvements and completed a root cause analysis;
5. Issued a Transmission data entry guideline that defines the relays within the AEP Transmission system to be included within the asset tracking database;

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<sup>22</sup> On March 4, 2010, AEP submitted its Mitigation Plan to address the violation of PRC-005-1 R2. SPP RE rejected this Mitigation Plan and AEP submitted a revised mitigation plan on April 5, 2010.

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6. Updated its Generation Protection System Maintenance and Testing Program Circular Letter that requires engineering services to complete a comprehensive review of the relays that are included;
7. Revised its Generation standard operating procedures to require a Reliability Standards compliance review for large projects; and
8. Completed a comprehensive review of AEP Generation's generator Protection Systems.

On April 2, 2012, AEP submitted to ReliabilityFirst a certification of completion for the Mitigation Plan (RFC201000668), which stated that AEP completed this Mitigation Plan as of March 30, 2012.<sup>23</sup>

On July 31, 2010, AEP submitted to SPP RE a certification of completion for the Mitigation Plan for SPP200900137, which stated that AEP completed this Mitigation Plan as of June 30, 2010.<sup>24</sup> On August 11, 2011, AEP submitted to Texas RE a certification of completion for this Mitigation Plan, which stated that AEP completed the Mitigation Plan as of July 29, 2011.

As evidence of completion of its Mitigation Plans, AEP submitted the following:

1. American Electric Power SPP Certification of a Completed Mitigation Plan PRC-005 1a\_20100729.pdf, which included evidence of completion for each of the Mitigation Plan Milestones.<sup>25</sup>
2. Evidence of completion of mitigation activities addressing the specific compliance matters in the Texas RE region.

<sup>23</sup> The Certification of Mitigation Plan Completion was signed on March 30, 2012 and dated April 2, 2012. The Verification of Mitigation Plan Completion states the Certification of Mitigation Plan Completion was submitted to ReliabilityFirst on April 3, 2012.

<sup>24</sup> AEP submitted its initial certification of completion on July 31, 2010; however, the certification of completion did not reference the "Violation Identification No." Therefore, SPP RE requested an amended certification of completion. AEP submitted an amended certification on August 24, 2010. However, this certification of completion did not list the "Date of Certification." SPP RE requested an additional amended certification, which AEP submitted on September 7, 2010. The Mitigation Plan is dated July 30, 2010 and was signed on August 19, 2010.

<sup>25</sup> The evidence record included the following electronic documents: SPP PRC5 Milestone Evidence D1.1 Relays and carrier Self-Report, Missed Intervals Detail; SPP PRC5 Milestone Evidence D1.2 Reinstated battery exception reports; SPP PRC5 Milestone Evidence D1.3 AEP Battery Inspection Missed Intervals Detail; SPP PRC5 Milestone Evidence D1.4 Improved maintenance completion reports; SPP PRC5 Milestone Evidence D1.5 AEP Battery Inspection Processes Review Report; and SPP PRC5 Milestone Evidence D1.5 AEP Battery Inspection Processes Review;

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On August 17, 2010, after reviewing AEP's submitted evidence, SPP RE verified completion of the Mitigation Plan. On December 1, 2011, Texas RE, after reviewing AEP's submitted evidence, verified the completion of this Mitigation Plan. On May 4, 2012, ReliabilityFirst, after reviewing AEP's submitted evidence, verified the completion of this Mitigation Plan.

## **Statement Describing the Assessed Penalty, Sanction or Enforcement Action Imposed<sup>26</sup>**

### **Basis for Determination**

Taking into consideration the Commission's direction in Order No. 693, the NERC Sanction Guidelines and the Commission's July 3, 2008, October 26, 2009 and August 27, 2010 Guidance Orders,<sup>27</sup> the NERC BOTCC reviewed the Settlement Agreement and supporting documentation on May 7, 2012. The NERC BOTCC approved the Settlement Agreement, including the Regions' assessment of a forty-two thousand nine hundred ninety-nine dollars (\$42,999) financial penalty against AEP and other actions to facilitate future compliance required under the terms and conditions of the Settlement Agreement. In approving the Settlement Agreement, the NERC BOTCC reviewed the applicable requirements of the Commission-approved Reliability Standards and the underlying facts and circumstances of the violations at issue.

In reaching this determination, the NERC BOTCC considered the following factors:

1. AEP self-reported the violations;
2. AEP had a compliance program at the time of the violation which the Regions considered a mitigating factor, as discussed above;
3. The Regions reported that AEP was cooperative throughout the compliance enforcement process;
4. There was no evidence of any attempt to conceal a violation nor evidence of intent to do so;
5. The Regions determined that the violations did not pose a serious or substantial risk to the reliability of the BPS, as discussed above; and

<sup>26</sup> See 18 C.F.R. § 39.7(d)(4).

<sup>27</sup> *North American Electric Reliability Corporation*, "Guidance Order on Reliability Notices of Penalty," 124 FERC ¶ 61,015 (2008); *North American Electric Reliability Corporation*, "Further Guidance Order on Reliability Notices of Penalty," 129 FERC ¶ 61,069 (2009); *North American Electric Reliability Corporation*, "Notice of No Further Review and Guidance Order," 132 FERC ¶ 61,182 (2010).

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6. The violations of PRC-005-1 R2 constituted repeat violations of the subject NERC Reliability Standard;<sup>28</sup>
7. The Regions reported that there were no other mitigating or aggravating factors or extenuating circumstances that would affect the assessed penalty.

For the foregoing reasons, the NERC BOTCC approved the Settlement Agreement and believes that the assessed penalty of forty-two thousand nine hundred ninety-nine dollars (\$42,999) is appropriate for the violations and circumstances at issue, and is consistent with NERC's goal to promote and ensure reliability of the BPS.

Pursuant to 18 C.F.R. § 39.7(e), the penalty will be effective upon expiration of the 30-day period following the filing of this Notice of Penalty with FERC, or, if FERC decides to review the penalty, upon final determination by FERC.

#### **Attachments to be Included as Part of this Notice of Penalty**

The attachments to be included as part of this Notice of Penalty are the following documents:

- a) Settlement Agreement by and between AEP and the Regions executed April 11, 2012, included as Attachment a;
  - A. AEP's Self-Report to ReliabilityFirst for PRC-008-0 R2 (RFC201000331) submitted February 12, 2010, included as Attachment A to the Settlement Agreement.
  - B. AEP's Self-Report to SPP RE for PRC-008-0 R2 (SPP201000448) submitted October 5, 2010, included as Attachment B to the Settlement Agreement.
  - C. AEP's Self-Report to SPP RE for PRC-008-0 R2 (SPP201000448) submitted December 16, 2010, included as Attachment C to the Settlement Agreement.
  - D. AEP's Self-Report to Texas RE for PRC-008-0 R2 (TRE201100301) submitted March 15, 2011, included as Attachment D to the Settlement Agreement.
  - E. AEP's Mitigation Plan to SPP RE designated as MIT-09-2436 for PRC-008-0 R2 (RFC201000331, SPP200900150 and TRE201100301) submitted April 5, 2010, included as Attachment E to the Settlement Agreement.

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<sup>28</sup> See n. 14.



- F. AEP's Mitigation Plan to SPP RE designated as SPPMIT005829 for PRC-008-0 R2 (SPP201000448) submitted August 1, 2011, included as Attachment F to the Settlement Agreement.
- G. AEP's Certification of Mitigation Plan Completion to SPP RE for PRC-008-2 R2 (RFC201000331 and SPP200900150) submitted September 7, 2010, included as Attachment G to the Settlement Agreement.
- H. SPP RE's Verification of Mitigation Plan Completion for PRC-008-0 R2 (RFC201000331 and SPP200900150) dated August 17, 2010, included as Attachment H to the Settlement Agreement.
- I. AEP's Certification of Mitigation Plan Completion to Texas RE for PRC-008-0 R2 (TRE201100301) submitted October 13, 2011, included as Attachment I to the Settlement Agreement.
- J. Texas RE's Verification of Mitigation Plan Completion for PRC-008-0 R2 (TRE201100301) dated December 1, 2011, included as Attachment J to the Settlement Agreement.
- K. AEP's Certification of Mitigation Plan Completion to SPP RE for PRC-008-0 R2 (SPP201000448) submitted August 22, 2011, included as Attachment K to the Settlement Agreement.
- L. SPP RE's Verification of Mitigation Plan Completion for PRC-008-0 R2 (SPP201000448) dated August 23, 2011, included as Attachment L to the Settlement Agreement.
- M. AEP's Self-Report to ReliabilityFirst for PRC-005-1 R2.1/R2.2 (RFC201000668) submitted October 18, 2010, included as Attachment M to the Settlement Agreement.
- N. AEP's Self-Report to ReliabilityFirst for PRC-005-1 R2.1 (RFC201000668) submitted on September 29, 2011, included as Attachment N to the Settlement Agreement.
- O. AEP's Self-Report to SPP RE for PRC-008-0 R2 (SPP200900150) submitted on October 5, 2009, included as Attachment O to the Settlement Agreement.<sup>29</sup>
- P. AEP's Self-Report to SPP RE for PRC-005-1 R2 (SPP200900137) submitted on April 18, 2011, included as Attachment P to the Settlement Agreement.
- Q. AEP's Self-Report to Texas RE for PRC-005-1 R2 (TRE201100300) submitted on March 15, 2011, included as Attachment Q to the Settlement Agreement.

<sup>29</sup> The Settlement Agreement incorrectly references Attachment O as being a Self-Report for PRC-005-1 R2. The actual document is a Self-Report for PRC-008-0 R2.

- R. AEP's Mitigation Plan to ReliabilityFirst designated as RFCMIT005457 for PRC-005-1 R2.1/R2.2 (RFC201000668) submitted June 1, 2011, included as Attachment R to the Settlement Agreement.
- S. AEP's Mitigation Plan to SPP RE designated as MIT-09-2435 for PRC-005-1 R2.1 (SPP200900137 and TRE201100300) submitted on April 5, 2010, included as Attachment S to the Settlement Agreement.
- T. AEP's Mitigation Plan to SPP RE designated as SPPMIT005870 for PRC-005-1 R2 (SPP201100449) submitted on August 1, 2011, included as Attachment T to the Settlement Agreement.
- U. AEP's Certification of Mitigation Plan Completion to SPP RE for PRC-005-1 R2.1 (SPP200900137) submitted September 7, 2010, included as Attachment U to the Settlement Agreement.
- V. SPP RE's Verification of Mitigation Plan Completion for PRC-005-1 R2.1/R2.2 (SPP200900137) dated August 17, 2010, included as Attachment V to the Settlement Agreement.
- W. AEP's Certification of Mitigation Plan Completion to Texas RE for PRC-005-1 R2 (TRE201100300) submitted August 11, 2011, included as Attachment W to the Settlement Agreement.
- X. Texas RE's Verification of Mitigation Plan Completion for PRC-005-1 R2 (TRE201100300) dated December 1, 2011, included as Attachment X to the Settlement Agreement.<sup>30</sup>
- b) AEP's Certification of Mitigation Plan Completion to ReliabilityFirst for PRC-005-1 R2.1 (SPP201100449 and RFC201000668) submitted April 2, 2012, included as Attachment b; and
- c) ReliabilityFirst's Verification of Mitigation Plan Completion for PRC-005-1 R2.1 (SPP201100449 and RFC201000668) dated May 4, 2012, included as Attachment c.

#### **A Form of Notice Suitable for Publication<sup>31</sup>**

A copy of a notice suitable for publication is included in Attachment d.

<sup>30</sup> Attachment X is not referenced in the Settlement Agreement but it is included in the Attachments document to the Settlement Agreement provided by the Regions.

<sup>31</sup> See 18 C.F.R § 39.7(d)(6).

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**Notices and Communications:** Notices and communications with respect to this filing may be addressed to the following:

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\*Persons to be included on the Commission's service list are indicated with an asterisk. NERC requests waiver of the Commission's rules and regulations to permit the inclusion of more than two people on the service list.

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**Conclusion**

NERC respectfully requests that the Commission accept this Notice of Penalty as compliant with its rules, regulations and orders.

Respectfully submitted,

/s/ Rebecca J. Michael

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cc: ReliabilityFirst Corporation,  
Southwest Power Pool Regional Entity,  
Texas Reliability Entity, Inc., and  
American Electric Power Service Corporation

Attachments



## **Attachment a**

**Settlement Agreement by and between AEP  
and ReliabilityFirst, SPP RE and Texas RE  
executed April 11, 2012**



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<b><i>In re:</i></b>		
<b>AMERICAN ELECTRIC</b>	)	<b>Docket Nos. RFC201000331;</b>
<b>POWER SERVICE</b>	)	<b>RFC201000668;</b>
<b>CORPORATION AS AGENT</b>	)	<b>SPP200900150;</b>
<b>FOR APPALACHIAN POWER</b>	)	<b>SPP200900137;</b>
<b>COMPANY, COLUMBUS</b>	)	<b>SPP201000448;</b>
<b>SOUTHERN POWER</b>	)	<b>SPP201000449;</b>
<b>COMPANY, INDIANA</b>	)	<b>TRE201100300; and</b>
<b>MICHIGAN POWER</b>	)	<b>TRE201100301</b>
<b>COMPANY, KENTUCKY</b>	)	
<b>POWER COMPANY,</b>	)	
<b>KINGSPORT POWER</b>	)	
<b>COMPANY, OHIO POWER</b>	)	
<b>COMPANY, WHEELING</b>	)	
<b>POWER COMPANY, AEP</b>	)	
<b>TEXAS NORTH COMPANY,</b>	)	
<b>AEP TEXAS CENTRAL</b>	)	
<b>COMPANY, PUBLIC SERVICE</b>	)	
<b>OF OKLAHOMA, AND</b>	)	
<b>SOUTHWESTERN ELECTRIC</b>	)	
<b>POWER COMPANY</b>	)	
	)	
NERC Registry ID Nos. NCR00682	)	NERC Reliability Standards:
NCR01056	)	PRC-008-0, Requirement 2 and
NCR04006	)	PRC-005-1, Requirement 2
	)	

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**SETTLEMENT AGREEMENT  
AMONG  
RELIABILITYFIRST CORPORATION,  
SOUTHWEST POWER POOL REGIONAL ENTITY,  
TEXAS RELIABILITY ENTITY, INC.,**

**AND  
AMERICAN ELECTRIC POWER SERVICE CORPORATION AS AGENT FOR  
APPALACHIAN POWER COMPANY, COLUMBUS SOUTHERN POWER COMPANY,  
INDIANA MICHIGAN POWER COMPANY, KENTUCKY POWER COMPANY,  
KINGSPORT POWER COMPANY, OHIO POWER COMPANY, WHEELING POWER  
COMPANY, AEP TEXAS NORTH COMPANY, AEP TEXAS CENTRAL COMPANY,  
PUBLIC SERVICE OF OKLAHOMA, AND SOUTHWESTERN ELECTRIC POWER  
COMPANY**

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## I. INTRODUCTION

1. ReliabilityFirst Corporation (“ReliabilityFirst”), Southwest Power Pool Regional Entity (“SPP RE”), Texas Reliability Entity (“Texas RE”) (collectively, the “Regions”), and American Electric Power Service Corporation as agent for Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, Wheeling Power Company, AEP Texas North Company, AEP Texas Central Company, Public Service of Oklahoma, and Southwestern Electric Power Company (“AEP”) enter into this Settlement Agreement (“Agreement”) to resolve alleged violations by AEP of Reliability Standards PRC-008-0, Requirement 2 and PRC-005-1, Requirement 2.
2. AEP acknowledges that the NERC Rules of Procedure authorize the Regions to:  
(a) institute separate enforcement proceedings against AEP for the respective alleged violations asserted by the Regions as specified herein; (b) impose penalties and/or other sanctions upon AEP for alleged violations affecting the respective geographical areas over which the Regions have enforcement authority, as delegated to each of them by NERC; and (c) to enter into separate settlements with AEP regarding the respective alleged violations asserted by each regional entity. In the interest of administrative economy, the Regions and AEP enter into this Agreement as a means of resolving the Regions’ respective determinations and findings in an efficient, cost-effective manner that is consistent with the requirements set forth in the NERC Rules of Procedure.
3. AEP further acknowledges and represents to the Regions that AEP desires to proceed with a multi-regional settlement of all outstanding issues relating to the Regions’ respective determinations and findings as to the alleged violations specified herein. AEP further expressly waives any and all objections that it could raise with respect to the use of a multi-regional settlement of all outstanding issues relating to the Regions’ respective determinations and findings as to the alleged violations specified herein.
4. The Regions agree and stipulate to this Agreement in its entirety. The facts stipulated herein are stipulated solely for the purpose of resolving among AEP and the Regions the subject matter of this Agreement and do not constitute admissions or stipulations for any purpose, other than AEP’s admission that the facts stipulated herein constitute violations of Reliability Standards PRC-005-1, R2 and PRC-008-0, R2.

### *Overview of AEP*

5. AEP is engaged in the generation and transmission of electricity throughout the United States. AEP is one of the nation’s largest generators of electricity, and owns nearly 38,000 MW of generating capacity in the United States. AEP also

owns the nation's largest electricity transmission system, a nearly 39,000-mile network that includes more 765 kV extra-high voltage transmission lines than all other U.S. transmission systems combined. AEP's transmission system directly or indirectly serves about ten percent of the electricity demand in the Eastern Interconnection, the interconnected transmission system that covers 38 eastern and central U.S. states and eastern Canada, and approximately 11 percent of the electricity demand in ERCOT, the transmission system that covers much of Texas.

6. AEP's utility units operate as Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company (collectively, the "AEP East Companies"); Public Service Company of Oklahoma, and Southwestern Electric Power Company (collectively, the "AEP West Companies"); and AEP Texas Central Company and AEP Texas North Company (collectively, "AEP Texas").
7. In ReliabilityFirst, AEP is registered on the NERC Compliance Registry as a Distribution Provider ("DP"), Generator Owner ("GO"), Generator Operator ("GOP"), Purchasing-Selling Entity ("PSE"), Load Serving Entity ("LSE"), Resource Planner ("RP"), Transmission Owner ("TO"), and Transmission Operator ("TOP") with the NERC Registry Identification Number NCR00682.
8. In SPP RE, AEP is registered on the NERC Compliance Registry as a Balancing Authority, DP, GO, GOP, LSE, PSE, RP, TO, TOP, and Transmission Planner ("TP") with the NERC Registry Identification Number NCR01056.
9. In Texas RE, AEP is registered on the NERC Compliance Registry as a DP, GO, GOP, LSE, PSE, TO, TOP, and TP with the NERC Registry Identification Number NCR04006.
10. In its capacity as a DP, GO and TO, AEP is subject to compliance with Reliability Standards PRC-005-1, R2 and PRC-008-0, R2.

## **II. ALLEGED VIOLATIONS OF PRC-008-0, R2 (RFC201000331, SPP200900150, SPP201000448 and TRE201100301)**

11. PRC-008-0 provides last resort system preservation measures by ensuring responsible entities implement an Under Frequency Load Shedding ("UFLS") Program.
12. A violation of PRC-008-0, R2 has the potential to affect the reliable operation of the bulk power system by allowing important UFLS Protection System devices to remain unmaintained and untested. PRC-008-0, R2 states:

**R2.** The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its

UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).

13. ReliabilityFirst, SPP RE, and Texas RE allege that AEP violated PRC-008-0, R2 by failing to implement its UFLS equipment maintenance and testing program.

*Description of Alleged Violations and Risk Assessment*

14. AEP discovered that it missed several maintenance and testing intervals on various UFLS Protection System devices within the Regions' footprints.
15. On February 12, 2010, AEP submitted a self report to ReliabilityFirst identifying a possible violation of PRC-008-0, R2. *See* Violation Self Reporting Form (attached as **Attachment A**). In ReliabilityFirst, AEP failed to test 81 of its 706 (11.5%) total UFLS station batteries at all frequency set points within the defined intervals, which constitute 4.0% of its 2,021 total UFLS Protection System relays and batteries. In ReliabilityFirst, AEP is capable of tripping 7,854 MW of load pursuant to its automatic UFLS program.
16. On October 5, 2009, AEP submitted a self report to SPP RE identifying a possible violation of PRC-008-0, R2. *See* AEP Self Report (Oct. 5, 2009) (attached as **Attachment B**). In SPP RE, AEP failed to test three of its 197 (1.5%) UFLS relays, and 42 of its 171 (24.6%) total UFLS station batteries within the defined intervals, which constitute 11.4% of its 368 total UFLS Protection System relays and batteries. The three UFLS relays would trip 31.6 MW of load at the 59 Hz and 58.7 Hz frequency set points, or 1.3% of AEP's UFLS program in SPP RE.
17. On December 16, 2010, AEP submitted a self report to SPP RE identifying an additional possible violation of PRC-008-0, R2. *See* AEP Self Report (attached as **Attachment C**). AEP failed to test one of its 197 (0.5%) UFLS relays within the defined interval, which constitutes 0.3% of its 368 total UFLS Protection System relays and batteries. The relay at issue would trip 19 MW of load at the 59.3 Hz frequency set point, or 0.63% of AEP's UFLS program in SPP RE.
18. On March 15, 2011, AEP submitted a self report to Texas RE identifying a possible violation of PRC-008-0, R2. *See* Self-Report Form (attached as **Attachment D**). In Texas RE, AEP failed to test six of its 184 (3.3%) UFLS relays within the defined interval, which constitutes 1.8% of its 327 total UFLS Protection System relays and batteries. The relays at issue would trip approximately 40.87 MW of load at the 59.3 Hz and 58.9 Hz frequency set points, or 0.91% of AEP's UFLS program in Texas RE.
19. The duration of the alleged violation in ReliabilityFirst is from April 26, 2008, the date AEP failed to perform testing, to January 21, 2010, the date AEP completed testing on all devices.

20. The duration of the alleged violations in SPP RE is from June 18, 2007, the date AEP failed to perform testing, to October 22, 2010, the date AEP completed testing on all devices.
21. The duration of the alleged violation in Texas RE is from January 1, 2008, the date AEP failed to perform testing, to November 21, 2008, the date AEP completed testing on all devices.
22. The risk to the reliability of the bulk power system was mitigated by the following factors.<sup>1</sup> In *ReliabilityFirst*, AEP is capable of shedding approximately 1,100 MW in excess of its required amount of load. In SPP RE, AEP is capable of shedding approximately 250 MW in excess of its required amount of load. In Texas RE, AEP is capable of shedding approximately 135 MW in excess of its required amount of load. These excess amounts offset the amount of load associated with the UFLS devices at issue in the alleged violations. Therefore, if the UFLS devices failed due to deficient maintenance and testing, AEP would still have met its automatic UFLS program requirements.
23. In addition, AEP experienced no Misoperations related to the equipment at issue. In addition, when AEP tested the devices at issue, it found them all to be in working condition. Furthermore, AEP monitors many of the UFLS station batteries at issue through the Supervisory Control and Data Acquisition (“SCADA”) system, and SCADA identified no issues during the time period of the alleged violations.
24. In light of the nature of the alleged violations, offset by the aforementioned mitigating factors, the Regions determined that these alleged violations posed a moderate risk to the reliability of the bulk power system.

#### *Mitigating Actions*

25. On April 5, 2010, AEP submitted to *ReliabilityFirst* and SPP RE its mitigation plan to address the alleged violations of PRC-008-0, R2 in *ReliabilityFirst* (RFC201000331) and SPP RE (SPP200900150),<sup>2</sup> which also memorialized the mitigating actions AEP took to address the alleged violation in Texas RE (TRE201100301). *See* NERC Mitigation Plan ID No. MIT-09-2436 (attached as **Attachment E**). On May 3, 2010, *ReliabilityFirst* and SPP RE accepted this

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<sup>1</sup> PRC-008-0, R2 has a Violation Risk Factor (“VRF”) of “Medium,” consistent with the VRF Matrix promulgated by NERC. Applying the Violation Severity Level (“VSL”) Matrix promulgated by NERC, *ReliabilityFirst*, SPP RE, and Texas RE determined that the facts and circumstances of (a) RFC201000331 warranted a “High” VSL; (b) SPP200900150 warranted a “Severe” VSL, (c) SPP201000448 warranted a “Lower” VSL, and (d) TRE201100301 warranted a “Lower” VSL.

<sup>2</sup> On March 4, 2010, AEP submitted its mitigation plan to address the alleged violation of PRC-008-0, R2. SPP RE and *ReliabilityFirst* rejected that mitigation plan, and on April 5, 2010, AEP submitted a revised mitigation plan.



mitigation plan, and on April 16, 2010, NERC approved and submitted it to the Federal Energy Regulatory Commission (the "Commission") as confidential, non-public information. On December 1, 2011, Texas RE accepted this mitigation plan for the Texas RE alleged violation.

26. On August 1, 2011, AEP submitted to SPP RE its mitigation plan to address the additional alleged violation of PRC-008-0, R2 (SPP201000448). *See* NERC Mitigation Plan ID No. SPPMIT005829 (attached as **Attachment F**). On August 22, 2011, SPP RE accepted this mitigation plan, and on September 12, 2011, NERC approved it. On September 13, 2011, NERC submitted this mitigation plan to the Commission as confidential, non-public information.
27. In these mitigation plans, AEP memorialized the actions it took to address the alleged violations of PRC-008-0, R2. AEP brought all maintenance and testing up to date on its UFLS relays and UFLS batteries and revised and implemented the AEP Transmission Protection and Control Maintenance and Testing Guideline. In addition, AEP reinstated centralized battery maintenance exception reports for both the monthly and detailed battery inspections. AEP also developed and implemented improved maintenance completion reports and completed a formal root cause analysis.
28. In addition, AEP issued a Workplan Development Guideline that instructed personnel to develop workplans for individual relay calibration dates. Furthermore, AEP Transmission issued a Transmission Data Entry Guideline that defined the relays within the AEP transmission system that AEP should include in the asset tracking database. This guideline addresses relays by type and function and promotes consistency of relay data.
29. On July 31, 2010, AEP submitted to ReliabilityFirst and SPP RE a certification of completion for the mitigation plan for RFC201000331 and SPP200900150, which stated that AEP completed this mitigation plan as of June 30, 2010.<sup>3</sup> *See* AEP Certification of Completed Mitigation Plan (attached as **Attachment G**). On August 17, 2010, ReliabilityFirst and SPP RE verified this completion. *See* Mitigation Plan Completion Notice (Aug. 17, 2010) (attached as **Attachment H**). On October 14, 2011, AEP submitted to Texas RE a certification of completion for this mitigation plan, which stated that AEP completed this mitigation plan as of October 7, 2011. *See* AEP Certification of Completion Mitigation Plan (attached as **Attachment I**). On December 1, 2011, Texas RE verified the completion of the mitigation plan. *See* Mitigation Plan Completion Notice (Dec. 1, 2011) (attached as **Attachment J**)

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<sup>3</sup> AEP submitted its initial certification of completion on July 31, 2010; however, the certification of completion did not reference the "Violation Identification No." Therefore, ReliabilityFirst and SPP RE requested an amended certification of completion. AEP submitted an amended certification on August 24, 2010. However, this certification of completion did not list the "Date of Certification." ReliabilityFirst and SPP RE requested an additional amended certification, which AEP submitted on September 7, 2010.

30. On August 22, 2011, AEP submitted to SPP RE a certification of completion for the mitigation plan for SPP201000448, which stated that AEP completed this mitigation plan as of July 29, 2011. *See* AEP Certification of Completed Mitigation Plan (attached as **Attachment K**). On August 23, 2011, SPP RE verified this completion. *See* Mitigation Plan Completion Notice (Aug. 23, 2011) (attached as **Attachment L**).

### **III. ALLEGED VIOLATIONS OF PRC-005-1, R2**

#### **A. Alleged Violations of PRC-005-1, R2 (RFC201000668, SPP201000449, SPP200900137, and TRE201100300)**

31. PRC-005-1 increases the reliability of the bulk power system by ensuring maintenance and testing of all transmission and generation Protection Systems, which isolate segments of the bulk power system when faults occur.
32. A violation of PRC-005-1, R2 has the potential to affect the reliable operation of the bulk power system by allowing important Protection System devices to remain unmaintained and untested. PRC-005-1, R2 states:

**R2.** Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall 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). The documentation of the program implementation shall include:

**R2.1.** Evidence Protection System devices were maintained and tested within the defined intervals.

**R2.2.** Date each Protection System device was last tested/maintained.

33. The Regions allege that AEP violated PRC-005-1, R2 by failing to provide evidence that its Protection System devices were maintained and tested within the defined intervals.

#### *Description of Alleged Violations and Risk Assessment*

34. AEP has business-unit specific Protection System maintenance and testing programs, including one for AEP Transmission and one for AEP Generation. The programs are identical across the Regions. AEP's Transmission Protection System asset tracking database provides triggers to alert AEP that maintenance and testing is required.

35. AEP discovered that it missed several maintenance and testing intervals on various Protection System devices within the Regions' footprints.
36. On October 18, 2010, AEP submitted a self report to ReliabilityFirst identifying a possible violation of PRC-005-1, R2. See Violation Self Reporting Form (attached as **Attachment M**). In addition, on September 29, 2011, AEP submitted a self report to ReliabilityFirst identifying additional facts regarding the possible violation of PRC-005-1, R2. See Self Report Form (attached as **Attachment N**).
37. In ReliabilityFirst, AEP discovered that it failed to test 198 of its 1,964 (10.1%) Generation Protection System relays.
38. In ReliabilityFirst, AEP reviewed its asset tracking database and discovered that the database did not include some of the Transmission Protection System devices. As a result, the asset tracking database did not provide triggers to alert AEP that maintenance and testing was required on those Transmission Protection System devices.
39. In addition, in ReliabilityFirst, AEP erroneously recorded the last detailed inspection date of a Transmission battery as "2/1/8250" in the asset tracking database, when AEP had in fact tested the battery on February 23, 2010. As a result, the asset tracking database did not provide a trigger to alert AEP that maintenance and testing was required on that battery. That battery was due for inspection on August 17, 2011, but AEP did not discover this discrepancy until September 28, 2011.
40. As a result, in ReliabilityFirst, AEP failed to test 31 of its 17,034 (0.2%) Transmission Protection System relays, and one of its 828 (0.1%) Transmission station batteries.
41. On October 5, 2009, AEP submitted a self report to SPP RE<sup>4</sup> identifying a possible violation of PRC-005-1, R2. See AEP Self Report (attached as **Attachment O**).<sup>5</sup> On April 18, 2011, AEP submitted a self report to SPP RE identifying an additional possible violation of PRC-005-1, R2. See AEP Self Report (attached as **Attachment P**).
42. In SPP RE, AEP discovered that it failed to test seven of its 654 (1.1%) Generation Protection System relays.

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<sup>4</sup> On October 5, 2009, AEP submitted a self report to ReliabilityFirst identifying a possible violation of PRC-005-1, R2.1. ReliabilityFirst and AEP entered into a settlement agreement disposing, *inter alia*, of this violation, which is similar to the instant alleged violation in SPP RE. See NP11-164-000.

<sup>5</sup> AEP notified SPP RE of this alleged violation on September 24, 2009, and submitted a self report on October 5, 2009.

43. In addition, in SPP RE, the asset tracking database paths were missing data, which caused the database to fail to flag the relays as due for testing. Furthermore, one of the relays in SPP RE was scheduled to be replaced, so it was also missing from the asset tracking database. As a result, AEP failed to test 60 of its 5,762 (1.0%) Transmission Protection System relays and 25 of its 322 (7.8%) Transmission station batteries.
44. On March 15, 2011, AEP submitted a self report to Texas RE identifying a possible violation of PRC-005-1, R2. *See* Self-Report Form (attached as **Attachment Q**). In Texas RE, the asset tracking database included incorrect testing dates. As a result, AEP failed to test 15 of its 7,844 (0.2%) Transmission Protection System relays.
45. The alleged violation in ReliabilityFirst began on August 17, 2010, the date AEP failed to test its devices, and will continue until AEP performs maintenance and testing on all missing devices. AEP plans to complete all maintenance and testing on the missing devices by March 31, 2012.
46. The duration of the alleged violations in SPP RE is from June 18, 2007, the date AEP was required to comply with PRC-005-1, to May 10, 2011, the date AEP performed maintenance and testing on the missing devices.
47. The duration of the alleged violation in Texas RE is from June 18, 2007, the date AEP was required to comply with PRC-005-1, to March 25, 2011, the date AEP performed maintenance and testing on the missing devices.
48. The risk to the reliability of the bulk power system was mitigated by the following factors.<sup>6</sup> AEP has backup protection in place for all devices, and redundant protection in place at certain locations. Thus far, AEP tested all of the missing devices except four and found them all to be correctly set and in working condition.
49. Furthermore, AEP experienced no Misoperations during the relevant time period. AEP has SCADA alarms that monitor many of the batteries, and SCADA identified no issues during the time period of the alleged violations.
50. In addition, regarding the missed battery inspection in ReliabilityFirst, AEP performed maintenance and testing on the battery at issue forty days after maintenance and testing was due.

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<sup>6</sup> PRC-005-1, R2 has a VRF of "High," consistent with the VRF Matrix promulgated by NERC. Applying the VSL Matrix promulgated by NERC, ReliabilityFirst, SPP RE, and Texas RE determined that the facts and circumstances of RFC201000668 warranted a "Moderate" VSL and SPP201000449, SPP200900137, and TRE201000300 each warranted a "Lower" VSL.

51. In light of the nature of the alleged violations, offset by the aforementioned mitigating factors, the Regions determined that these alleged violations posed a moderate risk to the reliability of the bulk power system.

*Mitigating Actions*

52. On June 1, 2011, AEP submitted to ReliabilityFirst its mitigation plan to address the alleged violation of PRC-005-1, R2. *See* NERC Mitigation Plan ID No. RFCMIT005457 (attached as **Attachment R**). On August 11, 2011, ReliabilityFirst accepted this mitigation plan, and on November 17, 2011, NERC approved it. On November 18, 2011, NERC submitted this mitigation plan to the Commission as confidential, non-public information.
53. On April 5, 2010, AEP submitted to SPP RE its mitigation plan to address the alleged violation of PRC-005-1, R2 (SPP200900137), which memorialized the mitigating actions AEP took to address the alleged violation in Texas RE.<sup>7</sup> *See* NERC Mitigation Plan ID No. MIT-09-2435 (attached as **Attachment S**). On April 9, 2010, SPP RE accepted this mitigation plan, and on April 16, 2010, NERC approved and submitted it to the Commission as confidential, non-public information. On December 1, 2011, Texas RE accepted this mitigation plan for the Texas RE alleged violation.
54. On August 1, 2011, AEP submitted to SPP RE its mitigation plan to address the alleged violation of PRC-005-1, R2 (SPP201000449). *See* NERC Mitigation Plan ID No. SPPMIT005870 (attached as **Attachment T**). On August 22, 2011, SPP RE accepted this mitigation plan, and on September 30, 2011, NERC approved it. On October 6, 2011, NERC submitted this mitigation plan to the Commission as confidential, non-public information.
55. In these mitigation plans, AEP memorialized the actions it took and will take to address the alleged violations of PRC-005-1, R2. First, AEP will bring all maintenance and testing up to date on its relays and batteries.
56. In addition, AEP removed certain Generation relays from service and completed testing and maintenance for Transmission relays. In addition, AEP revised its Transmission Protection and Control Maintenance and Testing Guideline to require technicians to verify the completeness of the asset tracking database entries against the in-service equipment. AEP also implemented Generation maintenance and testing work planning improvements and completed a root cause analysis. Furthermore, AEP issued a Transmission data entry guideline that defines the relays within the AEP Transmission system to be included within the asset tracking database.

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<sup>7</sup> On March 4, 2010, AEP submitted its mitigation plan to address the alleged violation of PRC-005-1, R2. SPP RE rejected that mitigation plan, and AEP submitted a revised mitigation plan on April 5, 2010.

57. AEP also committed to update its Generation Protection System Maintenance and Testing Program Circular Letter that requires engineering services to complete a comprehensive review of the relays that are included. In addition, AEP will revise its Generation standard operating procedures to require a Reliability Standards compliance review for large projects. Furthermore, AEP will complete a comprehensive review of AEP Generation's generator Protection Systems.
58. Pursuant to the NERC CMEP, AEP will submit a certification of completion to ReliabilityFirst and SPP RE for RFCMIT5457 and SPPMIT5870 within two days of completion of the mitigation plans. ReliabilityFirst and SPP RE will verify completion of the mitigation plans and promptly report the successful completion to NERC.
59. On July 31, 2010, AEP submitted to SPP RE a certification of completion for the mitigation plan for SPP200900137, which stated that AEP completed this mitigation plan as of June 30, 2010.<sup>8</sup> See Mitigation Plan Completion Review (attached as **Attachment U**). On August 17, 2010, SPP RE verified this completion. See Mitigation Plan Completion Notice (attached as **Attachment V**).
60. On August 11, 2011, AEP submitted to Texas RE a certification of completion for this mitigation plan, which stated that AEP completed this mitigation plan as of July 29, 2011. See AEP Certification of Completion Mitigation Plan (attached as **Attachment W**). On December 1, 2011, Texas RE verified the completion of the mitigation plan.

#### IV. ADJUSTMENT FACTORS

61. ReliabilityFirst, SPP RE, and Texas RE considered certain aspects of AEP's compliance program as mitigating factors. For example, AEP's Compliance Officer has independent access to the CEO, Executive Committee and Board of Directors. AEP's compliance program provides an annual schedule of standards to review and internal assessments of compliance by each affected business unit and by independent staff such as Internal Audits and Regulatory Services. AEP utilizes a compliance management software program.
62. In addition, the Regions considered as a mitigating factor that AEP self reported all of the alleged violations.
63. The Regions also considered as a mitigating factor the positive degree and quality of AEP's cooperation and remedial action during the enforcement process. AEP was cooperative throughout its interactions with the Regions in connection with

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<sup>8</sup> AEP submitted its initial certification of completion on July 31, 2010; however, the certification of completion did not reference the "Violation Identification No." Therefore, SPP RE requested an amended certification of completion. AEP submitted an amended certification on August 24, 2010. However, this certification of completion did not list the "Date of Certification." SPP RE requested an additional amended certification, which AEP submitted on September 7, 2010.



the alleged violations and also promptly submitted effective mitigation plans to remediate the alleged violations.

64. When assessing the penalty for the alleged violations at issue in this Agreement, the Regions considered whether the facts of these alleged violations evidenced any (a) repeated or continuing conduct similar to that underlying a prior violation of the same or a closely-related Reliability Standard Requirement; (b) conduct addressed in any previously submitted mitigation plan for a prior violation of the same or a closely-related Reliability Standard Requirement; or (c) multiple violations of the same Standard and Requirement. AEP previously violated PRC-005-1, R2.1 twice in the ReliabilityFirst region and once in SPP RE. Therefore, the Regions considered the instant violation of PRC-005-1, R2 as repetitive conduct and as an aggravating factor in the penalty determination.

## **V. PENALTY**

65. Based upon the foregoing, AEP shall pay a monetary penalty of \$14,333 to ReliabilityFirst, \$14,333 to SPP RE, and \$14,333 to Texas RE.
66. The Regions shall present invoices to AEP within 20 days after the Agreement is approved by the Commission or affirmed by operation of law. Upon receipt, AEP shall have 30 days to remit payment. The Regions will notify NERC if it does not timely receive the payment from AEP.
67. If AEP fails to timely remit the monetary penalty payment to the Regions, interest will commence to accrue on the outstanding balance, pursuant to 18 C.F.R. § 35.19a(a)(2)(iii), on the earlier of (a) the 31<sup>st</sup> day after the date on the invoice issued by ReliabilityFirst, SPP RE, and Texas RE to AEP for the monetary penalty payment or (b) the 51<sup>st</sup> day after the Agreement is approved by the Commission or operation of law.

## **VI. ADDITIONAL TERMS**

68. The Regions and AEP agree that this Agreement is in the best interest of bulk power system reliability. The terms and conditions of the Agreement are consistent with the regulations and orders of the Commission and the NERC Rules of Procedure.
69. The Regions shall report the terms of all settlements of compliance matters to NERC. NERC will review the Agreement for the purpose of evaluating its consistency with other settlements entered into for similar violations or under similar circumstances. Based on this review, NERC will either approve or reject this Agreement. If NERC rejects the Agreement, NERC will provide specific written reasons for such rejection and the Regions will attempt to negotiate with AEP a revised settlement agreement that addresses NERC's concerns. If a settlement cannot be reached, the enforcement process shall continue to conclusion. If NERC approves the Agreement, NERC will (a) report the approved settlement to the Commission review and approval by order or

operation of law and (b) publicly post the alleged violation and the terms provided for in this Agreement.

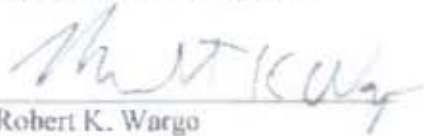
70. This Agreement shall become effective upon the Commission's approval of the Agreement by order or operation of law or as modified in a manner acceptable to the parties.
71. AEP agrees that this Agreement, when approved by NERC and the Commission, shall represent a final settlement of all matters set forth herein and binds AEP to perform the actions enumerated herein. AEP expressly waives its right to any hearing or appeal concerning any matter set forth herein, unless NERC or Commission action constitutes a material modification to this Agreement.
72. The Regions reserve all rights to initiate enforcement actions against AEP in accordance with the NERC Rules of Procedure in the event that AEP fails to comply with any of the terms or conditions of this Agreement, including failure to timely complete mitigation plans or other remedies of this Agreement. In the event AEP fails to comply with any of the terms or conditions of this Agreement, the Regions may initiate an action or actions against AEP to the maximum extent allowed by the NERC Rules of Procedure, including, but not limited to, the imposition of the maximum statutorily allowed monetary penalty. AEP will retain all rights to defend against such action or actions in accordance with the NERC Rules of Procedure.
73. AEP consents to the Regions' future use of this Agreement for the purpose of assessing the factors within the NERC Sanction Guidelines and applicable Commission orders and policy statements, including, but not limited to, the factor evaluating AEP's history of violations. Such use may be in any enforcement action or compliance proceeding undertaken by NERC or any Regional Entity or both, provided however that AEP does not consent to the use of the conclusions, determinations, and findings set forth in this Agreement as the sole basis for any other action or proceeding brought by NERC or any Regional Entity or both, nor does AEP consent to the use of this Agreement by any other party in any other action or proceeding.
74. AEP affirms that all of the matters set forth in this Agreement are true and correct to the best of its knowledge, information, and belief, and that it understands that the Regions enter into this Agreement in express reliance on the representations contained herein, as well as any other representations or information provided by AEP to the Regions during any interaction with the Regions relating to the subject matter of this Agreement.
75. The signatories to this Agreement agree that they enter into this Agreement voluntarily and that, other than the recitations set forth herein, no tender, offer, or promise of any kind by any member, employee, officer, director, agent, or representative of the Regions or AEP has been made to induce the signatories or any other party to enter into this Agreement.

76. The Agreement may be signed in counterparts.
77. This Agreement is executed in duplicate, each of which so executed shall be deemed to be an original.

**[SIGNATURE PAGE TO FOLLOW]**

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**Agreed to and accepted:**



Robert K. Wargo  
Director of Enforcement  
ReliabilityFirst Corporation

2/13/2012  
Date

\_\_\_\_\_  
Stacy Dochoda  
General Manager  
Southwest Power Pool Regional Entity

\_\_\_\_\_  
Date



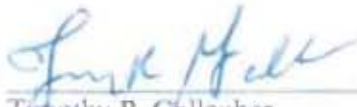
W. Lane Lanford  
Interim CEO  
Texas Reliability Entity

2-17-12  
Date

\_\_\_\_\_  
Richard E. Munczinski  
Senior Vice President - Regulatory Services  
American Electric Power Service Corporation

\_\_\_\_\_  
Date

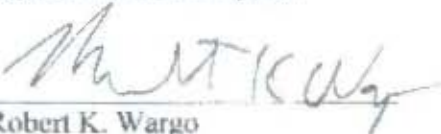
**Approved:**



Timothy R. Gallagher  
President & Chief Executive Officer  
ReliabilityFirst Corporation

2/14/12  
Date

Agreed to and accepted:

  
Robert K. Wargo  
Director of Enforcement  
ReliabilityFirst Corporation

2/13/2012  
Date

  
Stacy Dochoda  
General Manager  
Southwest Power Pool Regional Entity

2/12/2012  
Date

\_\_\_\_\_  
W. Lane Lanford  
Interim CEO  
Texas Reliability Entity

\_\_\_\_\_  
Date

\_\_\_\_\_  
Richard E. Munczinski  
Senior Vice President - Regulatory Services  
American Electric Power Service Corporation

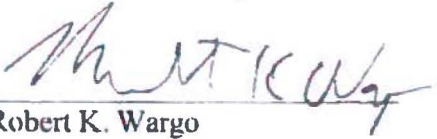
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Date

Approved:


  
Timothy R. Gallagher  
President & Chief Executive Officer  
ReliabilityFirst Corporation

2/14/12  
Date

**Agreed to and accepted:**

  
Robert K. Wargo  
Director of Enforcement  
ReliabilityFirst Corporation

2/13/2012  
Date

  
Stacy Dochoda  
General Manager  
Southwest Power Pool Regional Entity

4/2/2012  
Date


\_\_\_\_\_  
W. Lane Lanford  
Interim CEO  
Texas Reliability Entity

\_\_\_\_\_  
Date

  
Richard E. Munczinski  
Senior Vice President - Regulatory Services  
American Electric Power Service Corporation

4/11/12  
Date

**Approved:**

  
Timothy R. Gallagher  
President & Chief Executive Officer  
ReliabilityFirst Corporation

2/14/12  
Date

# Attachment A





## COMPLIANCE MONITORING AND ENFORCEMENT PROGRAM

### VIOLATION SELF-REPORTING FORM

*This Violation Self-Reporting Form can be used for submittals via e-mail for violations of the Reliability Standards identified by a self- assessment.*

1. Date:
2. Registered Entity:
3. NERC Registry ID:  Joint Registration ID (JRO) (if applicable):
4. Multiple Regional Registered Entity (MRRE) Regional Affiliates (if applicable):
5. Reliability Standard  Requirement <sup>a</sup>:
6. Reporting for registered function(s):
7. Date Violation was Discovered:   
Beginning Date of Violation:   
End or Expected End Date of Violation:
8. Has this violation been previously reported: Yes ☐ or No ☒  
If yes, Provide NERC Violation ID number:
9. Has this violation been reported to another region(s): Yes ☒ or No ☐  
If yes, Provide Region(s):
10. Is the violation still occurring: Yes ☐ or No ☒
11. Detail description and cause of the violation:

12. Violation Risk Factor: Lower ( ) – Medium ( X ) – High ( ) – Not Specified ( ) Select One

13. Violation Severity Level: Lower ( X ) – Moderate ( ) – High ( ) – Severe ( ) Select One  
Provide justification for this determination:

Less than 25% of our UFLS Protection Systems were affected.

14. Provide a determination of the Potential Impact to the Bulk Electric System:

The Battery Testing program ensures the overall life and serviceability of the battery. For the station batteries reported, 59 of the 81 UFLS Battery systems are monitored by SCADA. This SCADA monitoring ensures successful load shedding in an under frequency event which reduces the potential impact to the Bulk Electric System.

15. Mitigation Plan attached: Yes ☐ or No ☒

16. Additional Comments:

These maintenance gaps were identified as AEP's Transmission protection system evidence documents were being finalized for submittal of the self report documents reported to RFC on 9/24/09 for PRC-005-1. Maintenance records are still being reviewed and updated as appropriate. Complete details of the missed maintenance intervals will be provided to RFC as soon as they are complete and will be included with our Mitigation Plan.

17. Officer Verification: I understand that this information is being provided as required by the Reliability *First* Compliance Monitoring and Enforcement Program. Any review of this violation will require all information certified on this form be supported by appropriate documentation.

Officer's Name:

Title:

E-mail address:

Phone:

Primary Compliance Contact:

E-mail address:

Phone:

**E-mail Submittals to [self-reports@rfirst.org](mailto:self-reports@rfirst.org) Subject Line: Violation Self-Report**  
**For any questions regarding compliance submittals, please e-mail [compliance@rfirst.org](mailto:compliance@rfirst.org).**

<sup>a</sup>. Report on a requirement basis. If the violation is to a sub requirement, or multiple sub requirements, include all sub requirements relevant to this violation.

# Attachment B



**SPP Violation Self-Reporting Form**  
(for use internally in reporting information through the SPP Portal)

**Registered Entity:** American Electric Power Service Corp as Agent for Public Service of Oklahoma,  
and Southwestern Electric Power Company; NCR01056

1. Reliability Standard: PRC-008-0 Requirement(s): R2

2. AEP Applicable Function(s): TO

3. Date Alleged Violation Occurred: 10/5/2010

**4. Alleged Violation Description and Cause:**

A review of Transmission Underfrequency Protection System relays contained within AEP's asset tracking database was being performed. The review uncovered an instance where the last test date for one Underfrequency Load Shedding relay could not be verified.

**5. Potential Impact to the Bulk Power System**

It is AEP's opinion that potential impact to the BES is minimal. AEP continues to have high confidence in the functionality of these Protection Systems.

**6. Entity Comments and Documents:**

AEP found this issue because we are continually working to identify process improvements that can be implemented to further enhance compliance efforts. The date of alleged violation indicates the date of discovery by AEP.

**7. Officer Verification:**

Officer's Signature:  Date: 12/16/10

Officer's Name: Michael Heyeck

Officer's Title: SVP Transmission

Officer's E-mail Address: mheyeck@aep.com Phone: 614-552-1700

Primary Compliance Contact: Thad K. Ness

Email: tkness@aep.com Phone: 614-716-2053

# Attachment C

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## Self Report - 2010

Entity Name: American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele  
NERC Compl. Registry ID: NCR01056

Address: 1 Riverside Plaza  
Columbus OH 43215

Standard Requirement: PRC-008-0 R2

The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).

Date of Alleged Violation: October 05, 2010

Date Submitted: December 16, 2010

Self Report Status: Self Report has been submitted and is being reviewed.

Description and Cause: A review of Transmission Underfrequency Protection System relays contained within AEP's asset tracking database was being performed. The review uncovered an instance where the last test date for one Underfrequency Load Shedding relay could not be verified.

Potential Impact to the Bulk Power System: It is AEP's opinion that potential impact to the BES is minimal. AEP continues to have high confidence in the functionality of these Protection Systems.

Additional Information

# Attachment D



## Self-Report Form Non-Public and CONFIDENTIAL

Date Submitted by Registered Entity: 3/15/2011

NERC Registry ID: NCR04006

Joint Registration Organization (JRO) ID:

Registered Entity: American Electric Power

Registered Entity Contact Name: Thad Ness

Registered Entity Contact Email: tkness@aep.com

Function(s) Applicable to Self-Report:

<input type="checkbox"/> BA	<input type="checkbox"/> TOP	<input checked="" type="checkbox"/> TO	<input type="checkbox"/> GO	<input type="checkbox"/> GOP	<input type="checkbox"/> LSE
<input type="checkbox"/> DP	<input type="checkbox"/> PSE	<input type="checkbox"/> TSP	<input type="checkbox"/> PA	<input type="checkbox"/> RP	<input type="checkbox"/> TP
<input type="checkbox"/> RSG	<input type="checkbox"/> RC	<input type="checkbox"/> IA	<input type="checkbox"/> RRO		

Standard: PRC-008-0

Requirement: R2

Has this violation previously been reported or discovered: ☐ Yes ☒ No

If Yes selected: Provide NERC Violation ID (if known):

Date violation occurred:

Date violation discovered: 2/8/2011

Is the violation still occurring? ☐ Yes ☒ No

Detailed explanation and cause of violation: A review of Transmission Protection System elements contained within AEP's asset tracking database was being preformed, comparing individual relay calibration dates with calibration dates for the protection zone. That review uncovered 6 Underfrequency Load Shedding protective relays at 4 substations, Clarkwood, Fulton, Ingleside City and Rodd Field, that were beyond the 6 year calibration interval and grace period in accordance with AEP's maintenance and testing program. For all 6 relays, the last two calibration dates are in 2000 and 2008. When the UFLS relays were calibrated in 2008, they were not recognized as being out of the required calibration interval.

Potential Impact to the Bulk Power System: These relays represent 44.78MW of load, or 3.5% of AEP's UFLS system in the TRE footprint. It is AEP's opinion that potential impact to the BES is minimal and AEP continues to have high confidence in the functionality of these Protection Systems.

Additional Comments: AEP found this issue because we are continually working to identify process improvements that can be implemented to further enhance compliance efforts. Similar issues have been reported to SPP. AEP encourages the Regions to work collaboratively on assessing these self-reports.

**Submit completed form to: [selfreporting@texasre.org](mailto:selfreporting@texasre.org)**

*NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)*



American Electric Power  
700 Morrison Road  
Gahanna, OH 43230  
www.aep.com

## Self-Report Certification

Registered Entity Name:	American Electric Power Service Corp
Registered Entity NCR Number:	NCR04006

## CERTIFICATION

I, Michael Heyeck, certify that I am the Senior Vice President - Transmission, American Electric Power Service Corp; that I am authorized to execute this Certification; that I am familiar with the self-report submitted to Texas Regional Entity by American Electric Power Service Corp; that, to the best of my information, knowledge and belief, the statements included in this self-report and appended to this certification are true and correct as of the date of signing.

 3/15/2011  
SIGNATURE DATE

Michael Heyeck  
Senior Vice President - Transmission  
American Electric Power Service Corp  
614-552-1700

# Attachment E

## Mitigation Plan

Registered Entity: American Electric Power Service Corp. As Agent For Public

Mit Plan Code	NERC Violation ID	Requirement	Violation Validated On	Mit Plan Version
MIT-09-2436	SPP200900150	PRC-008-0 R2	04/03/2012	1

Mitigation Plan Submitted On: April 05, 2010

Mitigation Plan Accepted On: May 03, 2010

Mitigation Plan Proposed Completion Date: July 31, 2010

Actual Completion Date of Mitigation Plan: June 30, 2010

Mitigation Plan Certified Complete by AEPW On:

Mitigation Plan Completion Verified by SPP On: August 17, 2010

Mitigation Plan Completed? (Yes/No): Yes

## Section A: Compliance Notices

Section 6.2 of the NERC CMEP sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:

- (1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan. This person may be the Registered Entity's point of contact described in Section B.
  - (2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.
  - (3) The cause of the Alleged or Confirmed Violation(s).
  - (4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).
  - (5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).
  - (6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.
  - (7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.
  - (8) Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined or recommended to the applicable governmental authorities for not completing work associated with accepted milestones.
  - (9) Any other information deemed necessary or appropriate.
  - (10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self Certification or Self Reporting submittals.
  - (11) This submittal form may be used to provide a required Mitigation Plan for review and approval by regional entity(ies) and NERC.
- The Mitigation Plan shall be submitted to the regional entity(ies) and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.
  - This Mitigation Plan form may be used to address one or more related alleged or confirmed violations of one Reliability Standard. A separate mitigation plan is required to address alleged or confirmed violations with respect to each additional Reliability Standard, as applicable.
  - If the Mitigation Plan is accepted by regional entity(ies) and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission or filed with the applicable governmental authorities for approval in Canada.
  - Regional Entity(ies) or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.
  - Remedial action directives also may be issued as necessary to ensure reliability of the bulk power system.
  - The user has read and accepts the conditions set forth in these Compliance Notices.

---

## Section B: Registered Entity Information

B.1 Identify your organization:

Entity Name: American Electric Power Service Corp. As Agent For Public Svc. Co. Of  
Oklahoma & SW Ele Pwr Co.  
NERC Compliance Registry ID: NCR01056

Address: 1 Riverside Plaza  
Columbus OH 43215

B.2 Identify the individual in your organization who will serve as the Contact to the Regional Entity regarding this Mitigation Plan. This person shall be technically knowledgeable regarding this Mitigation Plan and authorized to respond to Regional Entity regarding this Mitigation Plan:

Name: Thad Ness  
Title: Reliability Compliance Manager  
Email: tkness@aep.com  
Phone: 614-716-2053



## Section C: Identification of Reliability Standard Violation(s) Associated with this Mitigation Plan

C.1 This Mitigation Plan is associated with the following violation(s) of the reliability standard listed below:

Violation ID	Date of Violation	Requirement
Requirement Description		
SPP200900150	09/24/2009	PRC-008-0 R2
The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).		

C.2 Brief summary including the cause of the violation(s) and mechanism in which it was identified above:

Maintenance records for some Transmission Owner Protection System devices were missing or found to indicate that maintenance did not always occur in accordance with guidelines defined in AEP's maintenance and testing program. These maintenance items include relay calibration and functional trip testing. Also, maintenance records for some Transmission Owner batteries indicated that maintenance and testing did not occur within the intervals defined in AEP's maintenance guidelines.

These deviations from AEP guidelines were discovered just as AEP's protection system evidence documents were being finalized for submittal in preparation for the October 2009 on-site compliance audit. AEP initially notified SPP RE of this issue in a 9/24/09 conference call with multiple parties from SPP and AEP. As reported in this discussion, the number of missed maintenance intervals involves less than 1% of AEP Transmission's overall UFLS protection maintenance program in the SPP footprint subject to PRC-008. On February 12, 2010, AEP notified SPP RE that we needed to modify the scope of this self report to include Transmission Owner batteries that missed maintenance intervals. For the missed battery inspection, the missed intervals involve less than 8.5% of the inspection opportunities.

C.3 Provide any relevant information regarding the identification of the violation(s) associated with this Mitigation Plan:

As prescribed in AEP's Protection and Control Testing and Maintenance Guide, there are two components of the AEP System Maintenance and Testing Program. The first is "Calibration" which corresponds to "System Maintenance". The second component is "Trip Path Testing" which corresponds to "System Testing". There are three UFLS relays that missed the relay functional trip tests. As of 12/4/2009, testing of the 3 relay elements subject to PRC-008-1 has been brought up-to-date as reported in our 1/8/2010 interrogatory response. Furthermore, after maintenance and testing, all subject relays are within specification and have not caused any misoperations.

As prescribed in AEP's Station Battery Maintenance Guideline, each station battery is to be inspected and with the inspection recorded in ISIS database within a maximum of 90-day interval from the last inspection ("monthly inspection"). In addition, a more thorough and detailed testing and inspection procedure is to be performed on station batteries twice a year with inspection recorded in ISIS database within 215 days of the previous such inspection ("detailed inspection"). There were a total of 42 batteries that missed 37 detailed inspections and 63 monthly inspections. Seventeen out of these 42 stations also have been reported in PRC-005-1 mitigation plan. As of 1/19/2010, testing/maintenance of all batteries subject to PRC-008-1 have been brought up-to-date. Furthermore, after maintenance and testing, all subject batteries are in proper operating condition. In our 1/8/2010 interrogatory response, we did not identify any batteries.

## Section D: Details of Proposed Mitigation Plan

- D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the violation(s) identified above in Section C.1 of this form:

AEP identifies the following 5 items in its mitigation plan.

- 1) A near-term plan was initiated on September 24, 2009 to bring all Protection System devices of the UFLS relay and trip testing maintenance up-to-date, including years 2007 and prior, with weekly progress reporting until complete. All maintenance items have been verified or brought up to date as of 12/4/2009.
- 2) Reinstate centralized Battery Maintenance Exception reports for both the monthly and detailed battery inspections. Transmission Asset Engineering is to run the exception reports and inform the Station Supervisors to ensure the inspections are conducted and reported according to the guidelines. The first exception report was issued on 11/12/2009.
- 3) Test/maintain all NERC reportable batteries for which testing/maintenance were not up-to-date. This task was completed on 1/19/2010.
- 4) Develop and implement improved station maintenance completion reports as part of a more formal process in which Transmission Asset Engineering staffs initiate monthly proactive reviews of issues that may cause deviations from scheduled protection system element maintenance and testing. Target initial report: July 31, 2010.
- 5) Initiate a formal Root Cause Analysis and Process Review specifically for missed battery maintenance activities to understand if there are process gaps and to identify potential improvements. Start process reviews and root cause analysis work by mid February with monthly reports and a targeted completion of June 18, 2010.

- D.2 Provide the timetable for completion of the Mitigation Plan, including the completion date by which the Mitigation Plan will be fully implemented and the violations associated with this Mitigation Plan are corrected:

Proposed Completion date of Mitigation Plan: July 31, 2010

- D.3 Milestone Activities, with completion dates, that your organization is proposing for this Mitigation Plan:

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date
Reinstate centralized Battery Maintenance Exception reports		11/12/2009	11/12/2009
Bring all Protection System devices of the UFLS relay maintenance and trip testing up-to-date		12/04/2009	12/04/2009
Bring all UFLS batteries testing/maintenance up-to-date (all 100 batteries mitigated).		01/19/2010	01/19/2010
Initiate process review and root cause analysis		02/15/2010	02/15/2010

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date
Develop improved station maintenance completion reports - 50% complete		03/31/2010	03/26/2010
Complete process review and root cause analysis		06/18/2010	
Develop improved station maintenance completion reports - 100% complete		06/30/2010	
Implement improved station maintenance reports		07/31/2010	

#### D.4 Additional Relevant Information (Optional)

As described in AEP's updated Protection and Control Testing and Maintenance Guide, maintenance of CTs and PTs is condition-based with their reasonability being continuously verified by SCADA, State Estimator or Operator awareness indications. There are no routine preventive maintenance activities for instrument transformers. Instrument transformers are tested at time of commissioning and inspected when there are indications of trouble.

There is confusion with the interpretation of PRC-008-0 when one compares the requirements of this standard with the requirements listed for similar standards. PRC-011-0 (UVLS System Maintenance and Testing) and PRC-017-0 (Special Protective System Maintenance and Testing) specifically list the elements to be covered by the standards in Requirement 1, i.e., Relays, Instrument Transformers, Communication systems and Batteries. PRC-008 (Underfrequency Load Shedding Equipment Maintenance Programs) Standard states "This UFLS equipment and maintenance testing program shall include UFLS equipment identification, the schedule for UFLS testing, and the schedule for UFLS equipment maintenance" and does not similarly detail the equipment as the other two Standards do. This confusion led AEP internal staff to have different interpretations as to the scope of equipment covered by Standard PRC-008-0 in that some AEP Staff focused on the Under Frequency Relays alone while others included the battery system. The fundamental question comes down to should batteries be included or not. To further clarify this difference of interpretation, draft 1 of PRC-005-2 dated July 21, 2009, table 1A on page 8 of 22, states that for UVLS or UFLS systems, the proper DC supply voltage is to be verified at the time of the maintenance. In summary, this internal difference of interpretation resulted in AEP's failure to initially report some battery systems serving the UFLS system that had missed maintenance intervals. AEP modified its self report on 2/12/2010.

## Section E: Interim and Future Reliability Risk

### E.1 Abatement of Interim BPS Reliability Risk

While your organization is implementing the Mitigation Plan proposed in Section D of this form, the reliability of the Bulk Power System may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take or is proposing as part of the Mitigation Plan to mitigate any increased risk to the reliability of the bulk power system while the Mitigation Plan is being implemented:

Completion of item 1 of the mitigation plan has brought UFLS relay maintenance and trip testing up to date, as of 12/4/2009. The load represented by the items in question represents approximately 3% of the UFLS program. AEP continues to have high confidence in the functionality of these relay systems, since there have been no mis-operations on these systems. Item 3 of the mitigation plan, testing of all batteries that were overdue, were completed as quickly as possible, as of 1/19/2010. For the UFLS batteries reported, 33 of the 42 PRC-008 batteries are monitored by SCADA. This SCADA monitoring verifies the battery condition, consequently reducing the potential negative impact to the Bulk Power System.

### E.2 Prevention of Future BPS Reliability Risk

Describe how successful completion of the Mitigation Plan as laid out in Section D of this form will prevent or minimize the probability that your organization incurs further violations of the same or similar reliability standards requirements in the future:

Improved station maintenance reports (Item 4 of the mitigation plan) will help keep a focus on maintenance items that are coming due in the near future and allow for efficient planning of resources and outages. These improved reports will be routinely routed to executive management to ensure oversight and accountability.

### E.3 Your organization may be taking or planning other action, beyond that listed in the Mitigation Plan, as proposed in Section D.1, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements listed in Section C.1, or of other reliability standards. If so, identify and describe any such action, including milestones and completion dates:

## Section F: Authorization

An authorized individual must sign and date the signature page. By doing so, this individual, on behalf of your organization:

(a) Submits the Mitigation Plan, as laid out in Section D, to the Regional Entity for acceptance and approval by NERC, and

(b) If applicable, certifies that the Mitigation Plan, as laid out in Section D of this form, was completed (i) as laid out in Section D of this form and (ii) on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and

(c) Acknowledges:

1. I am SVP Transmission of American Electric Power Service Corp. As Agent For Public Svc. Co. Of
2. I am qualified to sign this Mitigation Plan on behalf of American Electric Power Service Corp. As Agent
3. I have read and understand American Electric Power Service Corp. As Agent For Public Svc. Co. Of with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure and the NERC CMEP currently in effect or the NERC CMEP-Province of Manitoba, Schedule B currently in effect, whichever is applicable.
4. I have read and am familiar with the contents of the foregoing Mitigation Plan.
5. American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. Plan, including the timetable completion date, as accepted by the Regional Entity, NERC, and if required, the applicable governmental authorities in Canada.

Authorized Individual Signature: \_\_\_\_\_  
(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Authorized Individual

Name: Michael Heyeck

Title: SVP Transmission

Authorized On: April 01, 2010

# Attachment F

## Mitigation Plan

Registered Entity: American Electric Power Service Corp. As Agent For Public

<u>NERC Violation ID</u>	<u>Requirement</u>	<u>Violation Validated On</u>
SPP201000448	PRC-008-0 R2	02/16/2011

Mitigation Plan Submitted On: August 01, 2011

Mitigation Plan Accepted On: August 22, 2011

Mitigation Plan Proposed Completion Date: August 01, 2011

Actual Completion Date of Mitigation Plan:

Mitigation Plan Certified Complete by AEPW On:

Mitigation Plan Completion Validated by SPP On:

Mitigation Plan Completed? (Yes/No): No



## Section A: Compliance Notices

Section 6.2 of the NERC CMEP sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:

- (1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan. This person may be the Registered Entity's point of contact described in Section B.
- (2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.
- (3) The cause of the Alleged or Confirmed Violation(s).
- (4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).
- (5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).
- (6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.
- (7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.
- (8) Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined or recommended to the applicable governmental authorities for not completing work associated with accepted milestones.
- (9) Any other information deemed necessary or appropriate.
- (10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self Certification or Self Reporting submittals.
- (11) This submittal form may be used to provide a required Mitigation Plan for review and approval by regional entity(ies) and NERC.

- The Mitigation Plan shall be submitted to the regional entity(ies) and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.
- This Mitigation Plan form may be used to address one or more related alleged or confirmed violations of one Reliability Standard. A separate mitigation plan is required to address alleged or confirmed violations with respect to each additional Reliability Standard, as applicable.
- If the Mitigation Plan is accepted by regional entity(ies) and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission or filed with the applicable governmental authorities for approval in Canada.
- Regional Entity(ies) or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.
- Remedial action directives also may be issued as necessary to ensure reliability of the bulk power system.
- The user has read and accepts the conditions set forth in these Compliance Notices.

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## Section B: Registered Entity Information

B.1 Identify your organization:

Entity Name: American Electric Power Service Corp. As Agent For Public Svc. Co. Of  
Oklahoma & SW Ele Pwr Co.  
NERC Compliance Registry ID: NCR01056

Address: 1 Riverside Plaza  
Columbus OH 43215

B.2 Identify the individual in your organization who will serve as the Contact to the Regional Entity regarding this Mitigation Plan. This person shall be technically knowledgeable regarding this Mitigation Plan and authorized to respond to Regional Entity regarding this Mitigation Plan.:

Name: Thad Ness  
Title: Reliability Standards Compliance Manager  
Email: tkness@aep.com  
Phone: 614-716-2053

## Section C: Identity of Reliability Standard Violation Associated with this Mitigation Plan

C.1 This Mitigation Plan is associated with the following violation(s) of the reliability standard listed below:

Violation ID	Date of Violation	Requirement
Requirement Description		
SPP201000448	06/18/2007	PRC-008-0 R2
The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).		

C.2 Identify the cause of the violation(s) identified above:

A review of Transmission Underfrequency Protection System relays contained within AEP's tracking database was being performed. The review uncovered an instance where the last test date for an Underfrequency Load Shedding relay could not be verified.

C.3 Provide any relevant information regarding the violations associated with this Mitigation Plan: [If known]

See "Brief Summary" section.

## Section D: Details of Proposed Mitigation Plan

- D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the violation(s) identified above in Section C.1 of this form:

The proposed mitigation plan has already been completed due to ongoing efforts related to similar Protection System maintenance and testing issues being mitigated across the AEP footprint.

Work Already Completed:

- Complete Testing and Maintenance for Transmission Relays  
Maintenance and testing was completed on or before 10/22/2010 for the relay that was found to have incomplete records.
- Revise and implement AEP Transmission's P&C Maintenance and Testing Guideline  
Revised and implemented AEP Transmission's P&C Maintenance and Testing Guideline to require P&C Technicians to verify the completeness of the asset tracking database entries against the in-service equipment at AEP substations.
- Complete Root Cause Analysis  
AEP Transmission completed a root cause analysis of the PRC-008-0 self-report. This analysis will be used to determine if any additional mitigation measures are required.
- Issue a Transmission Data Entry Guideline  
AEP Transmission issued a Transmission Data Entry Guideline that defines the relays within the AEP Transmission system to be included within the asset tracking database. The guideline will promote consistency of relay data. The guideline addresses relays by type and function to meet the requirements of the NERC Reliability Standards.

- D.2 Provide the timetable for completion of the Mitigation Plan, including the completion date by which the Mitigation Plan will be fully implemented and the violations associated with this Mitigation Plan are corrected:

Proposed Completion date of Mitigation Plan: August 01, 2011

- D.3 Milestone Activities, with completion dates, that your organization is proposing for this Mitigation Plan:

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date
Complete Testing and Maintenance for Transmission Relays	Complete Testing and Maintenance for Transmission Relays	10/22/2010	October 22, 2010
Revise AEP Transmission Standard SS-420410 P&C Maintenance Guideline	Revise AEP Transmission Standard SS-420410 P&C Maintenance Guideline	05/31/2011	May 31, 2011
Complete Root Cause Analysis	Complete Root Cause Analysis	07/08/2011	June 27, 2011
Issue AEP Transmission Data Entry Guideline	Issue AEP Transmission Data Entry Guideline	08/01/2011	July 29, 2011

- D.4 Additional Relevant Information (Optional)

Activities associated with this Mitigation Plan were combined with efforts related to similar Protection

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System maintenance and testing issues being mitigated across the AEP footprint. (i.e. PRC-005-1)

## Section E: Interim and Future Reliability Risk

### E.1 Abatement of Interim BES Reliability Risk

While your organization is implementing the Mitigation Plan proposed in Section D of this form, the reliability of the Bulk Power System may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take or is proposing as part of the Mitigation Plan to mitigate any increased risk to the reliability of the bulk power system while the Mitigation Plan is being implemented:

AEP believes that there is no substantial risk to the reliability of the BES while this mitigation plan was executed. The identified relay has been calibrated as of 10/22/2010. AEP continues to have high confidence in the reliability of these Protection Systems, as the identified relay was found to be functioning properly when it was calibrated.

### E.2 Prevention of Future BES Reliability Risk

Describe how successful completion of the Mitigation Plan as laid out in Section D of this form will prevent or minimize the probability that your organization incurs further violations of the same or similar reliability standards requirements in the future:

AEP Transmission strives to continually improve their compliance programs. The remedial actions described in this plan will further strengthen AEP's PRC-008-0 compliance program. Transmission's continuous station inventory demonstrates AEP's commitment to continuous improvement.

### E.3 Your organization may be taking or planning other action, beyond that listed in the Mitigation Plan, as proposed in Section D.1, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements listed in Section C.1, or of other reliability standards. If so, identify and describe any such action, including milestones and completion dates:

## Section F: Authorization

An authorized individual must sign and date the signature page. By doing so, this individual, on behalf of your organization:

(a) Submits the Mitigation Plan, as laid out in Section D, to the Regional Entity for acceptance and approval by NERC, and

(b) If applicable, certifies that the Mitigation Plan, as laid out in Section D of this form, was completed (i) as laid out in Section D of this form and (ii) on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and

(c) Acknowledges:

1. I am Senior Vice President - Transmission of American Electric Power Service Corp. As Agent For Public
2. I am qualified to sign this Mitigation Plan on behalf of American Electric Power Service Corp. As Agent
3. I have read and understand American Electric Power Service Corp. As Agent For Public Svc. Co. Of with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure and the NERC CMEP currently in effect or the NERC CMEP-Province of Manitoba, Schedule B currently in effect, whichever is applicable.
4. I have read and am familiar with the contents of the foregoing Mitigation Plan.
5. American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. Plan, including the timetable completion date, as accepted by the Regional Entity, NERC, and if required, the applicable governmental authorities in Canada.

Authorized Individual Signature: \_\_\_\_\_

(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Name: Michael Heyeck

Title: Senior Vice President - Transmission

Authorized On: August 01, 2011

# Attachment G



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**CONFIDENTIAL NON-PUBLIC INFORMATION**

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**Certification of a Completed Mitigation Plan**

All Mitigation Plan Completion Certification submittals shall include data or information sufficient for SPP RE to verify completion of the Mitigation Plan. SPP RE may request such additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6)

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**Registered Entity Information**

**Company Name:** American Electric Power Service Corp. As Agent For Public Svc. Co. Of

Oklahoma & SW Electric Power Co.

**Company Address:** 1 Riverside Plaza, Columbus, OH 43215

**NERC Compliance Registry ID:** NCR 01056

**Date Mitigation Plan was submitted in CDMS:** 3/4/2010

**Date Mitigation Plan was completed:** 6/30/2010

List below the NERC Standard and Requirement covered under the accepted Mitigation Plan

**Standard and Requirement Number:** PRC-008-2 R2

**NERC Violation Number:** SPP200900150

**Date of Certification:** 7/30/2010

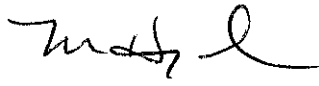
I certify that the mitigation plan for the above named alleged or confirmed violation has been completed on the date shown above and that all information submitted is complete and correct to the best of my knowledge.

**Name:** Mike Heyeck

**Title:** Senior Vice President, Transmission

**Email:** mheyeck@aep.com

**Phone:** 614-552-1700

**Authorized Signature:** 

**Date Signed:** 8/19/2010

Please submit to: SPP Regional Entity File Clerk@spp.org

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# Attachment H



**CONFIDENTIAL NON-PUBLIC INFORMATION**

Ms. Tasha Ward  
Compliance Specialist II  
[tward@spp.org](mailto:tward@spp.org)

Southwest Power Pool Regional Entity  
415 N. McKinley, Ste 140  
Little Rock, AR 72205-3020  
P 501.688.1738  
F 501.821.8726

August 17, 2010

**VIA E-MAIL ONLY**

Mr. Thad Ness  
Reliability Compliance Manager  
American Electric Power  
1 Riverside Plaza  
Columbus, OH 73215  
[tkness@aep.com](mailto:tkness@aep.com)

**Re: MITIGATION PLAN COMPLETION NOTICE**

**American Electric Power; NCR01056**

NERC Violation Identification Number: **SPP200900137**  
NERC Standard: **PRC-005-1 R2**  
SPP RE Violation Identification Number: **2009-067**  
Mitigation Plan Number: **MIT-09-2435**

NERC Violation Identification Number: **SPP200900150**  
NERC Standard: **PRC-008-0 R2**  
SPP RE Violation Identification Number: **2009-080**  
Mitigation Plan Number: **MIT-09-2436**

Dear Mr. Ness,

On July 31, 2010, the Southwest Power Pool Regional Entity (SPP RE) received American Electric Power's (AEP) Certifications of Mitigation Plan Completion for the subject mitigation plans. The SPP RE has completed its review of the evidence in support of completion of the mitigation plans. The SPP RE finds AEP has successfully completed the above referenced mitigation plans on June 30, 2010.

If you have any questions you may contact me at the contact information shown above.

Mitigation Plan Completion Notice

American Electric Power

August 17, 2010

Page 2

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Very Respectfully,

*Tasha Ward*

Tasha Ward

TW

cc: *(via e-mail only)*

AEP

Raj Rana

SPP RE

Stacy Dochoda

# Attachment I



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## **Mitigation Plan Completion Certification**

**Submittal of a Mitigation Plan Completion Certification shall include data or information sufficient for Texas Reliability Entity to verify completion of the Mitigation Plan.** Texas Reliability Entity may request additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6)

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Registered Entity Name: American Electric Power

NERC Registry ID:NCR04006

Date of Submittal of Certification:10/13/2011

NERC Violation ID No(s):

Reliability Standard and the Requirement(s) of which a violation was mitigated:PRC-008-0 R2

Date Mitigation Plan was scheduled to be completed per accepted Mitigation Plan:10/07/2011

Date Mitigation Plan was actually completed:10/07/2011

Additional Comments (or List of Documents Attached):

---

I certify that the Mitigation Plan for the above named violation has been completed on the date shown above and that all submitted information is complete and correct to the best of my knowledge.

Name:Michael Heyeck

Title:Senior Vice President - Transmission

Email:mheyek@aep.com

Phone:614-552-1700



---

Authorized Signature

*M. H. L.*

Date

10/12/2011

Please submit completed forms or any questions regarding completion of this form to the [mitigation@texasre.org](mailto:mitigation@texasre.org).

Please indicate the company name and reference the NERC Violation ID # (if known) in the subject line of the e-mail.

# Attachment J



**From:** Torgrimson, Brent [Brent.Torgrimson@TEXASRE.org]  
**Sent:** Thursday, December 01, 2011 2:40 PM  
**To:** Jimmy Cline; Amanda Owen  
**Subject:** 2011-12-01: AEP 137 (PRC-005 R2), 150 (PRC-008 R2) / CONFIDENTIAL NONPUBLIC INFORMATION / SPP RE RESTRICTED / ATTORNEY WORK PRODUCT

Jimmy and Amanda,

As requested, Texas RE has reviewed the mitigation plans submitted by AEP to SPP for the above SPP violations to ensure that they would address the similar compliance matters in the ERCOT region (TRE201100300 and TRE201100301). Texas RE has determined that the compliance situations self-reported by AEP to Texas RE for these two violations is functionally a subset of the violations found in SPP. Additionally, Texas RE has reviewed the mitigation plans to see if they would be acceptable to Texas RE for the ERCOT-region issues.

Please be advised that the mitigation plans submitted by AEP to SPP for these two violations are acceptable to Texas RE. In addition, AEP supplied Texas RE, and Texas RE has reviewed, information evidencing completion of mitigation activities addressing the specific compliance matters in the ERCOT region.

Please let me know if you any need additional information.

Regards,

Brent Torgrimson  
Sr. Enforcement Engineer  
Texas Reliability Entity, Inc.  
Phone: (512) 583-4987  
Cell: (512) 206-6355  
[brent.torgrimson@texasre.org](mailto:brent.torgrimson@texasre.org)

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---

**From:** Jimmy Cline [<mailto:jcline.re@spp.org>]  
**Sent:** Monday, November 28, 2011 12:15 PM  
**To:** Torgrimson, Brent; [amanda.owen@rfirst.org](mailto:amanda.owen@rfirst.org)  
**Subject:** AEP 137 (PRC-005 R2), 150 (PRC-008 R2) / CONFIDENTIAL NONPUBLIC INFORMATION / SPP RE RESTRICTED / ATTORNEY WORK PRODUCT

Brent,

Regarding these two PRC violations, AEP submitted MPs to TRE despite SPP RE conducting the completion reviews. RFC has requested confirmation that the information contained in the MPs submitted to TRE has been verified as complete. Attached are SPP RE's completion reviews. Although Tasha Ward was assigned these violations initially, I am sending her completion reviews so that you can compare them the TRE MP's. My understanding is that the MP details in SPP RE's also mitigated the reported violations in TRE and RFC. Please let us know at your earliest convenience. Thanks.  
Jimmy

Jimmy C. Cline  
Compliance Enforcement Attorney  
Southwest Power Pool Regional Entity  
16101 St. Vincent Way  
Little Rock, Arkansas 72223  
501-688-1759  
[jcline.re@spp.org](mailto:jcline.re@spp.org)

# Attachment K

## Machelle Smith

---

**From:** noreply@oati.net  
**Sent:** Monday, August 22, 2011 3:23 PM  
**To:** SPP RE Mitigation Plan  
**Subject:** Mitigation Plan Certification of Completion has been Submitted: American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. SPP201000448/  
SPP RE RESTRICTED CONFIDENTIAL NON-PUBLIC

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A Mitigation Plan Certification of Completion has been submitted.

Entity: **American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. - NCR01056**

*NERC Violation ID:* **SPP201000448**  
*Discovery Method:* **Self Report**  
*Standard Requirement:* **PRC-008-0 R2**  
*Mitigation Plan Submitted:* **08/01/2011**  
*Completion Date:* **07/29/2011**  
*Program Year:* **2010**

Entity Comment:

Authorized Individual:  
Name: **Robert C. Wagner**  
Title: **Vice President - Transmission Region Operations**  
Phone: **16145521900**  
Email: [rcwagner@aep.com](mailto:rcwagner@aep.com)

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[OATI Information - Email Template: MitPlan\_CmplCertSubmitted]

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**CONFIDENTIAL NON-PUBLIC INFORMATION**

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## **Certification of a Completed Mitigation Plan**

All Mitigation Plan Completion Certification submittals shall include data or information sufficient for SPP RE to verify completion of the Mitigation Plan. SPP RE may request such additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6)

---

### **Registered Entity Information**

Company Name: American Electric Power

Company Address: 1 Riverside Plaza, Columbus, OH 43215

NERC Compliance Registry ID: **NCR** NCR01056

**Date Original Mitigation Plan was submitted to SPP RE:** 8/1/2011

**Date Mitigation Plan was completed:** 7/29/2011

List below the NERC Standard and Requirement covered under the accepted Mitigation Plan

**Standard and Requirement Number:** PRC-008-0, R2

**NERC Violation Number:** SPP201000448

**Date of Certification:** 8/10/2011

I certify that the mitigation plan for the above named alleged or confirmed violation has been completed on the date shown above and that all information submitted is complete and correct to the best of my knowledge.

**Name:** Robert C. Wagner

**Title:** VP - Transmission Region Operations

**Email:** rcwagner@aep.com

**Phone:** 614-552-1900

**Authorized Signature:** 

**Date Signed:** 8-11-2011

The completed and signed Certification of a Completed Mitigation Plan should be submitted to the SPP RE via the CDMS Mitigation Plan Entity Document function. Once submitted, please notify the SPP RE by emailing the [spprefileclerk@spp.org](mailto:spprefileclerk@spp.org).

---

# Attachment L

## Machelle Smith

---

**From:** noreply@oati.net  
**Sent:** Tuesday, August 23, 2011 3:58 PM  
**To:** SPP RE Mitigation Plan  
**Subject:** Mitigation Plan has been Completed: American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. SPP201000448/ SPP RE RESTRICTED CONFIDENTIAL NON-PUBLIC

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Entity: American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. - NCR01056

NERC Violation ID: **SPP201000448**  
Standard and Requirement: **PRC-008-0 R2**  
Proposed Completion Date: **08/01/2011**  
Mitigation Plan Submitted: **08/01/2011**  
Mitigation Plan Completed: **07/29/2011**  
Mitigation Plan Verified: **08/23/2011**  
Program Year: **2010**

On 08/11/2011, the Southwest Power Pool Regional Entity (SPP RE) received American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co.'s Certification of Completion for the subject Mitigation Plan. The SPP RE Enforcement Staff has completed its review of the evidence in support of the mitigation plan completion. The SPP RE Enforcement Staff finds American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. has successfully completed the subject mitigation plan on 07/29/2011.

**Please note that, in accordance with the NERC Rules of Procedures, Appendix 4C (NERC CMEP), Section 6.5, the SPP RE Enforcement Staff's acceptance of the Mitigation Plan is provisional if the Mitigation Plan was submitted prior to the completion of the SPP RE's assessment of the underlying possible violation (i.e., the issuance of a Notice of Confirmed Violation (NOCV) or the execution of a settlement agreement). If upon the completion of its assessment of the underlying Possible Violation, the SPP RE Enforcement Staff determines that the facts and circumstances are different than those on which the accepted Mitigation Plan was based, the SPP RE Enforcement Staff will require the Registered Entity to submit a revised Mitigation Plan that fully addresses the facts and circumstances. The Mitigation Plan's acceptance will become final when the SPP RE issues a Notice of Confirmed Violation or enters into a settlement with the Registered Entity.**

If you have any questions regarding this Mitigation Plan, please contact:

SPP RE Contact: **Bob Reynolds**  
Phone: **(501) 688-8227**  
E-mail: [breyolds.re@spp.org](mailto:breyolds.re@spp.org)

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# Attachment M





## COMPLIANCE MONITORING AND ENFORCEMENT PROGRAM

### VIOLATION SELF-REPORTING FORM

*This Violation Self-Reporting Form can be used for submittals via e-mail for violations of the Reliability Standards identified by a self- assessment.*

1. Date: 10/18/2010
2. Registered Entity: American Electric Power
3. NERC Registry ID: Joint Registration ID (JRO) (if applicable:) NCR00682
4. Multiple Regional Registered Entity (MRRE) Regional Affiliates (if applicable:)
5. Reliability Standard PRC-005-1 Requirement <sup>a</sup>: R2.1, R2.2
6. Reporting for registered function(s): GO/TO
7. Date Violation was Discovered: 8/17/2010  
Beginning Date of Violation: 8/17/2010 (based on date of discovery)  
End or Expected End Date of Violation:
8. Has this violation been previously reported: Yes ☒ or No ☐  
If yes, Provide NERC Violation ID number: RFC200800074, RFC200900182
9. Has this violation been reported to another region(s): Yes ☒ or No ☐  
If yes, Provide Region(s): Southwest Power Pool RE
10. Is the violation still occurring: Yes ☒ or No ☐
11. Detail description and cause of the violation:

A review of Transmission Protection System elements contained within AEP's asset tracking database was being performed. That review uncovered instances where some Protection System elements were not accounted for adequately in the asset tracking database. As a result, there were no triggers to alert the TO that maintenance and testing was required.

Furthermore, AEP Generation's Protection System maintenance and testing program requires an engineering review of the relay list for PRC-005-1 compliance every 5 to 7 years. AEP Generation completed a review of the list in 2004. This review focused on relaying that was installed to protect the generator and whose operation directly resulted in a Unit trip.

AEP Generation completed the most recent review of the relay list in 2010. During this review, AEP Generation identified relays that were not maintained per the requirements of Generation's Protection System maintenance and testing program for one of the following reasons.

Bus Connected Transformer Relays

The previous review was completed prior to the board approval of RFC's definition of the Bulk Electric System (May 9, 2007) and prior to the approval of Appendix A to the RFC BES definition (December 4, 2007). While completing the 2010 review, AEP Generation identified transformers that are directly connected to a transmission bus operating at or above 100kV. Per Appendix A to the RFC BES definition, the relays associated with these transformers should have been maintained for PRC-005-1 compliance. AEP identified relays that were not properly identified in AEP Generation's asset tracking database and had not been maintained per AEP Generation's Protection System maintenance and testing program.

Protective Relaying Not Maintained

Generation's 2010 review identified additional relaying, not associated with the bus connected transformer definition, that had not been maintained per AEP Generation's Protection System maintenance and testing program.

12. Violation Risk Factor: Lower ( ) – Medium ( ) – High (X) – Not Specified ( ) Select One

13. Violation Severity Level: Lower (X) – Moderate ( ) – High ( ) – Severe ( ) Select One

Provide justification for this determination:

Affected devices represent less than 25% of applicable devices

14. Provide a determination of the Potential Impact to the Bulk Electric System:

It is AEP's opinion that potential impact to the BES is minimal and AEP continues to have high confidence in the functionality of these Protection Systems.

15. Mitigation Plan attached<sup>b</sup>: Yes ☐ or No ☒

16. Additional Comments:

AEP found this issue because we are continually working to identify process improvements that can be implemented to further enhance compliance efforts. AEP is also working to prioritize the maintenance and testing of those devices that had not previously been maintained per AEP's maintenance and testing programs.

17. Officer Verification: I understand that this information is being provided as required by the ReliabilityFirst Compliance Monitoring and Enforcement Program. Any review of this violation will require all information certified on this form be supported by appropriate documentation.

Officer's Name: Michael Heyeck



Title: Senior VP Transmission

E-mail address: mheyeck@aep.com

Phone: 614-552-1700

Primary Compliance Contact: Thad Ness

E-mail address: tkness@aep.com

Phone: 614-716-2053

E-mail Submittals to [self-reports@rfirst.org](mailto:self-reports@rfirst.org) Subject Line: (Registered No.) - Violation Self-Report  
For any questions regarding compliance submittals, please e-mail [self-reports@rfirst.org](mailto:self-reports@rfirst.org).

- <sup>a</sup>. Report on a requirement basis. If the violation is to a sub requirement, or multiple sub requirements, include all sub requirements relevant to this violation.
- <sup>b</sup>. Mitigation Plans are to be submitted to [mitigationplan@rfirst.org](mailto:mitigationplan@rfirst.org) with the subject line **(Registered No. - Mitigation Plan)**.

# Attachment N

Logged in as:  
**Abby Sheatzley**

Log Out

- System Administration
- Committees
- Compliance
- Self Reports
- TFE Request

Self Report Form - 2011

Save PDF | Return To Search Results

New Mitigation Plan | Attachments (0)

This form was submitted by Thad K. Ness (tkness@aep.com) on 9/29/2011.

\* Required Fields

Status: Saved

Region:	ReliabilityFirst
NERC Registry ID:	NCR00682
Joint Registration Organization (JRO) ID:	
Registered Entity:	American Electric Power Service Corporation (see Notes for legal name)
Registered Entity Contact Information:	
*	Thad Ness (tkness@aep.com) 614-716-2053

Standard Applicable to Self-Report:	PRC-005-1
Requirement Applicable to Self-Report:	R2.
Sub Requirements Applicable to Self-Report:	R2.1.
Function Applicable to Self-Report:	TO

Has this possible alleged violation previously been reported or discovered:	* <input checked="" type="radio"/> Yes <input type="radio"/> No
Provide NERC Violation ID (If known):	

Date violation occurred:	* 8/17/2011
Date violation discovered:	* 9/28/2011
Is the violation still occurring?	* <input type="radio"/> Yes <input checked="" type="radio"/> No
Detail explanation and cause of violation:	*

In preparation for the 2011 RFC Self-Certification, a detailed battery inspection at Sunnyside station was found not to have been conducted within the specified maintenance interval of 540 days. This was due to a data error in AEP's asset tracking database. Upon review of the asset tracking database, the last detailed inspection date was erroneously recorded as 2/1/8250. The actual detailed battery inspection occurred on 2/23/2010 and would have been due for re-inspection on 8/17/2011. Due to this data error, the detailed battery inspection did not appear due in maintenance schedule reports, thus there were no alerts that an inspection was required.

Reliability Impact:	* Minimal
Reliability Impact Description:	*

Considering the data entry error lead to just over forty days passed the 540 day detailed inspection interval, AEP believes the integrity of the DC system has not been compromised. The detailed battery inspection for this battery was completed on 9/29/2011 and therefore this incident posed minimal risk to the BES.

Additional Comments:

AEP is currently under an open enforcement action for PRC-005-1. This battery bank serves protection devices applicable to both PRC-005-1 and PRC-008-0 at Sunnyside station.

For Public Release - May 30, 2012

**NOTE:** While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)

☒ Submit Self Report



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# Attachment O

**Self Report - 2009**

American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele  
1 Riverside Plaza  
Columbus OH 43215

**NERC Registry ID:** NCR01056

**Standard Requirement:** PRC-008-0 R2

The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).

**Date of Alleged Violation:** September 24, 2009

**Date Submitted:** October 05, 2009

**Self Report Status:** Self Report has been submitted

**Description and Cause:** Maintenance records for two (2) Transmission Owner (TO) under-frequency relay systems indicate that testing did not always occur within the intervals defined in the maintenance and testing program. Our review of the maintenance records and investigation of causes is ongoing.

**Potential Impact to the Bulk Power System:** Under-Frequency Load Shed relay system may fail to perform as intended, possibly resulting in less load being shed than needed during a system disturbance. However, we have not experienced any relay mis-operations related to the equipment with missed maintenance intervals, nor have we experienced any under-frequency system events would have triggered these relay systems.

Additional Comments		
From	Comment	User Name
Entity	These maintenance gaps were identified as AEP's protection system evidence documents were being prepared for the October 2009 on-site compliance audit. AEP initially notified SPP RE of this issue in a 9/24/09 conference call. As reported in this discussion, the number of missed intervals involves approximately 1% of AEP Transmission's overall UFLS protection maintenance program in SPP. Complete details will be provided to SPP/RE as part of our Mitigation Plan.	System Batch User



# Attachment P



**SPP Violation Self-Reporting Form**  
(for use internally in reporting information through the SPP Portal)

**Registered Entity: American Electric Power Service Corp as Agent for Public Service of  
Oklahoma, Southwestern Electric Power Company NCR01056**

1. Reliability Standard: PRC-005-1 Requirement(s): R2

2. AEP Applicable Function(s): TO

3. Date Alleged Violation Occurred: 3/16/2011

**4. Alleged Violation Description and Cause**

A quarterly review of Transmission Protection System elements contained within AEP's asset tracking database was being performed. This review uncovered 1 relay at Northwest Texarkana substation that was beyond the required 6 year calibration interval and grace period in accordance with AEP's maintenance and testing program. This relay is part of a panel that is scheduled to be replaced on 4/25/2011. Another review also uncovered 28 trip testing paths at Pittsburg 345kV substation that were lacking information in the asset tracking database. Therefore, there was no indication that testing was required since commissioning in 2002. These trip paths are scheduled to be tested by 5/13/2011.

**5. Potential Impact to the Bulk Electrical System**

The potential impact to the BES is minimal. AEP continues to have high confidence in the functionality of these Protection Systems. These items represent less than 0.02% of BES relays and less than 0.02% of trip testing paths for AEP protective system elements within the SPP footprint.

**6. Entity Comments and Documents:**

AEP found these items because of continued efforts to identify process improvements that can be implemented to further enhance reliability. Similar issues have been reported to TRE and RFC. AEP encourages the Regions to work collaboratively on assessing these self-reports.

**6. Officer Verification:**

Officer's Signature:  Date: 4/18/2011

Officer's Name: Michael Heyeck

Officer's Title: SVP Transmission

Officer's E-mail Address mheyeck@aep.com Phone: 614-552-1700

Primary Compliance Contact: Thad K. Ness

Email: tkness@aep.com Phone: 614-716-2053

# Attachment Q

## Self-Report Form Non-Public and CONFIDENTIAL

Date Submitted by Registered Entity: 3/15/2011

NERC Registry ID: NCR04006

Joint Registration Organization (JRO) ID:

Registered Entity: American Electric Power

Registered Entity Contact Name: Thad Ness

Registered Entity Contact Email: tkness@aep.com

Function(s) Applicable to Self-Report:

<input type="checkbox"/> BA	<input type="checkbox"/> TOP	<input checked="" type="checkbox"/> TO	<input type="checkbox"/> GO	<input type="checkbox"/> GOP	<input type="checkbox"/> LSE
<input type="checkbox"/> DP	<input type="checkbox"/> PSE	<input type="checkbox"/> TSP	<input type="checkbox"/> PA	<input type="checkbox"/> RP	<input type="checkbox"/> TP
<input type="checkbox"/> RSG	<input type="checkbox"/> RC	<input type="checkbox"/> IA	<input type="checkbox"/> RRO		

Standard: PRC-005-1

Requirement: R2

Has this violation previously been reported or discovered: ☐ Yes ☒ No

If Yes selected: Provide NERC Violation ID (if known):

Date violation occurred:

Date violation discovered: 2/8/2011

Is the violation still occurring? ☒ Yes ☐ No

Detailed explanation and cause of violation: A review of Transmission Protection System elements contained within AEP's asset tracking database was being preformed, comparing individual relay calibration dates with calibration dates for the protection zone. That review uncovered 12 BES protective relays at 3 substations, Polk Avenue, Barilla Junction and Kenedy Switch, that were beyond the 6 year calibration interval and grace period in accordance with AEP's maintenance and testing program. Eight of those relays have been calibrated on or before 2/8/2011. The remaining 4 relays, located at Barilla Junction, are scheduled to be calibrated by the end of the second quarter of 2011. The last recorded calibration date for all 12 relays was in 2002. Relays were calibrated at

Kenedy Switch in December of 2010 and at Polk Avenue in February of 2011. The review also uncovered 3 trip testing zones at West Yates substation that were not accounted for in the asset tracking database. These 3 trip testing zones are scheduled to be tested by the end of the second quarter of 2011. This self report can be attributed to either 1) differences between protection zone calibration dates and relay calibration dates, leading to not being recognized as beyond the required calibration interval; or 2) not being properly inventoried, leading to no triggers to alert that testing was required.

Potential Impact to the Bulk Power System: It is AEP's opinion that potential impact to the BES is minimal and AEP continues to have high confidence in the functionality of these Protection Systems.

Additional Comments: AEP found this issue because we are continually working to identify process improvements that can be implemented to further enhance compliance efforts. Similar issues have been reported to both RFC and SPP. AEP encourages the Regions to work collaboratively on assessing these self-reports.

**Submit completed form to: [selfreporting@texasre.org](mailto:selfreporting@texasre.org)**

*NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)*

---




American Electric Power  
700 Morrison Road  
Gahanna, OH 43230  
www.aep.com

### Self-Report Certification

Registered Entity Name:	American Electric Power Service Corp
Registered Entity NCR Number:	NCR04006

### CERTIFICATION

I, Michael Heyeck, certify that I am the Senior Vice President - Transmission, American Electric Power Service Corp; that I am authorized to execute this Certification; that I am familiar with the self-report submitted to Texas Regional Entity by American Electric Power Service Corp; that, to the best of my information, knowledge and belief, the statements included in this self-report and appended to this certification are true and correct as of the date of signing.

 3/15/2011  
SIGNATURE DATE

Michael Heyeck  
Senior Vice President - Transmission  
American Electric Power Service Corp  
614-552-1700

# Attachment R



## Mitigation Plan Submittal Form

Date this Mitigation Plan is being submitted: 6/1/2011

### Section A: Compliance Notices & Mitigation Plan Requirements

- A.1 Notices and requirements applicable to Mitigation Plans and this Submittal Form are set forth in "Attachment A - Compliance Notices & Mitigation Plan Requirements."
- A.2 This form must be used to submit required Mitigation Plans for review and acceptance by ReliabilityFirst and approval by NERC.
- A.3 ☒ I have reviewed Attachment A and understand that this Mitigation Plan Submittal Form will not be accepted unless this box is checked.

### Section B: Registered Entity Information

- B.1 Identify your organization.

Company Name: America Electric Power

Company Address: 1 Riverside Plaza  
Columbus, OH 43215

NERC Compliance Registry ID: NCR00682

- B.2 Identify the individual in your organization who will be the Entity Contact regarding this Mitigation Plan.

Name: Thad Ness

Title: Reliability Standards Compliance Manager

Email: tkness@aep.com

Phone: (614) 716-2053





**Section C: Identification of Alleged or Confirmed Violation(s)  
Associated with this Mitigation Plan**

C.1 This Mitigation Plan is associated with the following Alleged or Confirmed violation(s) of the reliability standard listed below.

NERC Violation ID #	Reliability Standard	Requirement Number	Violation Risk Factor	Alleged or Confirmed Violation Date <sup>(*)</sup>	Method of Detection (e.g., Audit, Self-report, Investigation)
RFC201000 668	PRC-005-1	R2.1	High	8/17/2010	Self-report
RFC201000 668	PRC-005-1	R2.2	High	8/17/2010	Self-report

(\*) Note: The Alleged or Confirmed Violation Date shall be expressly specified by the Registered Entity, and subject to modification by ReliabilityFirst, as: (i) the date the Alleged or Confirmed violation occurred; (ii) the date that the Alleged or Confirmed violation was self-reported; or (iii) the date that the Alleged or Confirmed violation has been deemed to have occurred on by ReliabilityFirst. Questions regarding the date to use should be directed to the ReliabilityFirst contact identified in Section G of this form.

C.2 Identify the cause of the Alleged or Confirmed violation(s) identified above. Additional detailed information may be provided as an attachment.

Note: AEP has business-unit-specific protection systems maintenance and testing programs – one for AEP Transmission and one for AEP Generation. Consequently, the mitigation plan contains components for each of the programs.

AEP Generation

AEP Generation's Protection System maintenance and testing program requires an engineering review of applicable one lines and elementary (schematic) drawings to generate the relay list for PRC-005-1 compliance every 5 to 7 years. AEP Generation completed a review of the list in 2004. This review focused on relaying that was installed to protect the generator and whose operation directly resulted in a Unit trip.

AEP Generation completed the most recent review of the relay list in 2010. During this review, AEP Generation identified relays that were not maintained per the requirements of Generation's Protection System maintenance and testing program for one of the following reasons:



#### Bus-Connected Transformer Relays

The 2004 review was completed prior to board approval of RFC's definition of the Bulk Electric System (May 9, 2007) and prior to the approval of Appendix A to the RFC BES definition (December 4, 2007). The 2010 review was completed using the 2007 BES definition and Appendix A to the RFC BES definition as the basis. During the 2010 review AEP Generation included relays for transformers that are directly connected to a transmission bus operating at or above 100kV. The relays associated with these transformers should have been maintained for PRC-005-1 compliance. Some of these relays were not properly identified in AEP Generation's asset tracking database and had not been maintained per AEP Generation's Protection System maintenance and testing program.

#### Protective Relaying Not Maintained

AEP Generation's 2010 one line and elementary drawing review identified additional PRC-005-1 applicable relays not previously identified or maintained per AEP Generation's Protection System maintenance and testing program.

#### AEP Transmission

AEP Transmission's asset tracking database monitors relay calibration and trip testing maintenance activities. During regularly scheduled routine relay maintenance of BES equipment, AEP Transmission personnel identified relays and trip routes that were not populated in AEP Transmission's asset tracking database. AEP Transmission then initiated a review for similar relays that had not been included in the asset tracking database. Additional relays of similar type were discovered that had not been included in the asset tracking database. As a result, these relays had not been maintained per AEP Transmission's Protection and Control (P&C) Maintenance and Testing guideline. AEP Transmission determined the cause of the missing relays to be inconsistencies in the interpretation of requirements for the relays types to be included in the asset tracking database.

In addition, AEP Transmission discovered AEP-owned relays that were incorrectly identified in the asset tracking database as customer-owned. As a result, these relays were not included in routine maintenance work plans and were not identified in protective relay maintenance and testing queries.

Note: If a formal root cause analysis evaluation was performed, submit a copy of the summary report.

Root cause analysis is still underway. Summary report will be provided with the third quarter 2011 mitigation plan update. See milestone table below under section D3 for expected date of completion.



- C.3 Provide any additional relevant information regarding the Alleged or Confirmed violations associated with this Mitigation Plan. Additional detailed information may be provided as an attachment.

No additional details.

## **Section D: Details of Proposed Mitigation Plan**

### **Mitigation Plan Contents**

- D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the Alleged or Confirmed violations identified above in Part C.1 of this form. Additional detailed information may be provided as an attachment.

For the sake of completeness, the proposed mitigation plan includes both tasks already completed by AEP as well as additional tasks that AEP feels must be completed.

#### **Work Already Completed:**

##### **G1. Complete Testing and Maintenance of Generation Relays**

The Generation protective relays not maintained per AEP Generation's Protection System maintenance and testing program had been calibrated but not functionally tested. The functional test of all known untested relays was completed on or before October 15, 2010.

##### **T2. Complete Testing and Maintenance for Transmission Relays**

Maintenance and testing was completed on or before 1/26/2011 for all protective relays that were found to have incomplete records, as described in C.2. In addition, all relays discovered as a result of causes described in C.2 were added to the asset tracking database during 2010.

#### **Work To Be Completed:**

##### **T3. Revise and implement AEP Transmission's P&C Maintenance and Testing Guideline to require P&C Technicians to verify the completeness of the asset tracking database entries against the in-service equipment at AEP substations.**

##### **G4. Implement Generation Maintenance and Testing Work Planning Improvements**



AEP Generation will implement enhanced work processes to ensure that all identified relays are properly identified in AEP Generation's asset tracking database and are scheduled to be maintained per AEP Generation's Protection System maintenance and testing program. Phase 1 of these work process enhancements will include implementing quarterly validations of the relays identified within the asset tracking database. Phase 2 of these work process enhancements will include implementing a quarterly reviews by each plant of their upcoming maintenance and testing requirements.

5. Complete Root Cause Analysis

AEP Generation and Transmission are collaboratively completing a root cause analysis of the PRC-005-1 self-report. This analysis will be used to determine if any additional mitigation measures are required.

G6. Update Generation Protection System Maintenance and Testing Program Circular Letter

AEP Generation uses Circular Letter EL-M-CL-001 to comply with NERC Standard PRC-005-1 "Transmission and Generation Protection System Maintenance and Testing." This document requires Engineering Services to complete a comprehensive review the plant/unit specific relays that are considered part of "generator protection systems" once every 5 to 7 years, including a review of applicable plant drawings and validation of the data contained in AEP Generation's maintenance and testing scheduling tool. Currently, the program does not require the completion of a review in response to changes in NERC or regional requirements. The Circular Letter will be revised to include this requirement.

T7. Issue a Transmission Data Entry Guideline that defines the relays within the AEP Transmission system to be included within the asset tracking database. The guideline will promote consistency of relay data. The guideline will address relays by type and function to meet the requirements of the NERC Reliability Standards.

G8. Revise Generation Standard Operating Procedures

AEP Generation Standard Operating Procedures (SOPs) document a required method to ensure compliance with Generation's Quality Assurance program. Currently, the SOPs do not require a NERC standards compliance review for "large" projects. AEP Generation will modify the SOPs to include these reviews prior to final commissioning.

G9. Complete Comprehensive Review of Generation's Generator Protection Systems



In keeping with AEP's tradition of continuous process improvement, AEP Generation will complete a comprehensive review of the plant/unit specific relays that are considered part of "generator protection systems," including a review of applicable plant drawings and validation of the data contained in AEP Generation's maintenance and testing scheduling tool.

### **Mitigation Plan Timeline and Milestones**

- D.2 Provide the date by which full implementation of the Mitigation Plan will be, or has been, completed with respect to the Alleged or Confirmed violations identified above. State whether the Mitigation Plan has been fully implemented, and/or whether the actions necessary to assure the entity has returned to full compliance have been completed.

The Mitigation Plan will be fully implemented as outlined below.

- D.3 Enter Key Milestone Activities (with due dates) that can be used to track and indicate progress towards timely and successful completion of this Mitigation Plan.

No.	Key Milestone Activity	Proposed/Actual Completion Date* (shall not be more than 3 months apart)
G1.	Complete Test of Generation Relays	10/15/2010
T2.	Complete Testing and Maintenance for Transmission Relays	1/26/2011
G4a.	Implement Generation Maintenance and Testing Work Planning Improvements Phase 1	4/18/2011
T3.	Revise AEP Transmission Standard SS-420410 P&C Maintenance Guideline	5/31/2011
G4b.	Implement Generation Maintenance and Testing Work Planning Improvements Phase 2	5/31/2011
5.	Complete Root Cause Analysis	7/8/2011
T7.	Issue AEP Transmission Data Entry Guideline	8/1/2011
G6.	Update Generation Protection System Maintenance and Testing Program Circular Letter	10/1/2011
G8.	Revise Generation Standard Operating Procedures	12/31/2011
G9.	Complete Comprehensive Review of Generation's Generator Protection Systems	3/31/2012



(\*) Note: Additional violations could be determined for not completing work associated with accepted milestones.



## **Section E: Interim and Future Reliability Risk**

### **Abatement of Interim BPS Reliability Risk**

- E.1 While your organization is implementing this Mitigation Plan the reliability of the Bulk Power System (BPS) may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take to mitigate this increased risk to the reliability of the BPS. Additional detailed information may be provided as an attachment.

AEP believes that there is no substantial risk to the reliability of the BES while this mitigation plan is being executed. All identified relays have been calibrated and/or functionally tested. AEP continues to have high confidence in the reliability of these Protection Systems, as each of the identified relays were found to be functioning properly when they were tested.

### **Prevention of Future BPS Reliability Risk**

- E.2 Describe how successful completion of this Mitigation Plan by your organization will prevent or minimize the probability that the reliability of the BPS incurs further risk of similar violations in the future. Additional detailed information may be provided as an attachment.

Both AEP Generation and Transmission strive to continually improve their compliance programs. The remedial actions described in this plan will further strengthen AEP's PRC-005-1 compliance program. Generation's 5-7 year complete drawing review for PRC-005-1 applicable relays and Transmission's continuous station inventory demonstrates AEP's commitment to continuous improvement.





## Section F: Authorization

An authorized individual must sign and date this Mitigation Plan Submittal Form. By doing so, this individual, on behalf of your organization:

- a) Submits this Mitigation Plan for acceptance by ReliabilityFirst and approval by NERC, and
- b) If applicable, certifies that this Mitigation Plan was completed on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and
- c) Acknowledges:
  - 1. I am SVP of AEP Transmission
  - 2. I am qualified to sign this Mitigation Plan on behalf of AEP Transmission
  - 3. I have read and am familiar with the contents of this Mitigation Plan.
  - 4. AEP Transmission agrees to comply with, this Mitigation Plan, including the timetable completion date, as accepted by ReliabilityFirst and approved by NERC.

Authorized Individual Signature

A handwritten signature in black ink, appearing to read "Michael Heyeck", written over a horizontal line.

Name (Print):

Michael Heyeck

Title:

Senior Vice President - Transmission

Date:

5/27/2011

## Section G: Regional Entity Contact

Please direct completed forms or any questions regarding completion of this form to the ReliabilityFirst Compliance e-mail address [mitigationplan@rfirst.org](mailto:mitigationplan@rfirst.org).

Please indicate the company name and reference the NERC Violation ID # (if known) in the subject line of the e-mail. Additionally, any ReliabilityFirst Compliance Staff member is available for questions regarding the use of this form. Please see the contact list posted on the ReliabilityFirst Compliance web page.





## **Attachment A – Compliance Notices & Mitigation Plan Requirements**

- I. Section 6.2 of the CMEP<sup>1</sup> sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:
- (1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan.
  - (2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.
  - (3) The cause of the Alleged or Confirmed Violation(s).
  - (4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).
  - (5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).
  - (6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.
  - (7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.
  - (8) Key implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined for not completing work associated with accepted milestones.
  - (9) Any other information deemed necessary or appropriate.
  - (10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self-Certification or Self Reporting submittals.
- II. This submittal form must be used to provide a required Mitigation Plan for review and acceptance by ReliabilityFirst and approval by NERC.
- III. This Mitigation Plan is submitted to ReliabilityFirst and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.
- IV. This Mitigation Plan Submittal Form may be used to address one or more related Alleged or Confirmed violations of one Reliability Standard. A separate

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<sup>1</sup> "Compliance Monitoring and Enforcement Program" of the ReliabilityFirst Corporation;" a copy of the current version approved by the Federal Energy Regulatory Commission is posted on the ReliabilityFirst website.



mitigation plan is required to address Alleged or Confirmed violations with respect to each additional Reliability Standard, as applicable.

- V. If the Mitigation Plan is accepted by ReliabilityFirst and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission in accordance with applicable Commission rules, regulations and orders.
- VI. ReliabilityFirst or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.
- VII. Remedial action directives also may be issued as necessary to ensure reliability of the BPS.



## DOCUMENT CONTROL

**Title:** Mitigation Plan Submittal Form  
**Issue:** Version 2.0  
**Date:** 11 July 2008  
**Distribution:** Public  
**Filename:** ReliabilityFirst Mitigation Plan Submittal Form - Ver 2.DOC  
**Control:** Reissue as complete document only

## DOCUMENT APPROVAL

Prepared By	Approved By	Approval Signature	Date
Robert K. Wargo Senior Consultant Compliance	Raymond J. Palmieri Vice President and Director Compliance	<i>Raymond J. Palmieri</i>	1/2/08

## DOCUMENT CHANGE/REVISION HISTORY

Version	Prepared By	Summary of Changes	Date
1.0	Robert K. Wargo	Original Issue – Replaces “Proposed Mitigation Plan” Form	1/2/08
2.0	Tony Purgar	Revised email address from <a href="mailto:compliance@rfirst.org">compliance@rfirst.org</a> to <a href="mailto:mitigationplan@rfirst.org">mitigationplan@rfirst.org</a>	7/11/08

# Attachment S

## ***Mitigation Plan***

Mitigation Plan submitted on: **Apr 05, 2010**

Mitigation Plan Completed (Yes/No):

Mitigation Plan Completed On:

## **Section A: Compliance Notices**

- Section 6.2 of the NERC CMEP<sup>1</sup> sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:

(1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan. This person may be the Registered Entity's point of contact described in Section B.

(2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.

(3) The cause of the Alleged or Confirmed Violation(s).

(4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).

(5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).

(6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.

(7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.

(8) Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined or recommended to the applicable governmental authorities for not completing work associated with accepted milestones.<sup>2</sup>

(9) Any other information deemed necessary or appropriate.

(10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self Certification or Self Reporting submittals.

(11) This submittal form may be used to provide a required Mitigation Plan for review and approval by regional entity(ies) and NERC.

- The Mitigation Plan shall be submitted to the regional entity(ies) and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.

1. Uniform Compliance Monitoring and Enforcement Program ("NERC CMEP") of the North American Electric Reliability Corporation (a copy of the current version approved by the Federal Energy Regulatory Commission is posted on NERC's website.) Or the North American Electric Reliability Corporation Compliance Monitoring and Enforcement Program – Province of Manitoba, Schedule "B" to the Interim Agreement on Compliance Monitoring and Enforcement in Manitoba between NERC, the Regional Entity, and Manitoba Hydro (available upon request from the Regional Entity).

2. Implementation milestones that precede the date that a Mitigation Plan becomes effective in Manitoba will be considered to be extended until the date that the Mitigation Plan becomes effective.

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- This Mitigation Plan form may be used to address one or more related alleged or confirmed violations of one Reliability Standard. A separate mitigation plan is required to address alleged or confirmed violations with respect to each additional Reliability Standard, as applicable.
- If the Mitigation Plan is accepted by regional entity(ies) and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission or filed with the applicable governmental authorities for approval in Canada.
- Regional Entity(ies) or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.
- Remedial action directives also may be issued as necessary to ensure reliability of the bulk power system.
- The user has read and accepts the conditions set forth in these Compliance Notices.

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## **Section B: Registered Entity Information**

### **B.1**

Identify your organization:

Entity Name: **American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co.**

Address: **1 Riverside Plaza, Columbus, Ohio 43215, United States**

NERC Compliance Registry ID: *[If known]* **NCR01056**

### **B.2**

Identify the individual in your organization who will serve as the Contact to Regional Entity regarding this Mitigation Plan. This person shall be technically knowledgeable regarding this Mitigation Plan and authorized to respond to Regional Entity regarding this Mitigation Plan.:

Name: **Thad Ness**

Title: **Reliability Compliance Manager**

Email: **tkness@aep.com**

Phone: **614-716-2053**



## **Section C: Identity of Reliability Standard Violation associated with this Mitigation Plan**

### **C.1**

This Mitigation Plan is associated with the following violation(s) of the reliability standard listed below:

Standard Requirement: **PRC-005-1 R2.1**

Description: ***Evidence Protection System devices were maintained and tested within the defined intervals.***

Violation Date: **Sep 24, 2009**

### **C.2**

Identify the cause of the violation(s) identified above:

***Maintenance records for some Transmission Owner Protection System devices were missing or found to indicate that maintenance did not always occur in accordance with guidelines defined in AEP's maintenance and testing program. These maintenance items include relay calibration and functional trip testing. Also, maintenance records for some Transmission Owner batteries indicated that maintenance and testing did not occur within the intervals defined in AEP's maintenance guidelines.***

***These deviations from AEP guidelines were discovered just as AEP's protection system evidence documents were being finalized for submittal in preparation for the October 2009 on-site compliance audit. AEP initially notified SPP of this issue in a 9/24/09 conference call with multiple parties from SPP and AEP. The number of missed maintenance intervals involves approximately 2% of AEP Transmission's overall BES protection maintenance/testing program in the SPP footprint subject to PRC-005-1.***

### **C.3**

Provide any relevant information regarding the violations associated with this Mitigation Plan: *[If known]*  
***As prescribed in AEP's Protection and Control Testing and Maintenance Guide, there are two components of the AEP System Maintenance and Testing Program. The first is "Calibration" which corresponds to "System Maintenance". The second component is "Trip Path Testing" which corresponds to "System Testing". The Protection System devices of the BES relay and carrier that missed the maintenance and testing intervals include 48 devices (9 on relay functional trip tests and 39 on relay calibration). As of 12/29/2009, and as reported in our 1/8/2010 interrogatory response, testing and maintenance of 36 out of the 48 relay devices subject to PRC-005-1 has been brought up-to-date. On 2/2/2010, we discovered that 9 relays in the Lawton Eastside 138 kV station also missed the calibration and have included them on the mitigation list. On 2/12/2010 we discovered 3 relays in Logansport 138 kV station also missed the calibration and have included them on the mitigation list. Lawton Eastside relays were mitigated on 2/18/2010 and Logansport relays were mitigated on 3/18/2010. Furthermore, after***

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*maintenance and testing, all subject relays are within specification and have not caused any misoperations.*

*As prescribed in AEP's Station Battery Maintenance Guideline, each station battery is to be inspected and with the inspection recorded in ISIS database within a maximum of 90-day interval from the last inspection ("monthly inspection"). In addition, a more thorough and detailed testing and inspection procedure is to be performed on station batteries twice a year with inspection recorded in ISIS database within 215 days of the previous such inspection ("detailed inspection"). There are a total of 20 batteries that missed a total of 36 maintenance and testing intervals. Furthermore, since our 1/8/2010 interrogatory response, we identified 5 additional batteries that missed the maintenance/testing interval. As of 1/19/2010, testing/maintenance of all batteries subject to PRC-005-1 have been brought up-to-date. Furthermore, after maintenance and testing, all subject batteries are in proper operating condition.*

## **Section D: Details of Proposed Mitigation Plan**

### **Mitigation Plan Contents**

#### **D.1**

Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the violation(s) identified above in Section C.1 of this form:

**1) A near-term plan was initiated on September 24, 2009 to bring all Protection System devices of the BES relay and trip testing maintenance up-to-date, including years 2007 and prior, with weekly progress reporting until complete. By 12/14/2009, all but 4 maintenance items have been verified or brought up to date. These 4 maintenance items were outage-constrained due to other planned outages already in progress surrounding the Stall plant construction. These items were completed on 12/29/2009. As mentioned earlier, on 2/2/2010, we discovered that 9 relays in the Lawton Eastside 138 kV station also missed the calibration and have included them on the mitigation list. On 2/12/2010 we discovered 3 relays in Logansport 138 kV station also missed the calibration and have included them on the mitigation list. Lawton Eastside relays were mitigated on 2/18/2010 and Logansport relays were mitigated on 3/18/2010. Therefore, as of March 18, 2010, this task was completed.**

**2) Reinstate centralized Battery Maintenance Exception reports for both the monthly and detailed battery inspections. Transmission Asset Engineering is to run the exception reports and inform the Station Supervisors to ensure the inspections are conducted and reported according to the guidelines. The exception report was issued on 11/12/2009.**

**3) Test/maintain all NERC reportable batteries for which testing/maintenance were not up-to-date. This task was completed on 1/19/2010.**

**4) Develop and implement improved station maintenance completion reports as part of a more formal process in which Transmission Asset Engineering staffs initiate monthly proactive reviews of issues that may cause deviations from scheduled protection system element maintenance and testing. Target initial report: July 31, 2010.**

**5) Initiate a formal Root Cause Analysis and Process Review specifically for missed battery maintenance activities to understand if there are process gaps and to identify potential improvements. Start process reviews and root cause analysis work by mid February with monthly reports and a targeted completion of June 18, 2010.**

### **Mitigation Plan Timeline and Milestones**

#### **D.2**

Provide the timetable for completion of the Mitigation Plan, including the completion date by which the Mitigation Plan will be fully implemented and the violations associated with this Mitigation Plan are corrected: **Jul 31, 2010**

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### D.3

Milestone Activities, with completion dates, that your organization is proposing for this Mitigation Plan:

Milestone Activity	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date
Reinstate centralized Battery Maintenance Exception reports	Nov 12, 2009	Nov 12, 2009
Bring all elements of the BES relay maintenance and trip testing up-to-date	Dec 29, 2009	Dec 29, 2009
Bring all NERC reportable batteries testing/maintenance up-to-date	Jan 19, 2010	Jan 19, 2010
Initiate process review and root cause analysis	Feb 15, 2010	Feb 15, 2010
Calibrate 9 relays at Lawton Eastside 138 kV station	Feb 18, 2010	Feb 18, 2010
Calibrate 3 relays at Logansport 138 kV station	Mar 18, 2010	Mar 18, 2010
Develop improved station maintenance completion reports - 50% complete	Mar 31, 2010	Mar 26, 2010
Complete process review and root cause analysis	Jun 18, 2010	
Develop improved station maintenance completion reports - 100% complete	Jun 30, 2010	
Implement improved station maintenance reports	Jul 31, 2010	

(\*) Note: Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined for not completing work associated with accepted milestones.

### Additional Relevant Information (Optional)

#### D.4

If you have any relevant additional information that you wish to include regarding the mitigation plan, milestones, milestones dates and completion date proposed above you may include it here:

***As described in AEP's updated Protection and Control Testing and Maintenance Guide, maintenance of CTs and PTs is condition-based with their reasonability being continuously verified by SCADA, State Estimator or Operator awareness indications. There are no routine preventive maintenance activities for instrument transformers. Instrument transformers are tested at time of commissioning and inspected when there are indications of trouble.***

## **Section E: Interim and Future Reliability Risk**

### **Abatement of Interim BPS Reliability Risk**

#### **E.1**

While your organization is implementing the Mitigation Plan proposed in Section D of this form, the reliability of the Bulk Power System may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take or is proposing as part of the Mitigation Plan to mitigate any increased risk to the reliability of the bulk power system while the Mitigation Plan is being implemented:

***Proposed completion of item 1 of the mitigation plan has brought relay maintenance and trip testing up-to-date, as of 3/18/2010. AEP continues to have high confidence in the functionality of these relay systems, since there have been no mis-operations on these systems and backup relaying systems are in place. Some functional trip tests are for sectionalizing motor operated air-break (MOAB) switches. These MOABs are not directly tripped by BES protection systems, but allow for sequential reclosing of non-faulted line sections. Some functional trip tests were for facilities comprised of double-breaker or breaker-and-a-half configuration. Some maintenance activities are applied to portions of the AEP 138 kV system that were performing distribution or customer load service functions and did not have an impact to the transfer of bulk power. Item 3 of the Mitigation Plan, testing of all batteries that were overdue, were completed as quickly as possible, as of 1/19/2010. For the station batteries reported, 16 of the 21 PRC-005 batteries are monitored by SCADA. This SCADA monitoring verifies the battery condition, consequently reducing the negative impact to the Bulk Power System.***

### **Prevention of Future BPS Reliability Risk**

#### **E.2**

Describe how successful completion of the Mitigation Plan as laid out in Section D of this form will prevent or minimize the probability that your organization incurs further violations of the same or similar reliability standards requirements in the future:

***Improved station maintenance reports (Item 4 of the mitigation plan) will help keep a focus on maintenance items that are coming due in the near future and allow for efficient planning of resources and outages. These improved reports will be routinely routed to executive management to ensure oversight and accountability.***

#### **E.3**

Your organization may be taking or planning other action, beyond that listed in the Mitigation Plan, as proposed in Section D.1, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements listed in Section C.1, or of other reliability standards. If so, identify and describe any such action, including milestones and completion dates:

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**Section F: Authorization**

An authorized individual must sign and date the signature page. By doing so, this individual, on behalf of your organization:

- (a) Submits the Mitigation Plan, as laid out in Section D, to the Regional Entity for acceptance and approval by NERC, and
- (b) If applicable, certifies that the Mitigation Plan, as laid out in Section D of this form, was completed (i) as laid out in Section D of this form and (ii) on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and
- (c) Acknowledges:

1. I am ***SVP Regulatory Services of American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co..***

2. I am qualified to sign this Mitigation Plan on behalf of ***American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co..***

3. I have read and understand ***American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co.***'s obligations to comply with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure and the NERC CMEP currently in effect or the NERC CMEP-Province of Manitoba, Schedule B currently in effect, whichever is applicable.

4. I have read and am familiar with the contents of the foregoing Mitigation Plan.

5. ***American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co.*** agrees to be bound by, and comply with, this Mitigation Plan, including the timetable completion date, as accepted by the Regional Entity, NERC, and if required, the applicable governmental authorities in Canada.

**Authorized Individual Signature** \_\_\_\_\_

(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Name: ***Michael Heyeck***

Title: ***SVP Regulatory Services***

Authorized On: ***Apr 01, 2010***

# Attachment T

## Mitigation Plan

Registered Entity: American Electric Power Service Corp. As Agent For Public

<u>NERC Violation ID</u>	<u>Requirement</u>	<u>Violation Validated On</u>
SPP201100449	PRC-005-1 R2	02/16/2011

Mitigation Plan Submitted On: August 01, 2011

Mitigation Plan Accepted On: August 22, 2011

Mitigation Plan Proposed Completion Date: March 31, 2012

Actual Completion Date of Mitigation Plan:

Mitigation Plan Certified Complete by AEPW On:

Mitigation Plan Completion Validated by SPP On:

Mitigation Plan Completed? (Yes/No): No



## Section A: Compliance Notices

Section 6.2 of the NERC CMEP sets forth the information that must be included in a Mitigation Plan. The Mitigation Plan must include:

- (1) The Registered Entity's point of contact for the Mitigation Plan, who shall be a person (i) responsible for filing the Mitigation Plan, (ii) technically knowledgeable regarding the Mitigation Plan, and (iii) authorized and competent to respond to questions regarding the status of the Mitigation Plan. This person may be the Registered Entity's point of contact described in Section B.
- (2) The Alleged or Confirmed Violation(s) of Reliability Standard(s) the Mitigation Plan will correct.
- (3) The cause of the Alleged or Confirmed Violation(s).
- (4) The Registered Entity's action plan to correct the Alleged or Confirmed Violation(s).
- (5) The Registered Entity's action plan to prevent recurrence of the Alleged or Confirmed violation(s).
- (6) The anticipated impact of the Mitigation Plan on the bulk power system reliability and an action plan to mitigate any increased risk to the reliability of the bulk power-system while the Mitigation Plan is being implemented.
- (7) A timetable for completion of the Mitigation Plan including the completion date by which the Mitigation Plan will be fully implemented and the Alleged or Confirmed Violation(s) corrected.
- (8) Implementation milestones no more than three (3) months apart for Mitigation Plans with expected completion dates more than three (3) months from the date of submission. Additional violations could be determined or recommended to the applicable governmental authorities for not completing work associated with accepted milestones.
- (9) Any other information deemed necessary or appropriate.
- (10) The Mitigation Plan shall be signed by an officer, employee, attorney or other authorized representative of the Registered Entity, which if applicable, shall be the person that signed the Self Certification or Self Reporting submittals.
- (11) This submittal form may be used to provide a required Mitigation Plan for review and approval by regional entity(ies) and NERC.

- The Mitigation Plan shall be submitted to the regional entity(ies) and NERC as confidential information in accordance with Section 1500 of the NERC Rules of Procedure.
- This Mitigation Plan form may be used to address one or more related alleged or confirmed violations of one Reliability Standard. A separate mitigation plan is required to address alleged or confirmed violations with respect to each additional Reliability Standard, as applicable.
- If the Mitigation Plan is accepted by regional entity(ies) and approved by NERC, a copy of this Mitigation Plan will be provided to the Federal Energy Regulatory Commission or filed with the applicable governmental authorities for approval in Canada.
- Regional Entity(ies) or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.
- Remedial action directives also may be issued as necessary to ensure reliability of the bulk power system.
- The user has read and accepts the conditions set forth in these Compliance Notices.

Section B: Registered Entity Information

B.1 Identify your organization:

Entity Name: American Electric Power Service Corp. As Agent For Public Svc. Co. Of  
Oklahoma & SW Ele Pwr Co.  
NERC Compliance Registry ID: NCR01056

Address: 1 Riverside Plaza  
Columbus OH 43215

B.2 Identify the individual in your organization who will serve as the Contact to the Regional Entity regarding this Mitigation Plan. This person shall be technically knowledgeable regarding this Mitigation Plan and authorized to respond to Regional Entity regarding this Mitigation Plan.:

Name: Thad Ness  
Title: Reliability Standards Compliance Manager  
Email: tkness@aep.com  
Phone: 614-716-2053

## Section C: Identification of Reliability Standard Violation(s) Associated with this Mitigation Plan

C.1 This Mitigation Plan is associated with the following violation(s) of the reliability standard listed below:

Violation ID	Date of Violation	Requirement
Requirement Description		
SPP201100449	06/18/2007	PRC-005-1 R2
Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall 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). The documentation of the program implementation shall include:		

C.2 Identify the cause of the violation(s) identified above:

Note: AEP has business-unit-specific protection systems maintenance and testing programs – one for AEP Transmission and one for AEP Generation. Consequently, the mitigation plan contains components for each of the programs.

### AEP Generation

AEP Generation's Protection System maintenance and testing program requires an engineering review of applicable one lines and elementary (schematic) drawings to generate the relay list for PRC-005-1 compliance every 5 to 7 years. AEP Generation completed a review of the list in 2004. This review focused on relaying that was installed to protect the generator and whose operation directly resulted in a Unit trip.

AEP Generation completed the most recent review of the relay list in 2010. During this review, AEP Generation identified additional PRC-005-1 applicable relays not previously identified or maintained per the requirements of Generation's Protection System maintenance and testing program.

### AEP Transmission

During a quarterly review of Protection System elements contained within AEP's asset tracking database, Transmission personnel identified one relay that was beyond the required calibration interval. AEP Transmission then initiated a subsequent review of Protection System elements in the asset tracking database and discovered 28 trip testing paths that were lacking sufficient data. Therefore, there was no indication that maintenance was required for these items. As a result, these relays and trip testing paths had not been maintained per AEP Transmission's Protection and Control (P&C) Maintenance and Testing guideline.

C.3 Provide any relevant information regarding the violation(s) associated with this Mitigation Plan: [If known]

After further review, AEP Transmission concluded only 8 of the 28 trip testing paths were lacking sufficient records in the asset tracking database. This was due to inconsistencies in the data entry process.

## Section D: Details of Proposed Mitigation Plan

- D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the violation(s) identified above in Section C.1 of this form:

For the sake of completeness, the proposed mitigation plan includes both tasks already completed by AEP as well as additional tasks that AEP feels must be completed.

### Work Already Completed:

- Remove Generation Relays from Service:

With the exception of 2 protective relays, testing of the Generation protective relays not maintained per AEP Generation's Protection System maintenance and testing program had been completed at the time of initiating the self-report. It was determined that the two remaining relays requiring testing were no longer needed. They were removed from service during the next unit outage (by February 23, 2011).

- Complete Testing and Maintenance for Transmission Relays:

Maintenance and testing was completed on or before 5/10/2011 for all protective relays that were found to have incomplete records, as described in C.2. In addition, all relays discovered as a result of causes described in C.2 were added to the asset tracking database.

- Revise AEP Transmission's P&C Maintenance and Testing Guideline:

Revised and implemented AEP Transmission's P&C Maintenance and Testing Guideline to require P&C Technicians to verify the completeness of the asset tracking database entries against the in-service equipment at AEP substations.

- Implement Generation Maintenance and Testing Work Planning Improvements:

AEP Generation implemented enhanced work processes to ensure that all identified relays are properly identified in AEP Generation's asset tracking database and are scheduled to be maintained per AEP Generation's Protection System maintenance and testing program. Phase 1 of these work process enhancements included implementing quarterly validations of the relays identified within the asset tracking database. Phase 2 of these work process enhancements included implementing a quarterly review by each plant of their upcoming maintenance and testing requirements.

- Complete Root Cause Analysis:

AEP Generation and Transmission collaboratively completed a root cause analysis of the PRC-005-1 self-report. This analysis was used to determine if any additional mitigation measures are required.

- Issue a Transmission Data Entry Guideline:

AEP Transmission issued a Transmission Data Entry Guideline that defines the relays within the AEP Transmission system to be included within the asset tracking database. The guideline will promote consistency of relay data. The guideline addresses relays by type and function to meet the requirements of the NERC Reliability Standards.

### Work To Be Completed:

- Update Generation Protection System Maintenance and Testing Program Circular Letter AEP Generation uses Circular Letter EL-M-CL-001 to comply with NERC Standard PRC-005-1 "Transmission and Generation Protection System Maintenance and Testing." This document requires Engineering Services to complete a comprehensive review the plant/unit specific relays that are considered part of "generator protection systems" once every 5 to 7 years, including a review of applicable plant drawings and validation of the data contained in AEP Generation's maintenance and testing scheduling tool. Currently, the program does not require the completion of a review in response to changes in NERC or regional requirements. The Circular Letter will be revised to include this requirement.

- Revise Generation Standard Operating Procedures:

AEP Generation Standard Operating Procedures (SOPs) document a required method to ensure compliance with Generation's Quality Assurance program. Currently, the SOPs do not require a NERC

standards compliance review for "large" projects. AEP Generation will modify the SOPs to include these reviews prior to final commissioning.

- Complete Comprehensive Review of Generation's Generator Protection Systems:

In keeping with AEP's tradition of continuous process improvement, AEP Generation will complete a comprehensive review of the plant/unit specific relays that are considered part of "generator protection systems," including a review of applicable plant drawings and validation of the data contained in AEP Generation's maintenance and testing scheduling tool.

- D.2 Provide the timetable for completion of the Mitigation Plan, including the completion date by which the Mitigation Plan will be fully implemented and the violations associated with this Mitigation Plan are corrected:

Proposed Completion date of Mitigation Plan: March 31, 2012

- D.3 Milestone Activities, with completion dates, that your organization is proposing for this Mitigation Plan:

Milestone Activity	Description	*Proposed Completion Date (Shall not be greater than 3 months apart)	Actual Completion Date
Remove Generation Relays from Service	Remove Generation Relays from Service	02/23/2011	February 23, 2011
Implement Generation Maintenance and Testing Work Planning Improvements Phase 1	Implement Generation Maintenance and Testing Work Planning Improvements Phase 1	04/18/2011	April 18, 2011
Complete Testing and Maintenance for Transmission Relays	Complete Testing and Maintenance for Transmission Relays	05/31/2011	May 10, 2011
Revise AEP Transmission Standard SS-420410 P&C Maintenance Guideline	Revise AEP Transmission Standard SS-420410 P&C Maintenance Guideline	05/31/2011	May 31, 2011
Implement Generation Maintenance and Testing Work Planning Improvements Phase 2	Implement Generation Maintenance and Testing Work Planning Improvements Phase 2	05/31/2011	May 23, 2011
Complete Root Cause Analysis	Complete Root Cause Analysis	07/08/2011	June 27, 2011
Issue AEP Transmission Data Entry Guideline	Issue AEP Transmission Data Entry Guideline	08/01/2011	July 29, 2011
Update Generation Protection System Maintenance and Testing Program Circular Letter	Update Generation Protection System Maintenance and Testing Program Circular Letter	10/01/2011	
Revise Generation Standard Operating Procedures	Revise Generation Standard Operating Procedures	12/31/2011	
Complete Comprehensive Review of Generation's Generator Protection Systems	Complete Comprehensive Review of Generation's Generator Protection Systems	03/31/2012	

- D.4 Additional Relevant Information (Optional)

Activities associated with this Mitigation Plan were combined with efforts related to similar Protection System maintenance and testing issues being mitigated across the AEP footprint. (i.e. PRC-008-0)

## Section E: Interim and Future Reliability Risk

### E.1 Abatement of Interim BES Reliability Risk

While your organization is implementing the Mitigation Plan proposed in Section D of this form, the reliability of the Bulk Power System may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take or is proposing as part of the Mitigation Plan to mitigate any increased risk to the reliability of the bulk power system while the Mitigation Plan is being implemented:

AEP believes that there is no substantial risk to the reliability of the BES while this mitigation plan is being executed. All identified relays have been calibrated and/or functionally tested. Several relays have been replaced with modern IED relays. AEP continues to have high confidence in the reliability of these Protection Systems.

### E.2 Prevention of Future BES Reliability Risk

Describe how successful completion of the Mitigation Plan as laid out in Section D of this form will prevent or minimize the probability that your organization incurs further violations of the same or similar reliability standards requirements in the future:

Both AEP Generation and Transmission strive to continually improve their compliance programs. The remedial actions described in this plan will further strengthen AEP's PRC-005-1 compliance program. Generation's 5-7 year complete drawing review for PRC-005-1 applicable relays and Transmission's continuous station inventory demonstrates AEP's commitment to continuous improvement.

### E.3 Your organization may be taking or planning other action, beyond that listed in the Mitigation Plan, as proposed in Section D.1, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements listed in Section C.1, or of other reliability standards. If so, identify and describe any such action, including milestones and completion dates:

net.sourceforge.jtds.jdbc.ClobImpl@ab835a

## Section F: Authorization

An authorized individual must sign and date the signature page. By doing so, this individual, on behalf of your organization:

(a) Submits the Mitigation Plan, as laid out in Section D, to the Regional Entity for acceptance and approval by NERC, and

(b) If applicable, certifies that the Mitigation Plan, as laid out in Section D of this form, was completed (i) as laid out in Section D of this form and (ii) on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and

(c) Acknowledges:

1. I am Senior Vice President - Transmission of American Electric Power Service Corp. As Agent For Public
2. I am qualified to sign this Mitigation Plan on behalf of American Electric Power Service Corp. As Agent
3. I have read and understand American Electric Power Service Corp. As Agent For Public Svc. Co. Of with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure and the NERC CMEP currently in effect or the NERC CMEP-Province of Manitoba, Schedule B currently in effect, whichever is applicable.
4. I have read and am familiar with the contents of the foregoing Mitigation Plan.
5. American Electric Power Service Corp. As Agent For Public Svc. Co. Of Oklahoma & SW Ele Pwr Co. Plan, including the timetable completion date, as accepted by the Regional Entity, NERC, and if required, the applicable governmental authorities in Canada.

Authorized Individual Signature: \_\_\_\_\_

(Electronic signature was received by the Regional Office via CDMS. For Electronic Signature Policy see CMEP.)

Name: Michael Heyeck

Title: Senior Vice President - Transmission

Authorized On: August 01, 2011

# Attachment U



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**CONFIDENTIAL NON-PUBLIC INFORMATION**

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**Certification of a Completed Mitigation Plan**

All Mitigation Plan Completion Certification submittals shall include data or information sufficient for SPP RE to verify completion of the Mitigation Plan. SPP RE may request such additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6)

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**Registered Entity Information**

**Company Name:** American Electric Power Service Corp. As Agent For Public Svc. Co. Of

Oklahoma & SW Electric Power Co

**Company Address:** 1 Riverside Plaza, Columbus, OH 43215

**NERC Compliance Registry ID:** NCR 01056

**Date Mitigation Plan was submitted in CDMS:** 3/4/2010

**Date Mitigation Plan was completed:** 6/30/2010

List below the NERC Standard and Requirement covered under the accepted Mitigation Plan

**Standard and Requirement Number:** PRC-005-1 R2 1

**NERC Violation Number:** SPP200900137

**Date of Certification:** 7/30/2010

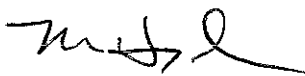
I certify that the mitigation plan for the above named alleged or confirmed violation has been completed on the date shown above and that all information submitted is complete and correct to the best of my knowledge.

**Name:** Mike Heyeck

**Title:** Senior Vice President, Transmission

**Email:** mheyeck@aep.com

**Phone:** 614-552-1700

**Authorized Signature:** 

**Date Signed:** 8/19/2010

Please submit to: SPP\_Regional\_Entity\_File\_Clerk@spp.org

---

# Attachment V



**CONFIDENTIAL NON-PUBLIC INFORMATION**

Ms. Tasha Ward  
Compliance Specialist II  
[tward@spp.org](mailto:tward@spp.org)

Southwest Power Pool Regional Entity  
415 N. McKinley, Ste 140  
Little Rock, AR 72205-3020  
P 501.688.1738  
F 501.821.8726

August 17, 2010

**VIA E-MAIL ONLY**

Mr. Thad Ness  
Reliability Compliance Manager  
American Electric Power  
1 Riverside Plaza  
Columbus, OH 73215  
[tkness@aep.com](mailto:tkness@aep.com)

**Re: MITIGATION PLAN COMPLETION NOTICE**

**American Electric Power; NCR01056**

NERC Violation Identification Number: **SPP200900137**  
NERC Standard: **PRC-005-1 R2**  
SPP RE Violation Identification Number: **2009-067**  
Mitigation Plan Number: **MIT-09-2435**

NERC Violation Identification Number: **SPP200900150**  
NERC Standard: **PRC-008-0 R2**  
SPP RE Violation Identification Number: **2009-080**  
Mitigation Plan Number: **MIT-09-2436**

Dear Mr. Ness,

On July 31, 2010, the Southwest Power Pool Regional Entity (SPP RE) received American Electric Power's (AEP) Certifications of Mitigation Plan Completion for the subject mitigation plans. The SPP RE has completed its review of the evidence in support of completion of the mitigation plans. The SPP RE finds AEP has successfully completed the above referenced mitigation plans on June 30, 2010.

If you have any questions you may contact me at the contact information shown above.

Mitigation Plan Completion Notice

American Electric Power

August 17, 2010

Page 2

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Very Respectfully,

*Tasha Ward*

Tasha Ward

TW

cc: *(via e-mail only)*

AEP

Raj Rana

SPP RE

Stacy Dochoda

# Attachment W



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## **Mitigation Plan Completion Certification**

**Submittal of a Mitigation Plan Completion Certification shall include data or information sufficient for Texas Reliability Entity to verify completion of the Mitigation Plan.** Texas Reliability Entity may request additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6)

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Registered Entity Name: American Electric Power

NERC Registry ID:NCR04006

Date of Submittal of Certification:08/11/2011

NERC Violation ID No(s):

Reliability Standard and the Requirement(s) of which a violation was mitigated:PRC-005-1 R2

Date Mitigation Plan was scheduled to be completed per accepted Mitigation Plan:08/01/2011

Date Mitigation Plan was actually completed:07/29/2011

Additional Comments (or List of Documents Attached):

---

I certify that the Mitigation Plan for the above named violation has been completed on the date shown above and that all submitted information is complete and correct to the best of my knowledge.

Name:Robert C. Wagner

Title:VP - Transmission Region Operations

Email:rcwagner@aep.com

Phone:614-552-1900

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2700 Via Fortuna, Suite 225  
Austin, Texas 78746  
Tel: (512) 583-4900  
Fax: (512) 583-4903



---

Authorized Signature \_\_\_\_\_

*Robert C. Abgiron*

Date 8-11-2011

Please submit completed forms or any questions regarding completion of this form to the [mitigation@texasre.org](mailto:mitigation@texasre.org).

Please indicate the company name and reference the NERC Violation ID # (if known) in the subject line of the e-mail.

# Attachment X



**From:** Torgrimson, Brent [Brent.Torgrimson@TEXASRE.org]  
**Sent:** Thursday, December 01, 2011 2:40 PM  
**To:** Jimmy Cline; Amanda Owen  
**Subject:** 2011-12-01: AEP 137 (PRC-005 R2), 150 (PRC-008 R2) / CONFIDENTIAL NONPUBLIC INFORMATION / SPP RE RESTRICTED / ATTORNEY WORK PRODUCT

Jimmy and Amanda,

As requested, Texas RE has reviewed the mitigation plans submitted by AEP to SPP for the above SPP violations to ensure that they would address the similar compliance matters in the ERCOT region (TRE201100300 and TRE201100301). Texas RE has determined that the compliance situations self-reported by AEP to Texas RE for these two violations is functionally a subset of the violations found in SPP. Additionally, Texas RE has reviewed the mitigation plans to see if they would be acceptable to Texas RE for the ERCOT-region issues.

Please be advised that the mitigation plans submitted by AEP to SPP for these two violations are acceptable to Texas RE. In addition, AEP supplied Texas RE, and Texas RE has reviewed, information evidencing completion of mitigation activities addressing the specific compliance matters in the ERCOT region.

Please let me know if you any need additional information.

Regards,

Brent Torgrimson  
Sr. Enforcement Engineer  
Texas Reliability Entity, Inc.  
Phone: (512) 583-4987  
Cell: (512) 206-6355  
[brent.torgrimson@texasre.org](mailto:brent.torgrimson@texasre.org)

Confidentiality Notice: The information contained in this email message, and any documents attached hereto, may be privileged and/or confidential and is intended for the addressee only. If you have received this document in error, please notify the sender immediately.

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**From:** Jimmy Cline [<mailto:jcline.re@spp.org>]  
**Sent:** Monday, November 28, 2011 12:15 PM  
**To:** Torgrimson, Brent; [amanda.owen@rfirst.org](mailto:amanda.owen@rfirst.org)  
**Subject:** AEP 137 (PRC-005 R2), 150 (PRC-008 R2) / CONFIDENTIAL NONPUBLIC INFORMATION / SPP RE RESTRICTED / ATTORNEY WORK PRODUCT

Brent,

Regarding these two PRC violations, AEP submitted MPs to TRE despite SPP RE conducting the completion reviews. RFC has requested confirmation that the information contained in the MPs submitted to TRE has been verified as complete. Attached are SPP RE's completion reviews. Although Tasha Ward was assigned these violations initially, I am sending her completion reviews so that you can compare them the TRE MP's. My understanding is that the MP details in SPP RE's also mitigated the reported violations in TRE and RFC. Please let us know at your earliest convenience. Thanks.  
Jimmy

Jimmy C. Cline  
Compliance Enforcement Attorney  
Southwest Power Pool Regional Entity  
16101 St. Vincent Way  
Little Rock, Arkansas 72223  
501-688-1759  
[jcline.re@spp.org](mailto:jcline.re@spp.org)

## **Attachment b**

**AEP's Certification of Mitigation Plan  
Completion to Reliability*First* for PRC-005-1  
R2.1 (RFC201000668) submitted April 2,  
2012**

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### **Certification of Mitigation Plan Completion**

Submittal of a Certification of Mitigation Plan Completion shall include data or information sufficient for ReliabilityFirst Corporation to verify completion of the Mitigation Plan. ReliabilityFirst Corporation may request additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6)

---

Registered Entity Name: American Electric Power

NERC Registry ID:NCR00682

Date of Submittal of Certification:4/2/2012

NERC Violation ID No(s):RFC201000668

Reliability Standard and the Requirement(s) of which a violation was mitigated:PRC-005-1, R2.1

Date Mitigation Plan was scheduled to be completed per accepted Mitigation Plan:3/31/2012

Date Mitigation Plan was actually completed:3/30/2012

Additional Comments (or List of Documents Attached):

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I certify that the Mitigation Plan for the above named violation has been completed on the date shown above and that all submitted information is complete and correct to the best of my knowledge.

Name:Michael Heyeck

Title:Senior Vice President - Transmission

Email:mheyeck@aep.com

Phone:(614) 552-1700

Authorized Signature 

Date 3/30/2012



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Please direct completed forms or any questions regarding completion of this form to the ReliabilityFirst Compliance e-mail address [mitigationplan@rfirst.org](mailto:mitigationplan@rfirst.org).

Please indicate the company name and reference the NERC Violation ID # (if known) in the subject line of the e-mail. Additionally, any ReliabilityFirst Compliance Staff member is available for questions regarding the use of this form. Please see the contact list posted on the ReliabilityFirst Compliance web page.



## DOCUMENT CONTROL

**Title:** Certification of Mitigation Plan Completion  
**Issue:** Version 1  
**Date:** 5 January 2008  
**Distribution:** Public  
**Filename:** Certification of a Completed Mitigation Plan\_Ver1.doc  
**Control:** Reissue as complete document only

## DOCUMENT APPROVAL

Prepared By	Approved By	Approval Signature	Date
Robert K. Wargo Manager of Compliance Enforcement	Raymond J. Palmieri Vice President and Director Compliance	<i>Raymond J. Palmieri</i>	1/5/2009

## DOCUMENT CHANGE/REVISION HISTORY

Version	Prepared By	Summary of Changes	Date
1.0	Robert K. Wargo	Original Issue	1/5/2009

## Attachment c

**Reliability *First's* Verification of Mitigation  
Plan Completion for PRC-005-1 R2.1  
(RFC201000668) dated May 4, 2012**

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<b><i>In re:</i> AMERICAN ELECTRIC POWER</b>	)	<b>Docket No. RFC201000668</b>
<b>SERVICE CORPORATION</b>	)	
	)	
NERC Registry ID No. NCR00682	)	NERC Reliability Standard:
	)	PRC-005-1, Requirement 2

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**VERIFICATION OF MITIGATION PLAN COMPLETION  
FOR  
RFCMIT005457**

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**I. RELEVANT BACKGROUND**

On October 18, 2010, American Electric Power Service Corporation (“AEP”) submitted a self report to ReliabilityFirst Corporation (“ReliabilityFirst”) of non-compliance with Reliability Standard PRC-005-1, R2.

AEP failed to provide evidence that its Protection System devices were maintained and tested within the defined intervals. Specifically, AEP failed to test 198 of its 1,964 (10.1%) Generation Protection System relays, 31 of its 17,034 (0.2%) Transmission Protection System relays, and one of its 828 (0.1%) Transmission station batteries.

On June 1, 2011, AEP submitted a proposed mitigation plan to ReliabilityFirst stating AEP would complete all mitigating actions on March 31, 2012. On August 11, 2011, ReliabilityFirst accepted this mitigation plan, designated RFCMIT005457, and on November 17, 2011, the North American Electric Reliability Corporation (“NERC”) approved it.

**II. MITIGATION PLAN COMPLETION REVIEW PROCESS**

On April 3, 2012, AEP certified that it completed the mitigation plan for PRC-005-1, R2 as of March 30, 2012. ReliabilityFirst requested and received evidence of completion for the actions AEP took as specified in the mitigation plan. ReliabilityFirst performed an in-depth review of the information provided to verify that AEP successfully completed all actions specified in the mitigation plan.



**A. Evidence Reviewed per Standard and Requirement.**

<u>Evidence Reviewed</u>		<u>Applicable Standard and Requirement</u>
1.	<i>RFC PRC-005-1 Mitigation Plan Evidence.pdf</i>	<b>PRC-005-1, R2</b>

**B. Verification of Mitigation Plan Completion.**

**R2.** Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall 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). The documentation of the program implementation shall include:

**R2.1.** Evidence Protection System devices were maintained and tested within the defined intervals.

**R2.2.** Date each Protection System device was last tested/maintained.

**Milestone G1: Complete Test of Generation Relays - Actual Completion October 15, 2010**

Page 15 of the evidence file listed in the table above contains a summary test dates for required functional testing at Picway Plant. This evidence demonstrates successful completion of Milestone G1.

**Milestone T2: Complete Testing and Maintenance for Transmission Relays -Actual Completion January 26, 2011**

Pages 16 through 17 of the evidence file listed in the table above contains a list of all relays, both generator and transmission, that were self-reported and the dates they were mitigated. This evidence demonstrates successful completion of Milestone T2.

**Milestone T3: Revise AEP Transmission Standard SS-420410 P&C Maintenance Guideline - Actual Completion May 31, 2011**

Pages 18 through 28 of the evidence file listed in the table above contains Revision 18 of AEP's *EVT3.1 – SS-420410 Protection and Control Testing and Maintenance Guide*. This revision includes instruction to field personnel to perform inventory of relays and carrier sets when conducting on-site maintenance to ensure that all required assets are properly entered in the asset tracking database. This evidence demonstrates successful completion of Milestone T3.

**Milestone G4: Implement Generation Maintenance and Testing Work Planning Improvements Phase 1 and Phase 2 - Actual Completion May 31, 2011**

Pages 29 through 32 of the evidence file listed in the table above contains a report showing tasks created and sent to the assignees on April 18th, 2011 in Phase 1. Also, there is a report showing the tasks completed and the preparer's comments for Phase 2. This evidence demonstrates successful completion of Milestone G4.

**Milestone 5: Complete Root Cause Analysis - Actual Completion July 8, 2011**

Pages 34 through 51 of the evidence file listed in the table above contains a Root Cause Analysis document that includes a summary of the analysis and recommended corrective actions for 17 generator relays (consisting of 33 separate tests,) 17 transmission relays, and 21 transmission trip circuits. This evidence demonstrates successful completion of Milestone 5.

**Milestone G6: Update Generation Protection System Maintenance and Testing Program Circular Letter - Actual Completion September 28, 2011**

Pages 52 through 75 of the evidence file listed in the table above contains the *Updated Generation Protection System Maintenance and Testing Program Circular Letter*. Pages 76 through 92 of the evidence file listed in the table above contains the *Engineering Guide* referenced in the *Update Generation Protection System Maintenance and Testing Program Circular Letter*. This evidence demonstrates successful completion of Milestone G6.

**Milestone T7: Issue AEP Transmission Data Entry Guideline - Actual Completion July 29, 2011**

Pages 92 through 326 of the evidence file listed in the table above contains the *Protection and Control Information Systems (PCIS) Instruction Manual*, Revision 5. This revision identifies what relays must be entered into the asset tracking database to promote consistency of data. This evidence demonstrates successful completion of Milestone T7.

**Milestone G8: Revise Generation Standard Operating Procedures - Actual Completion December 23, 2011**

Pages 327 through 364 of the evidence file listed in the table above contains Revision 7 of the *Project Guideline for Design Review Procedure*. This evidence demonstrates successful completion of Milestone G8.

**Milestone G9: Complete Comprehensive Review of Generation's Generator Protection Systems - Actual Completion March 23, 2012**

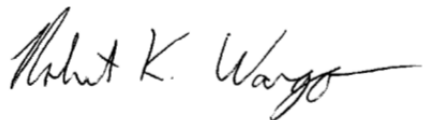
Pages 365 through 569 of the evidence file listed in the table above contains the *RFC NERC Protection System Review Summary*. The document contains the results of AEP Generation's comprehensive review of the plant/unit specific relays that are considered part of the generation Protection System. This evidence demonstrates successful completion of Milestone G9.

### III. CONCLUSION

ReliabilityFirst reviewed the evidence AEP submitted in support of its Certification of Mitigation Plan Completion. ReliabilityFirst determined this evidence demonstrates AEP successfully completed the mitigating activities in mitigation plan RFCMIT005457 associated with PRC-005-1, R2.

ReliabilityFirst verifies that AEP completed the mitigation plan associated with the possible violation of the Reliability Standard in accordance with its terms and conditions.

**Approved:**

A handwritten signature in black ink, appearing to read "Robert K. Wargo", with a stylized flourish at the end.

Robert K. Wargo  
Director of Analytics & Enforcement  
ReliabilityFirst Corporation

Date: May 4, 2012

**Attachment d**

**Notice of Filing**

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

American Electric Power Service Corporation

Docket No. NP12-\_\_\_\_-000

NOTICE OF FILING  
May 30, 2012

Take notice that on May 30, 2012, the North American Electric Reliability Corporation (NERC) filed a Notice of Penalty regarding American Electric Power Service Corporation as agent for: Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, and Wheeling Power Company; Public Svc. Co. Of Oklahoma & SW Ele Pwr Co.; and AEP Texas North Co, AEP Texas Central Co, and Public Service of Oklahoma in the ReliabilityFirst Corporation, Southwest Power Pool Regional Entity and Texas Reliability Entity, Inc. regions, respectively.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211, 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant.

The Commission encourages electronic submission of protests and interventions in lieu of paper using the "eFiling" link at <http://www.ferc.gov>. Persons unable to file electronically should submit an original and 14 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426.

This filing is accessible on-line at <http://www.ferc.gov>, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, D.C. There is an "eSubscription" link on the web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov), or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

Comment Date: [BLANK]

Kimberly D. Bose,  
Secretary