2012 SPP RE Annual Implementation Plan

November 14, 2011

Jim Williams, Lead Compliance Specialist
jwilliams.re@spp.org  501.614.3261
Leesa Oakes, Compliance Specialist II
loakes.re@spp.org  501.614.3274
SPP RE 2012 Implementation Plan

- **SPP.org->Regional Entity->Compliance**
- 2012 ends 5th and begins 6th year of SPP RE program
- Many smaller entities have yet to be audited for any aspect of CMEP
  - 25% have not been audited for 693
  - 75% have not been audited for CIP
Plan’s Principles and Objectives

• Promote BPS reliability through rigorous compliance monitoring and enforcement activities

• Facilitate improved consistency of compliance activities throughout North America

• Monitor all regulatory authority-approved Reliability Standards by using eight CMEP compliance monitoring methods

• Use risk-based and performance-based criteria for determining the scope for compliance audits

• Allow flexibility for ERO and REs to investigate trends that may pose a near term reliability risk either across North American BPS, across an Interconnection, or within an RE boundary

• Improve compliance program by analyzing the compliance monitoring experience across North America and implementing necessary improvements
2012 High Priorities

1. Misoperations of relay protection and control systems
2. Human errors by field personnel
3. Ambiguous or incomplete voice communications
4. Right-of-way maintenance
5. Changing resource mix
6. Integration of new technologies
7. Preparedness for high-impact, low-frequency events
8. Non-traditional threats via cyber-security vulnerabilities
9. Other
MISOPERATIONS – HIGH PRIORITY
### Focus Areas and Accomplishments

<table>
<thead>
<tr>
<th>2Qtr 2011 Summary Statistics</th>
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<tbody>
<tr>
<td><strong>Total REs Providing Data</strong></td>
</tr>
<tr>
<td><strong>Total Misoperations</strong>*</td>
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<tr>
<td><strong>Unnecessary Trip</strong></td>
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<tr>
<td><strong>Slow or Failure to Trip</strong></td>
</tr>
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### Planned Activities

- **Industry misoperations webinar – December 1, 2011**
  - Trends and analysis
  - Actionable steps to reduce relay misoperation totals
  - Industry success stories

### Risks

- Misoperations data still preliminary/incomplete

### Data quality

- Appears consistent across 8 regions
- Top cause – Incorrect setting/design error

### Tracking – Aggregated at NERC and Regional Entity level

http://www.nerc.com/page.php?cid=4|331|400
Misoperations by Region and Category in 2011Q2

- **NERC**: 500 Misoperations
- **FRCC**: 100 Misoperations
- **MRO**: 10 Misoperations
- **NPCC**: 5 Misoperations
- **RFC**: 150 Misoperations
- **SERC**: 50 Misoperations
- **SPP RE**: 10 Misoperations
- **TRE**: 5 Misoperations
- **WECC**: 50 Misoperations

**Categories**:
- Unnecessary Trip during Fault
- Unnecessary Trip without Fault
- Failure to Trip
- Slow Trip
Misoperations by Region and Cause Code in 2011Q2

- Incorrect setting, logic or design errors
- Relay Failures/Malfunctions
- Communication Failures
- Unknown/Unexplainable
- As-left Personnel Error
- AC System
- DC System

By Region:
- NERC
- FRCC
- MRO
- NPCC
- RFC
- SERC
- SPP RE
- TRE
- WECC
Misoperations by Region and Voltage in 2011Q2

Region and Voltage

- NERC
- FRCC
- MRO
- NPCC
- RFC
- SERC
- SPP RE
- TRE
- WECC

Voltage Classes:
- 100 kV – 199 kV
- 200 kV – 299 kV
- 300 kV – 399 kV
- 400 kV – 599 kV
- 600 kV – 799 kV
- Other
NON-TRADITIONAL THREATS – HIGH PRIORITY
All-Time Violations Through August 31, 2011

Analysis Complete: PRC-005, CIP-004, FAC-008, FAC-009, CIP-001, VAR-002, PER-002, CIP-006, CIP-007, EOP-005
Top 20 Violations

Previous 12 Months Violations Through August 31, 2011

Analysis Complete: PRC-005, CIP-004, FAC-008, FAC-009, CIP-001, VAR-002, PER-002, CIP-006, CIP-007, EOP-005
VEGETATION CONTACTS
Figure 1: Category 1 — Grow-in Outages Caused by Vegetation Growing into Lines from Inside and/or Outside the ROW.
Miles Assessed: Regional basis

- FRCC: 144
- MRO: 2399
- NPCC: 942
- RFC: 6930
- SERC: 4569
- SPP: 1028
- TRE: 5657
- WECC: 3312
2012 CHANGES
Key Points from 2012 Plan

- Entities will not be expected to provide evidence outside of current audit period unless it’s required to confirm compliance in accordance with entity’s processes/procedures
- Audit scope will include review of all mitigation plans that are open during audit period
- Electronic signatures by officer, employee, attorney or other representative are permitted in accordance with NERC/entity processes
Changes of Note for 2012

• Formal use of NERC Sampling Methodology
  – Adopted by all REs
  – Posted on NERC.com>Compliance>Resources

• Entity’s Risk Based Assessment Attributes:
  1. Entity’s Technical and Risk Profile
  2. Reliability performance metrics
  3. Internal compliance program
  4. Compliance and Enforcement metrics and status
  5. Regional Entity qualitative assessment
New: Risk-Based Monitoring

- **2012 Actively Monitored List** (AML) reduced from 2010/2011 AML
  - Expect more rigorous review of requirements
- SPP RE determines entity’s risk profile/audit scope
- All entities will be audited on Tier 1 Requirements
- Entities will be audited on Tier 2 and 3 based on their Risk Based Assessment
New: Risk Based Monitoring

• Standards/Requirements are assigned one of three Tiers
  
  – **Tier 1** – High-risk priorities – performance based
    - Example: PRC-005 R2 - ...shall provide documentation of its Protection System maintenance and testing program and implementation of that program to its RRO...
  
  – **Tier 2** – Lower-risk than Tier 1 – many are documentation-related
    - Example PRC-005 R1 - ...shall have a Protection System maintenance and testing program for Protection Systems that affect the reliability of the BES.
  
  – **Tier 3** – Lowest risk – many are administrative
    - EOP-001-0 R5 – ...shall annually review and update each emergency plan.
Registered entities are responsible for compliance with all regulatory approved Reliability Standards and Requirements in effect per their registered function at all times, regardless of what a registered entity’s risk profile may indicate.
Audit Scope Expansion

- Entity’s Risk Based Assessment will determine initial scope – will be included in initial notice
  - Initial scope may be beyond Tier 1
- Audit team may increase scope during pre-audit or on-site audit based on:
  - Audit team’s professional judgment
  - Discovery of non-compliance or problematic compliance history
- Will notify entity of increased scope as soon as possible
2012 Reliability Standard Audit Worksheets (RSAWs)

- Available on NERC.com>Compliance>Resources
- RSAWS include all requirements
- Should provide documentation for all requirements in initial audit scope
2012 DATES
## 693 Audit Schedule

### SPP RE 693 Audit Schedule for 2012

#### On Site Audit Schedule

<table>
<thead>
<tr>
<th>NCR#</th>
<th>Entity</th>
<th>Start Date</th>
<th>End Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCR01148</td>
<td>Sunflower Electric Power Cooperative (SECI)</td>
<td>3/12/2012</td>
<td>3/16/2012</td>
<td>Garden City, KS</td>
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<tr>
<td>NCR01101</td>
<td>Grand River Dam Authority (GRDA)</td>
<td>5/21/2012</td>
<td>5/25/2012</td>
<td>Locust Grove, OK</td>
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<td>NCR01056</td>
<td>American Electric Power Service Corporation (AEPW) - Lead by RFC</td>
<td>6/11/2012</td>
<td>6/15/2012</td>
<td>Columbus, OH</td>
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<tr>
<td>NCR01107</td>
<td>Kansas City Power &amp; Light Company (KCPL)</td>
<td>9/24/2012</td>
<td>9/28/2012</td>
<td>Kansas City, KS</td>
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<tr>
<td>NCR01058</td>
<td>KCPL - Greater Missouri Operations (KCPL-GMO)</td>
<td>10/9/2012</td>
<td>10/11/2012</td>
<td>Kansas City, KS</td>
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<tr>
<td>NCR01160</td>
<td>Western Farmers Electric Cooperative (WFEC)</td>
<td>11/5/2012</td>
<td>11/9/2012</td>
<td>Anadarko, OK</td>
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<td>NCR06040</td>
<td>Blue Canyon II Windpower LLC (BCWII)</td>
<td>2/27/2012</td>
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<td>SPP RE</td>
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<tr>
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<td>Blue Canyon Windpower LLC (BCWI)</td>
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<td>Blue Canyon Windpower V LLC (BCWV)</td>
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<tr>
<td>NCR10399</td>
<td>CAMS New Mexico, LLC (CAMSNM)</td>
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<td>NCR05059</td>
<td>Caprock Wind LLC (CAPROCK)</td>
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<tr>
<td>NCR10122</td>
<td>Exelon Wind 4, LLC (EXWD4)</td>
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<td>NCR10400</td>
<td>ITC Great Plains, LLC (ITCGP)</td>
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<td>Occidental Power Marketing, L.P. (OCCIDENTMK)</td>
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<tr>
<td>NCR01136</td>
<td>Piggott Light &amp; Water (PIGGOTTAR)</td>
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<td>Poplar Bluff (POPBLUFFMO)</td>
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<td>NCR00633</td>
<td>Tenaska Gateway Partners Ltd (TENASGATEW)</td>
<td>8/22/2011</td>
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<td>NCR06037</td>
<td>United Stae Army Corps Of Engineers - Little Rock (COELR)</td>
<td>12/10/2012</td>
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<tr>
<td>NCR06038</td>
<td>United States Army Corps Of Engineers - Tulsa Dist (COETULSA) w/TRE</td>
<td>12/12/2012</td>
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## CIP Audit Schedule

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<tr>
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<td>Southwestern Public Service Co. (Xcel Energy) (SPS) w/WECC</td>
<td>4/23/2012</td>
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<td>Denver, CO/ Amarillo, TX</td>
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<tr>
<td>NCR00658</td>
<td>Westar Energy, Inc. (WR)</td>
<td>5/7/2012</td>
<td>5/18/2012</td>
<td>Topeka, KS</td>
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<tr>
<td>NCR01130</td>
<td>Oklahoma Gas And Electric Co. (OKGE)</td>
<td>8/13/2012</td>
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<tr>
<td>NCR01081</td>
<td>City Utilities Of Springfield, MO (SPRM)</td>
<td>9/10/2012</td>
<td>9/14/2012</td>
<td>Springfield, MO</td>
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<td>Grand River Dam Authority (GRDA)</td>
<td>10/1/2012</td>
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<td>Southwestern Power Administration (SWPA)</td>
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Reporting Periods

• [SPP.org->Regional Entity->Compliance->Compliance Program 2012 folder]
  • CIP and 693 Self Certification
  • Periodic Data Submittal
  • Exception Reporting
  • TFEs
Conclusion

• 2012 SPP RE Implementation Plan is now posted to SPP.org
• Entities scheduled for 2012 audits have been notified except those singularly registered as PSE
• Program drivers are public and discussed in multiple forums
• Program continues to evolve and improve its focus on highest reliability risks
Coming Attractions

• December 13  RE Webinar - CIP-003-3 R4
• January 10  RE Webinar –2012 Training Opportunities Learning Center Tour
• February 28-29  RE Spring Workshop, Baton Rouge
• March 1  RTO Compliance Forum
Southwest Power Pool Regional Entity

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