



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

February 12, 2010

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

**Re: Abbreviated Notice of Penalty  
Municipal Electric Authority of Georgia, FERC Docket No. NP10-\_\_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Abbreviated Notice of Penalty (NOP) regarding the Municipal Electric Authority of Georgia (MEAG), with information and details regarding the nature and resolution of the violations discussed in detail in the attached Disposition Document (Attachment c), 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>1</sup>

On May 7, 2009, MEAG self-reported a possible violation of PRC-005-1 Requirement (R) 2.1 to SERC Reliability Corporation (SERC) for MEAG's failure to perform maintenance and testing of all four battery banks at its solely-owned generating plant, Wansley Unit #9,<sup>2</sup> as required by its generation Protection System Maintenance and Testing Program. During SERC's assessment of the self-report SERC also identified a possible violation of PRC-005-1 R1 for MEAG's failure to have a Protection System maintenance and testing program that contained all of the elements required by the Reliability Standard.

This Notice of Penalty is being filed with the Commission because, based on information from SERC, SERC and MEAG have entered into a Settlement Agreement to resolve all outstanding issues arising from a preliminary and non-public assessment resulting in SERC's determination and findings of the enforceable violations of PRC-005-1 R1 and R2.1. According to the

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<sup>1</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 (2008). *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>2</sup> The Wansley Unit #9 is used for peaking and intermediate power requirements.

Settlement Agreement, MEAG admits to the violations and has agreed to the proposed penalty of three thousand dollars (\$3,000) to be assessed to MEAG, in addition to other remedies and actions 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 SERC200900269 and SERC200900309 are being filed in accordance with the NERC Rules of Procedure and the CMEP.

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

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement, executed on February 3, 2010 by and between SERC and MEAG, included as Attachment b, as well as the Disposition Document included as Attachment c. The details of the findings and the basis for the penalty are set forth in Attachment c. 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 (2007), NERC provides the following 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 (\$) |
|--------|---|--------|-------------------|------------------|----------|-------------------|--------------------|
| SERC   | Municipal Electric Authority of Georgia | 466    | SERC200900269     | PRC-005-1        | R2.1     | High <sup>3</sup> | \$3,000            |
|        |   |        | SERC200900309     | PRC-005-1        | R1       | High <sup>4</sup> |                    |

The text of the Reliability Standards at issue is set forth in the Disposition Document.

#### **PRC-005-1 R2.1 - OVERVIEW<sup>5</sup>**

SERC determined that MEAG, as a Generation Owner, had not conducted daily, monthly and annual tests of its batteries within the defined intervals as required by its generation Protection System Maintenance and Testing Program and the Reliability Standard.

The duration of the PRC-005-1 R2.1 violation was from June 26, 2007, the first date that daily inspections were missed, through December 7, 2009, the date MEAG completed its mitigation plan.

<sup>3</sup> PRC-005-1 R2 has a "Lower" Violation Risk Factor (VRF); R2.1 has 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>4</sup> When NERC filed VRFs, it originally assigned PRC-005-1 R1 a "Medium" VRF. The Commission approved the VRF as filed; however, it directed NERC to submit modifications. NERC submitted the modified "High" VRF, which the Commission approved on August 6, 2007. Therefore, the "Medium" VRF for PRC-005-1 R1 was in effect from June 18, 2007 until August 6, 2007 when the "High" VRF became effective.

<sup>5</sup> Further information on this violation is contained in Attachment d, the Disposition Document.

SERC concluded that this violation did not pose a serious or substantial risk to the reliability of the bulk power system (BPS) because:

- a. the station batteries at Wansley Unit #9 have alarms connected into the plant control system that will alert the operator to abnormal conditions such as low voltage. More importantly, the gas turbine units' control system includes a permissive in the startup sequence that requires the DC lube oil pumps to start and operate for one minute before the gas turbine is allowed to start. The intent of this step is to provide assurance that the DC emergency power system (including the station batteries) is operable.
- b. MEAG mostly missed daily inspection of all battery banks when the plant was not operational. Of the 204 days for which there is no data from operator rounds, 42 of those days were operating days;
- c. battery maintenance and testing activities were performed before and after any missed events that confirmed the capability of the equipment; and
- d. prior to having a comprehensive generation Protection System Maintenance and Testing procedure, MEAG had maintenance and testing procedures for batteries and protective relays.

#### PRC-005-1 R1 - OVERVIEW<sup>6</sup>

SERC determined that MEAG, as a Generator Owner, did not have a documented generation Protection System maintenance and testing program that contained all of the elements required by PRC-005-1, Requirement 1.

The duration of the PRC-005-1 R1 violation was from June 18, 2007, when the standard became mandatory and enforceable, through December 7, 2009, the date MEAG completed its mitigation plan.

SERC concluded that this violation did not pose a serious or substantial risk to the reliability of the BPS because MEAG had performed maintenance and testing even though it did not have a documented procedure that contained all of the elements as required by the standard.

#### Regional Entity's Basis for Penalty

According to the Settlement Agreement, SERC has assessed a penalty of three thousand dollars (\$3,000) for the referenced violations. In reaching this determination, SERC considered the following factors:

1. MEAG has had no prior violation history for any Reliability Standard;
2. MEAG self-reported the violation of R2.1;
3. MEAG fully cooperated with SERC Compliance Enforcement Staff in addressing these issues;

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<sup>6</sup> Further information on this violation is contained in Attachment d, the Disposition Document.

4. MEAG agreed to resolve these issues via settlement and promptly initiated various mitigation and preventative measures, as described in its Mitigation Plan, before receiving a Notice of Alleged Violation and Proposed Penalty or Sanction from SERC;
5. MEAG admitted the violations; and
6. SERC determined that there was no serious or substantial risk to the BPS as a result of these violations, as discussed above.

After consideration of the above factors, SERC determined that, in this instance, the penalty amount of three thousand dollars (\$3,000) is appropriate and bears a reasonable relation to the seriousness and duration of the alleged violations.

### **Statement Describing the Proposed Penalty, Sanction or Enforcement Action Imposed<sup>7</sup>**

#### **Basis for Determination**

Taking into consideration the Commission's direction in Order No. 693, the NERC Sanction Guidelines, the Commission's July 3, 2008 and October 26, 2009 Guidance Orders,<sup>8</sup> the NERC BOTCC reviewed the Settlement Agreement and supporting documentation on February 10, 2010. The NERC BOTCC approved the Settlement Agreement, including SERC's imposition of a financial penalty, assessing a penalty of three thousand dollars (\$3,000) against MEAG 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 alleged violations at issue.

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

1. MEAG has had no prior violation history for any Reliability Standard;
2. MEAG self-reported the violation of R2.1;
3. The violation of R1 was a documentation issue;
4. MEAG fully cooperated with SERC Compliance Enforcement Staff in addressing these issues;
5. MEAG agreed to resolve these issues via settlement and promptly initiated various mitigation and preventative measures, as described in its Mitigation Plan, before receiving a Notice of Alleged Violation and Proposed Penalty or Sanction from SERC; and
6. SERC determined that there was no serious or substantial risk to the BPS as a result of these violations, as discussed above.

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<sup>7</sup> See 18 C.F.R. § 39.7(d)(4).

For the foregoing reasons, the NERC BOTCC approves the Settlement Agreement and believes that the proposed penalty of three thousand dollars (\$3,000) is appropriate for the violations and circumstances in question, and is consistent with NERC's goal to promote and ensure reliability of the bulk power system.

Pursuant to Order No. 693, 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 is the following documents and material:

- a) MEAG's Self-Report for the violation of PRC-005-1 R2.1, dated May 7, 2009, included as Attachment a;
- b) Source Document for the violation of PRC-005-1 R1, included in Attachment d;
- c) Settlement Agreement between MEAG and SERC, executed February 3, 2010, included as Attachment b;
- d) Disposition Document and SERC's Verification of Completion contained therein, dated February 5, 2010, included as Attachment c; and
- e) MEAG's Certification of Completion, dated December 7, 2009 included as Attachment d.

#### **A Form of Notice Suitable for Publication<sup>9</sup>**

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

#### **Notices and Communications**

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

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<sup>9</sup> See 18 C.F.R § 39.7(d)(6).

|  |   |
|--|---|
| <p>Gerald W. Cauley*<br/>President and Chief Executive Officer<br/>David N. Cook*<br/>Vice President and General Counsel<br/>North American Electric Reliability Corporation<br/>116-390 Village Boulevard<br/>Princeton, New Jersey 08540-5721<br/>(609)452-8060<br/>(609) 452-9550 – facsimile<br/>gerry.cauley@nerc.net<br/>david.cook@nerc.net</p> <p>For MEAG:<br/>J. Scott Jones<br/>Vice President, Corporate Affairs<br/>Municipal Electric Authority of Georgia<br/>1470 Riveredge Parkway NW<br/>Atlanta, GA 30328<br/>(770) 563-0314<br/>(770) 661-2800 – facsimile<br/>sjackson@meagpower.org</p> <p>P.T. Nielsen*<br/>Manager, Power Generation<br/>Municipal Electric Authority of Georgia<br/>1470 Riveredge Parkway NW<br/>Atlanta, GA 30328<br/>(770) 563-0423<br/>(770) 661-2800 – facsimile<br/>pnielsen@meagpower.org</p> <p>Jerry Heeren*<br/>Manager, Regulatory Compliance<br/>Municipal Electric Authority of Georgia<br/>1470 Riveredge Parkway NW<br/>Atlanta, GA 30328<br/>(770) 661-2866<br/>(770)564-0004 – facsimile<br/>jheeren@meagpower.org</p> <p>*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.</p> | <p>Rebecca J. Michael*<br/>Assistant General Counsel<br/>Holly A. Hawkins*<br/>Attorney<br/>North American Electric Reliability Corporation<br/>1120 G Street, N.W.<br/>Suite 990<br/>Washington, D.C. 20005-3801<br/>(202) 393-3998<br/>(202) 393-3955 – facsimile<br/>rebecca.michael@nerc.net<br/>holly.hawkins@nerc.net</p> <p>For SERC:<br/>Thomas J. Galloway*<br/>Interim President and Chief Executive Officer<br/>SERC Reliability Corporation<br/>2815 Coliseum Centre Drive<br/>Charlotte, NC 28217<br/>(704) 940-8205<br/>(704) 357-7914 – facsimile<br/>tgalloway@serc1.org</p> <p>Marisa A. Sifontes*<br/>Interim Director of Compliance and Compliance Legal Counsel<br/>SERC Reliability Corporation<br/>2815 Coliseum Centre Drive<br/>Charlotte, NC 28217<br/>(704) 494-7775<br/>msifontes@serc1.org</p> <p>Kenneth B. Keels, Jr.*<br/>Manager of Compliance Enforcement<br/>SERC Reliability Corporation<br/>2815 Coliseum Centre Drive<br/>Charlotte, NC 28217<br/>(704) 940-8214<br/>(704) 357-7914 – facsimile<br/>kkeels@serc1.org</p> |
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## Conclusion

Accordingly, NERC respectfully requests that the Commission accept this Abbreviated NOP as compliant with its rules, regulations and orders.

Respectfully submitted,

Gerald W. Cauley  
President and Chief Executive Officer  
David N. Cook  
Vice President and General Counsel  
North American Electric Reliability Corporation  
116-390 Village Boulevard  
Princeton, NJ 08540-5721  
(609) 452-8060  
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gerry.cauley@nerc.net  
david.cook@nerc.net

/s/ Rebecca J. Michael  
Rebecca J. Michael  
Assistant General Counsel  
Holly A. Hawkins  
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North American Electric Reliability  
Corporation  
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(202) 393-3998  
(202) 393-3955 – facsimile  
rebecca.michael@nerc.net  
holly.hawkins@nerc.net

cc: Municipal Electric Authority of Georgia  
SERC Reliability Corporation

Attachments

## **Attachment a**

### **MEAG's Self-Report for the violation of PRC- 005-1 R2.1, dated May 7, 2009**





**SERC Reliability Corporation**  
**Self-Reporting / Complaint Form Template**  
**Revision 1 (10-25-07)**

Report Type (please check): ☒ Self-Report ☐ Complaint

Date of Report: May 7, 2009

| NAME OF PERSON REPORTING POSSIBLE STANDARD VIOLATION(S)   |                          |                               |
|---|--------------------------|-------------------------------|
| CONTACT NAME  | CONTACT TELEPHONE NUMBER |                               |
| Jerry Heeren  | 770-661-2866             |                               |
| CONTACT E-MAIL  | CONTACT FAX              |                               |
| jheeren@meagpower.org   |                          |                               |
| REPORTING COMPANY NAME  | ANONYMOUS? (Y/N)         |                               |
| Municipal Electric Authority of Georgia (MEAG Power)  | no                       |                               |
| NERC OR REGIONAL STANDARD(S) AND SPECIFIC REQUIREMENT(S) POSSIBLY VIOLATED  |                          |                               |
| NAME OF COMPANY POSSIBLY VIOLATING STANDARD(S)  | ENTITY FUNCTION TYPE(S)  |                               |
| MEAG Power  | GO                       |                               |
| STANDARD # AND VERSION  | MEASURE / REQUIREMENT    | DATE OF POSSIBLE VIOLATION(S) |
| PRC-005-1   | R2.1                     | January 2009                  |
| POSSIBLE VIOLATION DESCRIPTION, REASON FOR COMPLAINT, OR QUESTION   |                          |                               |
| Wansley Unit #9, a generating station wholly owned by MEAG Power, has defined several maintenance & testing intervals for station batteries (daily, monthly, quarterly, annually, etc). Documentation is not available to confirm that the monthly maintenance & testing activity took place within the defined intervals during the first quarter of 2009. A more thorough investigation is in progress. |                          |                               |
| RELIABILITY IMPACT (IF KNOWN)   |                          |                               |
|   |                          |                               |

**SERC Staff will contact the person providing the report as soon as possible.**

**If you do not receive a response from SERC Staff within 2 business days please contact the SERC office (704-357-7372).**

**Please complete the form as completely as possible and email to [serccomply@serc1.org](mailto:serccomply@serc1.org).**

## **Source Document for the violation of PRC-005-1 R1**

## **Attachment b**

### **Settlement Agreement between MEAG and SERC, executed February 3, 2010**

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**SETTLEMENT AGREEMENT**

**OF**

**SERC RELIABILITY CORPORATION**

**AND**

**MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA**

**I. INTRODUCTION**

1. SERC Reliability Corporation (“SERC”) and Municipal Entity Authority of Georgia (“MEAG”) enter into this Settlement Agreement (“Settlement Agreement”) to resolve all outstanding issues arising from a preliminary and non-public assessment resulting in SERC’s determination and findings, pursuant to the North American Electric Reliability Corporation (“NERC”) Rules of Procedure, of two violations by MEAG of NERC Reliability Standard PRC-005-1 (Transmission and Generation Protection System Maintenance and Testing) Requirement (R) 1 and R2.1 (SERC Issue Tracking Nos. 09-068 and 09-025; NERC Violation ID Nos. SERC200900309 and SERC200900269).
2. MEAG admits the violations of NERC Reliability Standard PRC-005-1 R1 and R2.1 and has agreed to the proposed penalty of three thousand dollars (\$3,000) to be assessed to MEAG, in addition to other remedies and mitigation actions to mitigate the instant alleged violations and facilitate future compliance under the terms and conditions of the Settlement Agreement.

**II. STIPULATION**

3. The facts stipulated herein are stipulated solely for the purpose of resolving, between MEAG and SERC, the matters discussed herein and do not constitute stipulations or admissions for any other purpose. The attached Disposition document is incorporated herein in its entirety. MEAG and SERC hereby stipulate and agree to the following:

**Background**

4. See Section I of the Disposition document for a description of MEAG.

## **Violations of NERC Reliability Standard PRC-005-1, Requirements 1 and 2.1**

5. See Section II of the Disposition document for the description of the violations.

### **III. PARTIES' SEPARATE REPRESENTATIONS**

#### **Statement of SERC and Summary of Findings**

6. SERC Staff finds that beginning on June 18, 2007 and continuing until completion of MEAG's mitigation plan on December 7, 2009, MEAG, as a Generator Owner, did not have a comprehensive documented generation Protection System maintenance and testing program as described in the Disposition document, and as required by NERC Reliability Standard PRC-005-1, R1.
7. SERC Staff finds that beginning on June 26, 2007 and continuing until completion of MEAG's mitigation plan on December 7, 2009, MEAG, as a Generator Owner, did not have evidence that it maintained and tested all of its Protection System devices as described in the Disposition document, in accordance with its Protection System maintenance and testing program, as required by NERC Reliability Standard PRC-005-1, R2.1
8. SERC Staff concluded that the violations did not pose a serious or substantial risk to the bulk-power system, as discussed in the Disposition document.
9. SERC agrees that this Settlement Agreement is in the best interest of the parties and in the best interest of bulk-power system reliability.

#### **Statement of MEAG**

10. MEAG admits that the facts set forth and agreed to by the parties for purposes of this Agreement constitute violations of NERC Reliability Standard PRC-005-1, Requirements 1 and 2.1.
11. MEAG has agreed to enter into this Settlement Agreement with SERC to avoid extended litigation with respect to the matters described or referred to herein, to avoid uncertainty, and to effectuate a complete and final resolution of the issues set forth herein. MEAG agrees that this Settlement Agreement is in the best interest of the parties and in the best interest of bulk-power system reliability.
12. MEAG believes that compliance with NERC Reliability Standards is a key to preserving the reliability of the bulk power system. Further, MEAG believes that timely reviews and revisions of the standards are an important component of improving bulk power system reliability. MEAG is committed to compliance with NERC Reliability Standards, as described in the paragraphs below, and regularly participates in the ongoing review and revision of the standards.

13. MEAG's nine-member Board of Directors actively oversees the business of the corporation. Ultimate authority for overseeing MEAG's regulatory compliance lies with the Board. The Board has enacted two policies that are relevant to MEAG's compliance program: The Enterprise Risk Management Policy and the Regulatory Compliance Policy.
14. MEAG's Enterprise Risk Management Policy defines a management philosophy to mitigate risks that could jeopardize achievement of MEAG's mission. This Policy specifically recognizes the potential adverse impact of breakdowns in the fulfillment of regulatory or compliance obligations. The Policy directs MEAG to maintain an inventory of risks and corresponding mitigating controls, and it describes an arsenal of controls. With respect to the risks posed by NERC Reliability Standard noncompliance, the controls MEAG uses include:
  - i. Proactive Communication (*e.g.*, the Regulatory Compliance Policy);
  - ii. Preventive Measures (*e.g.*, periodic self-audits of compliance with specific NERC Reliability Standards); and
  - iii. Preparedness/Awareness (*e.g.*, compliance training).
15. The Regulatory Compliance Policy specifically addresses MEAG's NERC compliance responsibilities. The purpose of this Policy is to formalize certain practices, authorizations and controls to ensure that MEAG complies with the Federal Energy Regulatory Commission ("FERC" or "Commission") and NERC rules and regulations that are applicable to MEAG. The Policy provides for a Compliance Committee whose membership includes officers of the corporation.
16. The Compliance Committee, which meets quarterly, is chaired by the Vice President, Corporate Affairs. The Compliance Committee oversees MEAG's program to monitor compliance with applicable FERC and NERC regulations, and assigns responsibility for compliance to functional organizations. The Compliance Committee is required to report the state of MEAG's compliance to the Risk Management & Audit committee of the Board of Directors at least annually.
17. MEAG's Corporate Affairs organization administers and monitors MEAG's compliance programs. Corporate Affairs has no operational functions covered by NERC Reliability Standards. The Vice President, Corporate Affairs, a MEAG Power officer, reports to the President/CEO. Two other organizations within MEAG perform the functions that are covered by NERC Reliability Standards: Power Supply and Transmission. Each is headed by a Vice President who reports to the President/CEO.

#### **IV. MITIGATING ACTIONS, REMEDIES AND SANCTIONS**

18. SERC and MEAG agree that MEAG has completed and SERC has verified completion of the mitigating actions set forth in Section IV of the Disposition

document. Further, SERC has verified that MEAG has completed the additional actions addressed in Section V of the Disposition document. The Mitigating Actions, Remedies and Sanctions are discussed in detail in the Disposition document.

19. SERC Staff also considered the specific facts and circumstances of the violations and MEAG's actions in response to the violations in determining a proposed penalty that meets the requirement in Section 215 of the Federal Power Act that "[a]ny penalty imposed under this section shall bear a reasonable relation to the seriousness of the violation and shall take into consideration the efforts of [MEAG] to remedy the violation in a timely manner."<sup>1</sup> The factors considered by SERC Staff in the determination of the appropriate penalty are set forth in Section V of the Disposition document.
20. Based on the above factors, as well as the mitigation actions and preventative measures taken, MEAG shall pay three thousand dollars (\$3,000) to SERC as set forth in this Settlement Agreement. MEAG shall remit the payment to SERC via check, or by wire transfer to an account to be identified by SERC ("SERC Account"), within twenty days after SERC provides MEAG with a notice of penalty payment due and invoice, to be issued by SERC after this Settlement Agreement is either approved by the Commission or by operation of law. SERC shall notify NERC, and NERC shall notify the Commission, if the payment is not timely received. If MEAG does not remit the payment by the required date, interest payable to SERC will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date that payment is due, and shall be payable in addition to the payment.
21. Failure to make a timely penalty payment or to comply with any of the terms and conditions agreed to herein, or any other conditions of this Settlement Agreement shall be deemed to be either the same alleged violation that initiated this Settlement Agreement and/or additional violation(s) and may subject MEAG to new or additional enforcement, penalty or sanction actions in accordance with the NERC Rules of Procedure. MEAG shall retain all rights to defend against such additional enforcement actions in accordance with NERC Rules of Procedure.

## **V. ADDITIONAL TERMS**

22. The signatories to the Settlement Agreement agree that they enter into the Settlement 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 SERC or MEAG has been made to induce the signatories or any other party to enter into the Settlement Agreement. The signatories agree that the terms and conditions of this Settlement Agreement are consistent with the Commission's regulations and orders, and NERC's Rules of Procedure.

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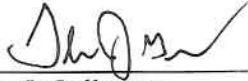
<sup>1</sup> 16 U.S.C. § 824o(e)(6).

23. SERC shall report the terms of all settlements of compliance matters to NERC. NERC will review the settlement for the purpose of evaluating its consistency with other settlements entered into for similar violations or under other, similar circumstances. Based on this review, NERC will either approve the settlement or reject the settlement and notify SERC and MEAG of changes to the settlement that would result in approval. If NERC rejects the settlement, NERC will provide specific written reasons for such rejection and SERC will attempt to negotiate a revised settlement agreement with MEAG including any changes to the settlement specified by NERC. If a settlement cannot be reached, the enforcement process shall continue to conclusion. If NERC approves the settlement, NERC will (i) report the approved settlement to the Commission for the Commission's review and approval by order or operation of law and (ii) publicly post this Settlement Agreement.
24. This Settlement Agreement shall become effective upon the Commission's approval of the Settlement Agreement by order or operation of law as submitted to it or as modified in a manner acceptable to the parties.
25. MEAG agrees that this Settlement Agreement, when approved by NERC and the Commission, shall represent a final settlement of all matters set forth herein and MEAG waives its right to further hearings and appeal, unless and only to the extent that MEAG contends that any NERC or Commission action on the Settlement Agreement contains one or more material modifications to the Settlement Agreement. SERC reserves all rights to initiate enforcement, penalty or sanction actions against MEAG in accordance with the NERC Rules of Procedure in the event that MEAG fails to comply with the mitigation plan and compliance program agreed to in this Settlement Agreement. In the event MEAG fails to comply with any of the stipulations, remedies, sanctions or additional terms, as set forth in this Settlement Agreement, SERC will initiate enforcement, penalty, or sanction actions against MEAG to the maximum extent allowed by the NERC Rules of Procedure, up to the maximum statutorily allowed penalty. Except as otherwise specified in this Settlement Agreement, MEAG shall retain all rights to defend against such enforcement actions, also according to the NERC Rules of Procedure.
26. MEAG consents to the use of SERC's determinations, findings, and conclusions set forth in this Agreement for the purpose of assessing the factors, including the factor of determining the company's history of violations, in accordance with the NERC Sanction Guidelines and applicable Commission orders and policy statements. Such use may be in any enforcement action or compliance proceeding undertaken by NERC and/or any Regional Entity; provided, however, that MEAG does not consent to the use of the specific acts set forth in this Agreement as the sole basis for any other action or proceeding brought by NERC and/or SERC, nor does MEAG consent to the use of this Agreement by any other party in any other action or proceeding.
27. Each of the undersigned warrants that he or she is an authorized representative of the entity designated, is authorized to bind such entity and accepts the Settlement Agreement on the entity's behalf.



28. The undersigned representative of each party affirms that he or she has read the Settlement Agreement, that all of the matters set forth in the Settlement Agreement are true and correct to the best of his or her knowledge, information and belief, and that he or she understands that the Settlement Agreement is entered into by such party in express reliance on those representations, provided, however, that such affirmation by each party's representative shall not apply to the other party's statements of position set forth in Section III of this Settlement Agreement.
29. The Settlement Agreement may be signed in counterparts.
30. This Settlement Agreement is executed in duplicate, each of which so executed shall be deemed to be an original.

Agreed to and accepted:



\_\_\_\_\_  
Thomas J. Galloway  
Interim President and CEO  
**SERC RELIABILITY CORPORATION**



\_\_\_\_\_  
Date



\_\_\_\_\_  
J. Scott Jones  
Vice President, Corporate Affairs  
**MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA**



\_\_\_\_\_  
Date

**Attachment c**

**Disposition Document and SERC's Verification of  
Completion contained therein, dated February 5,  
2010**

# **DISPOSITION OF ALLEGED/CONFIRMED VIOLATION**

**Dated January 28, 2010**

|                   |                              |      |
|-------------------|------------------------------|------|
| NERC TRACKING NO. | REGIONAL ENTITY TRACKING NO. | NOC# |
| SERC200900269     | 09-025 and 09-068            | 466  |
| and               |                              |      |
| SERC200900309     |                              |      |

|   |                   |
|---|-------------------|
| REGISTERED ENTITY                       | NERC REGISTRY ID. |
| Municipal Electric Authority of Georgia | NCR01278          |
| REGIONAL ENTITY(IES)                    |                   |
| SERC Reliability Corporation            |                   |

## **I. REGISTRATION INFORMATION**

ENTITY IS REGISTERED FOR THE FOLLOWING FUNCTIONS:

| BA | DP | <i>GO</i> | GOP | IA | LSE | PA | PSE | RC | RP | RSG | TO | TOP | TP | TSP |
|----|----|-----------|-----|----|-----|----|-----|----|----|-----|----|-----|----|-----|
|    |    | X         | X   |    | X   | X  | X   |    | X  |     | X  |     | X  | X   |

\*ALLEGED/CONFIRMED VIOLATION(S) APPLIES TO ITALICIZED FUNCTIONS

### DESCRIPTION OF THE REGISTERED ENTITY

The Municipal Electric Authority of Georgia ("MEAG") was created by the State of Georgia for the purpose of owning and operating electric generation and transmission facilities to supply bulk electric power to political subdivisions of Georgia. MEAG currently provides bulk electric power to 48 cities and one county in the State of Georgia (the "Participants") pursuant to separate power sales contracts with each Participant. MEAG does not engage in retail sales. Rather, the Participants provide retail electric service to their end users under arrangements that do not involve MEAG. The approximate load requirement of the Participants is 2,100 MW and 11,000 GWh.

MEAG has joint ownership interests in 9 electric generating units that are operated by the other joint owners. For these jointly-owned plants, MEAG and the respective joint owners have entered into written agreements whereby the operating owners are responsible for compliance with the NERC Reliability Standards.

MEAG is the sole owner and operator of one electric generating plant, known as Wansley #9, which is a combined-cycle power plant consisting of two gas turbines and one steam turbine with an approximate capacity of 500 MW. The Wansley Unit 9 is used for peaking and intermediate power requirements. In addition, MEAG purchases and sells bulk electric capacity and energy in order to enhance the Participants' reliability and financial flexibility. MEAG's ownership interests include more than 2,000 MW of generating capacity. MEAG also has an ownership interest in two additional nuclear generating units under development.

Additionally, MEAG owns transmission facilities which, together with those of other utilities, form a statewide Integrated Transmission System (the "ITS"). MEAG and each of the other ITS owners may use all transmission system facilities included in the ITS, regardless of ownership, to serve customers. MEAG's transmission facilities include approximately 1,300 miles of transmission lines and 19 transmission substations.

All of MEAG's generation and load are located within the Southern Control Area. Southern Company Services provides Transmission Operator, Reliability Coordinator, and Balancing Authority services for MEAG.

The violation of NERC Reliability Standard PRC-005-1 R1 and R2.1 pertains to MEAG's registration as a Generator Owner.

## **II. VIOLATION INFORMATION**

| RELIABILITY STANDARD | REQUIREMENT(S) | SUB-REQUIREMENT(S) | VRF*(S) | VSL**(S) |
|----------------------|----------------|--------------------|---------|----------|
| PRC-005-1            | R1             |                    | High    | Lower    |
| PRC-005-1            | R2             | R2.1               | High    | Lower    |

\*Violation Risk Factor ("VRF")

\*\*Violation Severity Level ("VSL")

### **TEXT OF RELIABILITY STANDARD AND REQUIREMENT(S)/SUB-REQUIREMENT(S):**

The purpose of NERC Reliability Standard PRC-005-1 is to ensure that all transmission and generation Protection Systems<sup>1</sup> affecting the reliability of the Bulk Electric System (BES) are maintained and tested. The text of the relevant requirements is as follows:

**R1.** Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall have a Protection System maintenance and testing program for Protection Systems that affect the reliability of the BES. The program shall include:

**R1.1.** Maintenance and testing intervals and their basis.

**R1.2.** Summary of maintenance and testing procedures.

**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

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<sup>1</sup> *The NERC Glossary of Terms Used in Reliability Standards*, updated April 20, 2009, defines Protection System as "Protective relays, associated communication systems, voltage and current sensing devices, station batteries and DC control circuitry."

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.

#### ALLEGED/CONFIRMED VIOLATION DESCRIPTION

NERC Reliability Standard PRC-005-1 R2.1 (09-025)

On May 7, 2009, MEAG submitted a self-report stating that it was not able to confirm that the monthly maintenance and testing activity took place on battery banks within the intervals defined in its generation Protection System Maintenance and Testing procedure (WI 07.2.2) Rev 0 dated March 20, 2008 during the first quarter of 2009. Upon further investigation, MEAG determined that it had not performed the monthly maintenance and testing activity for each of the 4 battery banks at MEAG's one solely-owned and operated plant, Wansley #9, for the annual 2008 interval and the monthly January 2009 interval.

For the annual 2008 interval and for the monthly January 2009 interval, MEAG stated that a software problem was the primary cause of the failure to conduct the annual station battery testing and maintenance activities that had been scheduled. A programming error resulted in the failure of the nightly system backup routine to backup the IBM computerized maintenance management system ("Maximo") database and reporting structure. This server and the Maximo software have been in use to schedule and track maintenance activities since the initial commissioning of the plant in 2004. The content of the server's hard drives was routinely backed up each night to an off-site server. However, without the knowledge of plant or IT staff, the nightly backups did not backup the Maximo database and reporting structure from June 2008 through December 2008 when the server failed.

On December 14, 2008, two of the hard drives in the server that runs the Maximo system failed. This failure by itself should not have resulted in a long term outage of the Maximo system, provided that the database was properly backed up. However, as discussed above, in the process of replacing the failed hard drives and restoring the server, it was discovered that the database was not being properly backed up. This required MEAG to engage the services of an outside specialty company to perform a "forensic recovery" of the contents of the hard drives. The specialty company was able to recover the raw data, but not the Maximo reporting structure, which had to be rebuilt. MEAG reported that its Maximo system was not fully functional again until February 12, 2009.

During its assessment of the violation, SERC Compliance Enforcement Staff discovered that MEAG also could not provide documentation that it had performed for the November 2008 monthly interval, as it had performed the required maintenance and testing on December 1, 2008, one day outside of its defined monthly interval.

MEAG attributed the cause for performing the November 2008 monthly maintenance late to a lack of awareness on the part of the operations staff that failure to conduct its Protection System device maintenance activities within their defined intervals constitutes non-compliance with the NERC standard. There were no issues identified when the monthly maintenance and testing was performed on December 1, 2008.

MEAG also had numerous instances where records were not available for daily inspections required under its procedures Transmission and Generator Protection System Maintenance and Testing (WI 7.2.2). Non-performance of daily operator rounds, or not having documentation that such rounds occurred, happened during times when the plant was not operational. This was attributed to a lack of awareness on the part of the operations staff that it needed to follow and document daily rounds, even on days when the plant was not running. While MEAG's maintenance and testing procedure required daily operator rounds, those rounds are conducted by plant operators, who differ from the staff that perform maintenance and testing. MEAG's plant operating procedure, Facility Operation (WI 6.01), describes the process for daily rounds and does not require the daily rounds be performed when the plant is not operating or is in an upset condition.

As a result of its assessment, SERC Compliance Enforcement Staff determined that documentation was not available to confirm that MEAG had performed the monthly maintenance and testing activity for the four battery banks, at its plant, Wansley #9, within the defined intervals for the November 2008 and January 2009 monthly intervals or for the annual 2008 interval. In addition, there were instances where records were not available for daily required inspections beginning on June 26, 2007. As a result, SERC Compliance Enforcement Staff found that MEAG has a violation of PRC-005-1 R2.1.

NERC Reliability Standard PRC-005-1 R1 (09-068)

During the assessment of the self-report submitted to SERC for NERC Reliability Standard PRC-005-1 R2.1, SERC Compliance Enforcement Staff also identified a possible violation of PRC-005-1 R1.

Between June 18, 2007 and March 20, 2008, MEAG had independent procedures insufficient for reliability compliance, for battery and protective relay maintenance and testing. However, it did not have a comprehensive procedure that addressed all of the required elements of a maintenance and testing program for its generation Protection System.

In addition, upon review of MEAG's Transmission and Generation Protection System Maintenance and Testing procedure (WI 07.2.2) Rev 0 dated March 20, 2008, SERC Compliance Enforcement Staff determined that MEAG's procedure did not include the required basis for the daily battery inspections specified in its procedure. All other elements of the requirements of NERC Reliability Standard PRC-005-1 R1 were included in the procedure.

RELIABILITY IMPACT STATEMENT- POTENTIAL AND ACTUAL

SERC finds that the violations did not pose a serious or substantial risk to the reliability of the bulk power system, because:

1. for the violation of PRC-005-1 R1:
  - a. MEAG had performed maintenance and testing but did not have a documented procedure that contained all of the elements as required by the standard;
2. for the violation of PRC-005-1 R2.1:
  - a. the station batteries at Wansley Unit 9 have alarms connected into the plant control system that will alert the operator to abnormal conditions such as low voltage. More importantly, the gas turbine units' control system includes a permissive in the startup sequence that requires the DC lube oil pumps to start and operate for one minute before the gas turbine is allowed to start. The intent of this step is to provide assurance that the DC emergency power system (including the station batteries) is operable.
  - b. MEAG mostly missed daily inspection of all battery banks when the plant was not operational; of the 204 days for which there is no data from operator rounds, 42 of those days were operating days;
  - c. battery maintenance and testing activities were performed before and after any missed events that confirmed the capability of the equipment; and
  - d. prior to having a comprehensive generation Protection System Maintenance and Testing procedure, MEAG had maintenance and testing procedures for batteries and protective relays.

WITH RESPECT TO THE ALLEGED/CONFIRMED VIOLATION, REGISTERED ENTITY

|  |     |                                     |
|--|-----|-------------------------------------|
| ADMITS TO IT                                   | YES | <input checked="" type="checkbox"/> |
| NEITHER ADMITS NOR DENIES IT                   | YES | <input type="checkbox"/>            |
| DOES NOT CONTEST IT (INCLUDING WITHIN 30 DAYS) | YES | <input type="checkbox"/>            |

WITH RESPECT TO THE PROPOSED PENALTY OR SANCTION, REGISTERED ENTITY

|  |     |                                     |
|--|-----|-------------------------------------|
| ACCEPTS IT                                     | YES | <input checked="" type="checkbox"/> |
| DOES NOT CONTEST IT (INCLUDING WITHIN 30 DAYS) | YES | <input type="checkbox"/>            |

REQUEST FOR SETTLEMENT AGREEMENT YES ☒ NO ☐  
DATE OF REQUEST September 23, 2009

### **III. DISCOVERY INFORMATION**

METHOD OF DISCOVERY:

|                    |                                     |
|--------------------|-------------------------------------|
| SELF-REPORT (R2.1) | <input checked="" type="checkbox"/> |
| SELF-CERTIFICATION | <input type="checkbox"/>            |



|                                    |  |
|------------------------------------|--|
| COMPLIANCE AUDIT                   | <input type="checkbox"/>                         |
| COMPLIANCE VIOLATION INVESTIGATION | <input type="checkbox"/>                         |
| SPOT CHECK (R1)                    | <input checked="" type="checkbox"/> <sup>2</sup> |
| COMPLAINTS                         | <input type="checkbox"/>                         |
| PERIODIC DATA SUBMITTALS           | <input type="checkbox"/>                         |
| EXCEPTION REPORTING                | <input type="checkbox"/>                         |

**DURATION DATE(S):**

PRC-005-1 R1 (09-068) - June 18, 2007, when the standard became mandatory and enforceable, until MEAG completed its mitigation plan and returned to compliance on December 7, 2009.

PRC-005-1 R2.1 (09-025) - June 26, 2007,<sup>3</sup> the first date that daily inspections were missed until MEAG completed its mitigation plan and returned to compliance on December 7, 2009.

**DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY**

May 7, 2009 – self-report of PRC-005-1 R2.1

August 31, 2009 – SERC Compliance Enforcement Staff finding of PRC-005 R1 during assessment of R2.1 self-report

**IS THE ALLEGED/CONFIRMED VIOLATION STILL OCCURRING?**

YES ☐ NO ☒

**EXPLAIN**

Mitigation Plan completed and Certified Complete on December 7, 2009.

REMEDIAL ACTION DIRECTIVE ISSUED YES ☐ NO ☒

PRE TO POST JUNE 18, 2007 VIOLATION YES ☐ NO ☒

**IV. MITIGATION INFORMATION**

MITIGATION PLAN NO. MIT-07-2095

DATE OF MITIGATION PLAN September 15, 2009<sup>4</sup>

DATE ACCEPTED BY REGIONAL ENTITY October 27, 2009

DATE APPROVED BY NERC November 3, 2009

<sup>2</sup> The violation of R1 was discovered by SERC Compliance Enforcement Staff during the course of its compliance assessment of the R2.1 self-report. SERC Compliance Enforcement Staff consulted NERC Enforcement and Mitigation Staff and both staffs agreed to record the method of identification for this violation as a “spot-check.”

<sup>3</sup> The self-report incorrectly states the violation began in January 2009.

<sup>4</sup> MEAG originally submitted its proposed mitigation plan on July 31, 2009. After the expansion of scope was identified to include the alleged violation of PRC-005-1 R1, MEAG submitted a second proposed mitigation plan on September 15, 2009 (Rev 1) to address the revised scope. However, the signature for this version was contained in a document separate from the mitigation plan. On October 9, 2009, MEAG resubmitted the Mitigation Plan to include the signature directly in the document, but the submission date of September 15, 2009, which is the date of the mitigation plan which contained the mitigating actions for both the R1 and R2 violations, was retained.

DATE PROVIDED TO FERC November 3, 2009  
IDENTIFY AND EXPLAIN VERSIONS THAT WERE REJECTED  
N/A

MITIGATION PLAN COMPLETED YES ☒ NO ☐

EXPECTED COMPLETION DATE December 14, 2009

EXTENSIONS GRANTED

ACTUAL COMPLETION DATE December 7, 2009

Note: Although the training portion of the mitigation plan actions relative to the importance of compliance with NERC Standards was completed on June 25, 2009, the upgrade to its maintenance management system was not completed until December 7, 2009.

DATE CERTIFIED AS COMPLETE BY REGISTERED ENTITY  
December 7, 2009

DATE VERIFIED AS COMPLETE BY REGIONAL ENTITY  
SERC verified on January 22, 2010 that MEAG completed its mitigation plan on December 7, 2009.

#### ACTIONS TAKEN TO MITIGATE THE ISSUE

To correct the violation of NERC Reliability Standard PRC-005-1 R1, MEAG has revised its generation Protection System Maintenance and Testing procedure to remove the requirement to conduct daily battery inspections when the plant is operational as part of its Maintenance and Testing program, while leaving the requirement to perform daily inspections when the plant is operating in its Operating Procedure. There should be no adverse reliability impact due to this change, as monthly testing is still required, daily testing will be performed when the plant is operational and there is no identified basis for daily testing. MEAG also has amended its procedure to include maximum variances for performance of testing to address scheduling concerns, outages or other plant conditions. The variances detailed in MEAG's revised procedure are: Monthly – between 7 – 53 days from the date of the previous testing, Quarterly – between 45 – 135 days from the date of the previous testing, Annual – between 180 – 540 days from the date of the previous testing and Greater than annual – anytime within the calendar year of the year in which testing is due. In addition, MEAG will document the reasons if any maintenance intervals are conducted outside of the regularly scheduled timeframe.

To correct the violation of NERC Reliability Standard PRC-005-1 R2.1, MEAG was required to and has completed the following actions detailed in its Mitigation Plan:

1. Additional checks and balances have been put in place to ensure that scheduled maintenance and testing occur in accordance with the defined intervals. In addition to the Maintenance Manager utilizing the upgraded Maximo system to schedule NERC Reliability Standard PRC-005-1 related

maintenance and testing activities, the plant Environmental, Health & Safety (EHS) Manager is now also using the plant's quality compliance calendar software tool to track battery maintenance and testing activities. While the Maximo system will still generate the work orders for the maintenance staff to perform in accordance with the defined intervals set forth in the procedure, the compliance calendar tool will provide an independent and redundant means to assure that these tasks are addressed. The compliance calendar will automatically generate e-mails to the EHS Manager and the Maintenance Manager a prescribed number of days prior to the due date for the activity. If the tasks are not entered as completed, reminder e-mails will be generated and sent to these two managers after the due date. This not only provides an independent software tool running on a separate server from the Maximo system, but also focuses a second manager on the required compliance actions.

2. Prior to the self-report, the plant was already working on a project to migrate the Maximo system from the on-site licensing arrangement to a web-based Maximo application, and upgrade from Version 5 to Version 6.2.3.<sup>5</sup> Rather than being installed on a server at the plant with remote IT technical support, the upgraded off-site system was installed at a Contractor facility designed to serve multiple plants. The off-site facility includes full-time IT support on-site, and has full backup capability at another location. This additional backup will provide reliability in the event of a disaster at the primary support center.
3. MEAG's Protection System Maintenance and Testing Procedures Manual has been revised to eliminate the daily inspection of station batteries, and to identify and clarify maintenance and testing requirements. Daily inspections may continue to be performed on days when the plant is operating, as a part of prudent stewardship of plant assets. These inspections are addressed in the Facility Operation Manual (*WI 6.01*).
4. To improve overall awareness and compliance with the NERC Reliability Standards, on June 25, 2009, MEAG provided training for plant staff on the importance of compliance with NERC standards with particular emphasis on NERC Reliability Standard PRC-005-1.

#### LIST OF EVIDENCE REVIEWED BY REGIONAL ENTITY TO EVALUATE COMPLETION OF MITIGATION PLAN OR MILESTONES (FOR CASES IN WHICH MITIGATION IS NOT YET COMPLETED)

MEAG submitted the following as evidence of its completion of its Mitigation Plan:

1. Screen images of the compliance calendar tool, which show NERC compliance-related activities and calendar capabilities;
2. E-mails generated by the compliance calendar tool for the December 2009 monthly battery inspections;

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<sup>5</sup> Due to IT changes between the planning and implementation phase of the Maximo upgrade project, MEAG implemented V6.2.3, instead of V6.2.4 of the Maximo software, as was listed in its Mitigation Plan.

3. A copy of the presentation materials used to train plant staff on NERC compliance issues, *NERC Compliance Presentation 6 25 2009 (Wansley)*, along with a copy of the sign-in sheet showing the names of personnel in attendance;
4. Revision 1 of the plant's *Protection System Maintenance and Testing Procedures Manual*, dated July 7, 2009; and
5. A screen image of the CMMS with the version identification and a Gantt chart titled *Upgrade Schedule – MEAG* showing the schedule for the software upgrade.

## **V. PENALTY INFORMATION**

### **PROPOSED PENALTY OR SANCTION**

SERC and MEAG have agreed that MEAG will pay a monetary penalty of three thousand dollars (\$3,000).

In addition to paying the monetary penalty, MEAG agreed to purchase an online computer-based training program to augment its compliance awareness training initiatives as part of the implementation of an enhanced training program for its employees on the NERC Reliability Standards. MEAG purchased this program in December 2009 for approximately \$2,600 and is currently integrating it into its training program. The initial computer-based training effort will focus on three standards: CIP-001 (Sabotage Reporting), PRC-001 (System Protection Coordination), and PRC-005 (Transmission & Generation Protection System Maintenance & Testing). Each of the three standards described above will be addressed by a one-hour training module that includes knowledge checks and online activities to ensure participant interaction. The training will be accessed online through the vendor's website. MEAG administrators have the ability to log on to track all student progress. MEAG anticipates implementing this training in the first quarter of 2010 and will consider adding other reliability standards and extending use of the online computer-based training program, if it proves to be effective.

### **ADDITIONAL SUPPORT FOR PROPOSED PENALTY OR SANCTION**

Requirements 1 and 2.1 of NERC Reliability Standard PRC-005-1 both have a "High" VRF. SERC Compliance Enforcement Staff assessed a VSL of "Lower" for both violations of the standard, in accordance with the matrix in effect at the time the violations were discovered because MEAG's procedure was missing the basis and MEAG lacked testing records for its 4 battery banks, out of the total number of devices in the Protection System, which is no more than 25% of its 109 total Protection System devices, as the violations only involved batteries.

### **(1) THE RELATION OF THE PENALTY TO THE SERIOUSNESS OF THE VIOLATION**

SERC has determined that the proposed penalty bears a reasonable relationship to the severity of the violation and considers the actions taken by MEAG to mitigate the violation. This determination is based, in part, on the following facts:

- a. MEAG has had no prior violation history for any Reliability Standard.
- b. MEAG self-reported the violation of Requirement 2.1.
- c. MEAG fully cooperated with SERC Compliance Enforcement Staff in addressing these issues.
- d. MEAG agreed to resolve these issues via settlement and promptly initiated various mitigation and preventative measures, as described in its Mitigation Plan, before receiving a Notice of Alleged Violation from SERC.
- e. SERC determined that there was no serious or substantial risk to the BPS as a result of these violations, as discussed above.

DOCUMENTATION ☐ PERFORMANCE ☐ BOTH ☒

EXPLAIN

See above.

## (2) REGISTERED ENTITY'S COMPLIANCE HISTORY

PRIOR VIOLATIONS OF THIS RELIABILITY STANDARD OR REQUIREMENT(S) THEREUNDER?

YES ☐ NO ☒

NUMBER OF SUCH VIOLATIONS?

LIST ANY CONFIRMED OR SETTLED VIOLATIONS AND STATUS

PRIOR VIOLATIONS OF OTHER RELIABILITY STANDARD(S) OR REQUIREMENTS THEREUNDER?

YES ☐ NO ☒

NUMBER OF SUCH VIOLATIONS?

LIST ANY PRIOR CONFIRMED OR SETTLED VIOLATIONS AND STATUS

## (3) THE DEGREE AND QUALITY OF COOPERATION BY THE REGISTERED ENTITY

|                       |     |                                     |    |                          |
|-----------------------|-----|-------------------------------------|----|--------------------------|
| EXEMPLARY COOPERATION | YES | <input type="checkbox"/>            | NO | <input type="checkbox"/> |
| FULL COOPERATION      | YES | <input checked="" type="checkbox"/> | NO | <input type="checkbox"/> |
| PARTIAL COOPERATION   | YES | <input type="checkbox"/>            | NO | <input type="checkbox"/> |

#### EXPLAIN

MEAG cooperated in a timely and satisfactory manner with SERC Compliance Enforcement Staff during the assessment. MEAG provided prompt responses to all of SERC Staff's data requests and cooperated with SERC Compliance Enforcement Staff during meetings between the parties to discuss these issues. Further, MEAG's Senior Management was actively involved in addressing and resolving these issues.

#### (4) THE PRESENCE AND QUALITY OF THE REGISTERED ENTITY'S COMPLIANCE PROGRAM

IS THERE A COMPLIANCE PROGRAM YES ☒ NO ☐  
EXPLAIN

MEAG has a well documented compliance program which is widely disseminated throughout the organization.

#### EXPLAIN SENIOR MANAGEMENT'S ROLE AND INVOLVEMENT WITH RESPECT TO THE REGISTERED ENTITY'S COMPLIANCE PROGRAM EXPLAIN

MEAG's Manager of Regulatory Compliance reports to the Vice President, Corporate Affairs, who is an officer of the organization. MEAG's Regulatory Compliance Policy provides for a Compliance Committee whose membership includes officers of the corporation. The Compliance Committee, which meets quarterly, is chaired by the Vice President, Corporate Affairs. The Compliance Committee is required to report the state of MEAG's compliance to the Risk Management & Audit committee of MEAG's Board of Directors at least annually.

#### (5) ANY ATTEMPT BY THE REGISTERED ENTITY TO CONCEAL THE VIOLATION(S) OR INFORMATION NEEDED TO REVIEW, EVALUATE OR INVESTIGATE THE VIOLATION(S)

YES ☐ NO ☒  
EXPLAIN

There was no attempt by the entity to conceal the violations. The violation of PRC-005-1 R2.1 was self-reported.

(6) ANY EVIDENCE THIS WAS AN INTENTIONAL VIOLATION

YES ☐ NO ☒

EXPLAIN

No evidence was present to suggest these violations were intentional.

(7) ANY OTHER MITIGATING FACTORS FOR CONSIDERATION

YES ☐ NO ☒

EXPLAIN

No other mitigating factors were considered.

(8) ANY OTHER AGGRAVATING FACTORS FOR CONSIDERATION

YES ☐ NO ☒

EXPLAIN

No aggravating factors were present.

(9) ANY OTHER EXTENUATING CIRCUMSTANCES

YES ☐ NO ☒

EXPLAIN

There were no extenuating circumstances to consider.

OTHER RELEVANT INFORMATION:

NOTICE OF ALLEGED VIOLATION AND PROPOSED PENALTY OR SANCTION  
ISSUED

DATE : OR N/A ☒

NOTICE OF CONFIRMED VIOLATION ISSUED

DATE: OR N/A ☒

SUPPLEMENTAL RECORD INFORMATION

DATE(S) \_ \_ \_ \_ OR N/A ☒

REGISTERED ENTITY RESPONSE CONTESTED

FINDINGS ☐ PENALTY ☐ BOTH ☐

HEARING REQUESTED

YES ☐ NO

DATE

OUTCOME

APPEAL REQUESTED

EXHIBITS:

MEAG SELF-REPORT, dated May 7, 2009

MEAG MITIGATION PLAN, submitted on October 9, 2009

MEAG CERTIFICATION OF COMPLETION OF MITIGATION PLAN, dated  
December 7, 2009

SETTLEMENT AGREEMENT BETWEEN SERC AND MEAG, executed February 3,  
2010





Rev 2 - Submitted  
10/09/09

# Mitigation Plan Submittal Form

**Please refer to  
SERC Guidelines for Mitigation Plan Submission.pdf available at  
<http://www.serc1.org/Application/ContentPageView.aspx?ContentId=22>**

Date this Mitigation Plan is being submitted: 9/15/09

If this Mitigation Plan has already been completed:

- Check this box ☐ and
- Provide the Date of Completion of the Mitigation Plan:

## **Section A: Compliance Notices**

- 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. This person may be the Registered Entity's point of contact described in Section 2.0.
  - (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

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<sup>1</sup> "Uniform Compliance Monitoring and Enforcement Program 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.



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.
- This submittal form shall be used to provide a required Mitigation Plan for review and approval by SERC and NERC.
  - The Mitigation Plan shall be submitted to SERC 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 violations of one Reliability Standard. A separate mitigation plan is required to address violations with respect to each additional Reliability Standard, as applicable.
  - If the Mitigation Plan is approved by SERC and 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.
  - SERC 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.

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

### **B.1      Identify your organization:**

Company Name:    Municipal Electric Authority of Georgia (MEAG Power)

Company Address:      1470 Riveredge Parkway NW, Atlanta GA 30328  
NERC Compliance Registry ID **[if known]**:    NRC01278

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

Name:      Jerry Heeren  
Title:      Manager, Regulatory Compliance  
Email:      jheeren@meagpower.org  
Phone:      770-661-2866



**Section C: Identity of Reliability Standard Violations Associated with this Mitigation Plan**

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

C.1 Standard: PRC-005-1  
*[Identify by Standard Acronym (e.g. FAC-001-1)]*

C.2 Requirement(s) violated and violation dates:  
*[Enter information in the following Table]*

| NERC Violation ID #<br>[if known] | SERC<br>Violation ID<br>#<br>[if known ] | Requirement<br>Violated<br>(e.g. R3.2) | Violation Date <sup>(*)</sup> |
|-----------------------------------|--|--|-------------------------------|
|                                   | 09-025                                   | R2.1                                   | 05/07/2009                    |
|                                   | 09-068                                   | R1.1                                   | 05/07/2009                    |
|                                   |  |  |                               |
|                                   |  |  |                               |
|                                   |  |  |                               |
|                                   |  |  |                               |
|                                   |  |  |                               |
|                                   |  |  |                               |

(\*) Note: The Violation Date shall be: (i) the date that the violation occurred; (ii) the date that the violation was self-reported; or (iii) the date that the violation has been deemed to have occurred on by SERC. Questions regarding the date to use should be directed to SERC.

C.3 Identify the cause of the violation(s) identified above:

Please see Attachment A for general background information on MEAG Power's Plant Wansley Unit 9 and on the circumstances of this self-report. We have identified three causes:

1. A software problem was the primary cause of the failure to conduct the annual station battery testing and maintenance activities that were scheduled for December 2008 and the monthly testing and maintenance that was scheduled for January 2009. A programming error resulted in the failure of the nightly system backup routine to backup the computerized maintenance management system (Maximo) database and reporting structure. This server and the Maximo software have been in use to schedule and track maintenance activities since the initial commissioning of the plant in 2004. The content of the server's hard drives was routinely backed up each night to an off-site server.



However, without the Contractor's plant or IT staff's knowledge, the nightly backups were not picking up the Maximo database and reporting structure from June 2008 through December 2008 when the server failed.

2. A contributing cause for the two missed activities was the December 14, 2008 failure of two of the hard drives in the server that runs the Maximo system. The Maximo system software is run on a computer server that includes four hard drives. The server is designed to be able to operate with one failed hard drive, but must have at least two of the four drives operating in order to function. This failure by itself should not have resulted in a long term outage of the Maximo system, provided that the database was properly backed up. However, in the process of replacing the failed hard drives and restoring the server, it was discovered that the database was not being properly backed up. This required engaging the services of an outside specialty company to perform a "forensic recovery" of the contents of the hard drives. They were able to recover the raw data, but not the Maximo reporting structure. This added a substantial amount of time to rebuild the entire report structure. The Maximo system was not fully functional again until February 12, 2009.

3. The cause for either missing daily operator rounds, or just not having documented that such rounds occurred, is attributed to a lack of awareness on the part of the operations staff that failure to strictly follow and document daily rounds per the plant procedure for Transmission and Generator Protection System Maintenance and Testing (WI 7.2.2) could constitute non-compliance with the NERC standard. While the maintenance and testing procedure does call for daily operator rounds, such rounds are actually an operating function where neither maintenance nor testing is conducted. Review of related procedures identified an inconsistency in that the plant procedure for Facility Operation (WI 6.01) that describes the process for daily rounds allows flexibility in performing the daily rounds depending upon the operating status of the plant. Under that procedure, if the plant is not running or is in an upset condition, daily rounds may not be considered a high priority and the operator is allowed to exercise judgment as to whether to make the daily rounds.

4. The cause for performing the November 2008 monthly maintenance one day late is attributed to a lack of awareness on the part of the operations staff that failure to strictly follow scheduled maintenance activities could constitute non-compliance with the NERC standard.

[Provide your response here; additional detailed information may be provided as an attachment as necessary]



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

**See Attachment A for additional background and detailed information.**

The reliability of the BES was not at risk due to this violation for the following reasons:

1. Wansley Unit 9 is not a critical asset.
2. The battery systems are monitored and alarmed on a real time basis from the plant control room.
3. The entire DC emergency power system is functionally tested to confirm that it is available before a generator is allowed to startup, and this plant typically shuts down each night (hence must go through the start sequence frequently).
4. Battery maintenance/testing activities occurred both before and after the missed events confirming that no degradation had occurred in the systems.

[Provide your response here; additional detailed information may be provided as an attachment as necessary]

## **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 violations identified above in Part C.2 of this form:

The following actions are planned (or have already been implemented) to address the issues. Items 1 and 2 are focused on the software and hardware problems associated with the Maximo system, while item 3 is intended to increase plant staff awareness regarding NERC compliance.

1. In addition to the Maintenance Manager utilizing the Maximo system to schedule PRC-005 related maintenance and testing activities, the plant Environmental, Health & Safety (EHS) Manager is now also using the plant's quality compliance calendar software tool to track battery maintenance and testing activities. While the Maximo system will still generate the work orders for the maintenance staff to perform, the compliance calendar tool will provide an independent and redundant means to assure that these tasks are addressed. The compliance calendar will automatically generate emails to the EHS Manager and the Maintenance Manager a prescribed number of days prior to the due date for the activity. If the tasks are not entered as completed, reminder emails will be



generated after the due date. This not only provides an independent software tool running on a separate server from the Maximo system, but also focuses a second manager on the required compliance actions.

2. Prior to this self-report issue being discovered, the plant was already working on a project to upgrade the Maximo system. This project involves upgrading the Maximo software from the on-site licensing arrangement to a web-based Maximo application, and upgrading from Version 5 to Version 6.2.4. Rather than being installed on a server at the plant with remote IT technical support, the upgraded off-site system will be installed at a Contractor facility designed to serve multiple plants. The facility will include full-time IT support on-site, and will be provided with full backup capability at another location. This will provide reliability in the event of a disaster at the main support center. This project is expected to be complete by the end of September.

3. To improve the plant staff awareness regarding what constitutes compliance, we have provided training for plant staff on the importance of compliance with NERC standards with particular emphasis on PRC-005.

4. Plant Wansley's Protection System Maintenance and Testing Procedures Manual (WI 07.2.2) will be revised to eliminate the daily inspection of station batteries, and to allow appropriate grace periods for all other maintenance and testing, where justified technically.

[Provide your response here; additional detailed information may be provided as an attachment as necessary]

***Check this box ☐ and proceed to Section E of this form if this Mitigation Plan, as set forth in Part D.1, has already been completed; otherwise respond to Part D.2, D.3 and, optionally, Part D.4, below.***

#### **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: See Section D.3 below.

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



| Milestone Activity  | Proposed Completion Date*<br>(shall not be more than 3 months apart) |
|---|--|
| Wansley Unit 9 will incorporate PRC-005 maintenance and testing activity reminders into its quality compliance calendar tool. | Completed June 30, 2009  |
| MEAG Power will train plant staff on the importance of compliance with NERC standards.  | Completed June 25, 2009  |
| MEAG Power will submit a revised mitigation plan  | September 15, 2009   |
| Wansley Unit 9 will revise its Protection System Maintenance and Testing Procedures Manual (WI 07.2.2)                        | December 14, 2009  |
| Wansley Unit 9 will upgrade its computerized maintenance management system (CMMS).  | December 14, 2009  |

(\*) 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.

[Note: Provide your response here; additional detailed information may be provided as an attachment as necessary]

#### **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:

[Provide your response here; additional detailed information may be provided as an attachment as necessary]

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

***Check this box ☐ and proceed and respond to Part E.2 and E.3, below, if this Mitigation Plan, as set forth in Part D.1, has already been completed.***

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





- E.1 While your organization is implementing the Mitigation Plan proposed in Part 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:

There will be no risks or impacts to the reliability of the BES while this mitigation plan is being implemented. See the discussion in Attachment A on the impact of Wansley Unit 9 on the reliability of the BES, and on the systems that prevent plant startup if batteries are inadequate to power emergency equipment.

[Provide your response here; additional detailed information may be provided as an attachment as necessary]

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

- E.2 Describe how successful completion of the Mitigation Plan as laid out in Part 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:

1. The Contractor's upgraded CMMS is expected to be more reliable with increased IT support than the current site-based version.
2. The plant staff will have independent and redundant systems to schedule and track the PRC-005 maintenance and testing activities.
3. Plant management and staff will better understand the differences between preventive maintenance to protect plant assets, and maintenance / testing of protective systems to ensure the reliability of the BES. Plant management and staff will understand the importance of complying with NERC standards, and of maintaining evidence of compliance.

[Provide your response here; additional detailed information may be provided as an attachment as necessary]

- E.3 Your organization may be taking or planning other action, beyond that listed in the Mitigation Plan, as proposed in Part D.1, to prevent or minimize the probability of incurring further violations of the same or similar standards requirements listed in Part C.2, or of other reliability





standards. If so, identify and describe any such action, including milestones and completion dates:

[Provide your response here; additional detailed information may be provided as an attachment as necessary]

**Continued on Next Page**



## **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 the Mitigation Plan, as laid out in Section D of this form, to SERC for acceptance by SERC 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 Vice President, Power Supply of Municipal Electric Authority of Georgia (MEAG Power).
  - 2. I am qualified to sign this Mitigation Plan on behalf of Municipal Electric Authority of Georgia (MEAG Power).
  - 3. I have read and understand Municipal Electric Authority of Georgia (MEAG Power) 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, including Appendix 4(C) (Compliance Monitoring and Enforcement Program of the North American Electric Reliability Corporation" (NERC CMEP)).
  - 4. I have read and am familiar with the contents of the foregoing Mitigation Plan.
  - 5. Municipal Electric Authority of Georgia (MEAG Power) agrees to be bound by, and comply with, the Mitigation Plan, including the timetable completion date, as approved by SERC and approved by NERC.

**Authorized Individual Signature**

**/s/ Steven M. Jackson**

(Electronic signatures are acceptable; see CMEP)

Name (Print): Steven M. Jackson

Title: Vice President, Power Supply

Date: September 15, 2009



**Section G: Comments and Additional Information**

You may use this area to provide comments or any additional relevant information not previously addressed in this form.

[Provide your response here; additional detailed information may be provided as an attachment as necessary]

**Submittal Instructions:**

Please convert the completed and signed document to a text-searchable Adobe .pdf document using the following naming convention:

[(MP Entity Name (STD-XXX) MM-DD-YY.pdf)]

Email the pdf file to [serccomply@serc1.org](mailto:serccomply@serc1.org).

Please direct any questions regarding completion of this form to:

Ken Keels  
Manager, Compliance Enforcement  
SERC Reliability Corporation  
704-357-7372  
[kkeels@serc1.org](mailto:kkeels@serc1.org)



Attachment A  
Municipal Electric Authority of Georgia (MEAG Power)  
Mitigation Plan Tracking Numbers 09-025 and 09-068

Wansley Unit 9, which is owned solely by MEAG Power, is a gas-fired and steam driven combined cycle power plant that has an approximate capacity of 500 MW. Wansley Unit 9 began commercial operation in June 2004. MEAG Power contracted with a third party to perform the operation and maintenance of Wansley Unit 9, hereafter referred to as Contractor. In addition to their qualification as the original equipment manufacturer of the major turbine components, they have extensive experience in the operation of combined cycle facilities, including a number of facilities using technology similar to Wansley Unit 9. The current contractor has been the only operator of the plant since its initial operation date.

Wansley Unit 9 is used for peaking and intermediate power requirements and is dispatched when market conditions are advantageous. MEAG Power uses a risk-based assessment methodology to identify assets that support the reliable operation of the BES, as required by NERC Standard CIP-002. Wansley Unit 9 does not meet the assessment methodology's criteria for a critical asset and is therefore deemed not critical to the reliable operation of the Bulk Electric System (BES).

Wansley Unit 9 is ISO-9001 certified. ISO 9001 is an internationally recognized standard for quality management that prescribes systematic control of activities to ensure that a product or service is quality assured. To earn this registration, applicants must develop a quality management system and undergo a rigorous third party review of their processes and procedures for assuring the quality of the operation.

The Contractor has published a facility procedure titled "Transmission and Generation Protection System Maintenance and Testing" (WI 07.2.2) which describes plans to comply with NERC Reliability Standard PRC-005 at Wansley Unit 9. This procedure has been supplied to SERC under separate cover. The procedure defines maintenance and testing intervals, explains their basis, and summarizes procedures for five categories of Protection System equipment:

- Protective relays: The defined maintenance/testing interval is 3 years. Relay maintenance/testing was completed in May 2007, and will therefore not be due again until May 2010. Evidence of date last maintained/tested has been provided to SERC under separate cover.
- Associated communication systems: MEAG and the Contractor assert that no communication systems are associated with system protection devices at Unit 9. [From NERC's January 30, 2009 interpretation of PRC-005: *"Associated communication systems" refer to communication systems used to convey essential Protection System tripping logic, sometimes referred to as pilot relaying or teleprotection. Examples include communications equipment involved in power-line-carrier relaying, communications equipment involved in various types of permissive protection system applications, direct transfer-trip systems, and digital communication systems.*]
- Voltage & current sensing devices: The defined interval is 9 years. Wansley Unit 9's initial operating date was June 2004, therefore maintenance/testing of voltage & current sensing devices will not be due until June 2013.



Attachment A  
Municipal Electric Authority of Georgia (MEAG Power)  
Mitigation Plan Tracking Numbers 09-025 and 09-068

- DC control circuitry: The defined interval is 9 years. Initial operating date was June 2004, therefore maintenance/testing of DC control circuitry will not be due until June 2013.
- Station batteries: The Contractor has defined five intervals for various battery maintenance/testing activities: Daily operator rounds; and maintenance/testing at Monthly, Quarterly, Annual, and Five year intervals. Evidence of dates of the most recent battery activities has been provided to SERC under separate cover.

On May 27, 2009, SERC requested maintenance and testing records from July 2008 – present. Station batteries were the only protection system devices that were due for maintenance/testing during that time interval (as noted above).

A review of the records revealed the following:

- One (1) monthly maintenance/testing activity which was scheduled for November 2008 was not performed until December 1, 2008 (one day late).
- One (1) monthly maintenance/testing activity was missed for the month of January 2009. A monthly activity was completed December 8, 2008 and the next monthly activity was completed on February 9, 2009.
- One (1) annual maintenance/test activity was missed for 2008. An annual activity was completed in July 2007, and the next annual activity was completed in March 2009.
- A five-year maintenance/test activity on the station batteries was conducted in December 2006. Maintenance records and evidence of that activity has been provided to SERC under separate cover.

The other area that was reviewed was the daily operator rounds. Documentation was also absent to confirm whether daily operator rounds for the battery systems were conducted on a number of days. The plant operators typically carry a hand-held computer when making rounds and enter the operational parameters for the systems into the hand-held computer. However, the site was unable to validate or document the completion of the rounds via the hand-held computers. This is not confirmation that the operators did not make the daily rounds, only that there is not documentation to confirm that the rounds were conducted. For reasons described below, we believe that operator rounds are an operating function and should not be considered in the same category as the maintenance and testing activities.

Wansley Unit 9 has battery banks installed in three locations: one set for each of the two gas turbines and a third set supplying balance of plant emergency power requirements. In addition to the battery banks, the plant critical service bus is provided with an alternate power feed that is supplied through a 115kV line that is independent from the normal 230kV service. The station batteries at Wansley Unit 9 have alarms connected into the plant control system that will alert the operator to abnormal conditions such as low voltage. Perhaps more importantly, the gas turbine units' control system includes a permissive in the startup sequence that requires the DC lube oil pumps to start and operate for one minute before the gas turbine is allowed to start. The intent of this step is to provide assurance that the DC emergency power system (including the station batteries) is operable. While this is not built into the control logic for the steam turbine, the startup procedure for the steam turbine requires the operator to start the steam turbine's DC lube oil pump to confirm availability of DC power prior to placing the steam turbine into service.



Attachment A  
Municipal Electric Authority of Georgia (MEAG Power)  
Mitigation Plan Tracking Numbers 09-025 and 09-068

Wansley Unit 9's procedures for inspecting, testing, and maintaining station batteries were originally designed to assure emergency power supply to vital plant assets, including the DC lube oil pumps and the plant control system. During certain emergency conditions, such as a transmission outage that isolates the plant, battery power is needed to safely shut down the plant. The plant's station batteries are capable of providing emergency on-site power for several hours, thus protecting the plant from damage. The station batteries also provide backup power to the transmission and generation protective relays and generator breakers, but the power requirements for those items are relatively small, and the duration of the need is a matter of seconds, not hours.

When the prior plant procedure for protective relay maintenance and testing was revised to incorporate the full PRC-005 requirements, a decision was made to use the insurance company and IEEE guidelines as the basis for battery testing and maintenance procedures. These guidelines have been provided to SERC under separate cover. While not suggested by the insurance guidelines, the IEEE guidelines, or the battery manufacturers' O&M manuals, daily operator rounds are usually conducted by the plant staff, and hence, they included reference to that activity in the procedure. The contractor knows of no written basis for conducting a daily inspection of batteries. The Contractor believes that it is good practice to conduct visual inspections of all plant systems on a regular basis, but upon further reflection, it is certainly not necessary to conduct daily visual inspections of DC battery systems in order to be confident on their reliability and availability. This is especially true in the case of Wansley Unit 9 where the operators are provided with control room alarms and the DC system operability is confirmed prior to each plant startup. The facility is a peak operating plant and usually shuts down overnight. Therefore, the startups provide a frequent operational test of the DC systems.

Another consideration in the design of the battery maintenance and testing program is the design of the battery systems themselves. The gas turbine battery systems consist of banks of 58 cells each, while the balance of plant battery system consists of two banks of 60 cells each. Station battery systems are expected to last many years (up to 20 years), and their performance tends to degrade slowly over time as opposed to failing instantly. In fact, the only maintenance specified in the battery system O&M manuals is that demineralized water be added every 2 to 3 years. Given the critical importance of the DC power systems, the Contractor believes the more involved insurance company/IEEE guidelines represent a more prudent approach. To summarize, the main points regarding the daily operator rounds are:

- (1) they are not specified in the guidelines that formed the basis for the maintenance/testing program,
- (2) they are not a requirement for a reliable battery system, and
- (3) they could be deleted from the maintenance/testing procedure without any adverse consequences to battery system reliability.



Attachment A  
Municipal Electric Authority of Georgia (MEAG Power)  
Mitigation Plan Tracking Numbers 09-025 and 09-068

If the Contractor was to delete the reference to daily operator rounds as a requirement in the maintenance/testing procedure, they would continue to conduct their rounds through the areas as expected under the Facility Operations procedure discussed below.

The Contractor has published another procedure manual titled "Facility Operation" (WI 06.01) that defines daily "rounds":

"Plant Logs/Records: These records consist of Daily "Rounds" taken on key equipment and systems as well as Daily Logs, which contain written entries regarding day-to-day plant operations. Daily Rounds are taken at pre-determined intervals according to the operational status of the plant." [This document has also been supplied to SERC under separate cover. See Sections 3.1.6 through 3.1.6.1; emphasis added.]

While it is generally expected that operators will make Daily Rounds, this procedure does note that intervals are "according to the operational status of the plant." For example, if the plant is in an upset or tripped condition, then getting the plant stabilized or back on line would take priority over the daily rounds. During the daily rounds, the operator is expected to make more than 350 data entries that note the status of many items of plant equipment, including station batteries. The operator records the data using a hand-held computer, which currently provides the only retrievable data available to substantiate operator rounds. The plant has had problems with the hand-held computers that have resulted in lost data. This plant is a peaking unit, and most of the operating days for this plant occur during the summer. It sits idle for many days during each year. Of the 204 days for which there is no data from operator rounds, only 42 of those days were operating days. It is likely that many of those days were days in which the operator did make rounds, but did not have documentation to verify it either because of a failure of the hand-held device or because only a quick round of visual inspections was made without logging data.

Regarding the missed monthly and annual maintenance activities, the computer server used to run the computerized plant maintenance management system (IBM's Maximo system) failed in December 2008. The computer hardware and software used to support maintenance/testing activities is located on site, with the exception of data backup. The Contractor's corporate software support services provided a data backup service. (The backup was not on-site; instead it used an online process to transfer on-site data to a corporate site.) While most of the contents of the server were being backed up nightly, due to a programming error, the Maximo database was not included in the backups from June through December 2008.

In December 2008, the server at the plant site failed and needed to be rebuilt. This took the computer used to schedule maintenance/testing activities off line until January 15, 2009. Because of the data backup service failure, a current database was not available to restore the repaired server. The Contractor's corporate software support services contracted with an outside company to provide a forensic recovery of the data from the failed hard drives. While they were able to recover the raw data, the entire reporting structure was lost. Rebuilding the reporting structure required a level of effort similar to the initial setup of the system during plant commissioning. The system was not fully functional again until February 12, 2009.





Attachment A  
Municipal Electric Authority of Georgia (MEAG Power)  
Mitigation Plan Tracking Numbers 09-025 and 09-068

The plant had performed the annual and 5-year testing in December 2006, and had scheduled annual and 5-year testing to be performed in Decembers of subsequent years. An annual test was prematurely conducted in July 2007, only seven months after the previous annual testing. When the Maximo system issued a work order for the December 2007 annual testing, that activity was cancelled because it had recently been performed, and the schedule for the next annual event was left at December 2008. While the failure of the Maximo system resulted in missing the scheduled annual testing that month, the scheduled monthly testing was conducted in December 2008 prior to the failure of the Maximo system.

In October 2008, the Wansley Unit 9 Facility Manager was promoted to a territory outside of the SERC footprint. The existing Maintenance Manager was subsequently promoted and became the new Facility Manager. The new Facility Manager held both positions, Facility Manager and Maintenance Manager, from October 2008 to February 2009. In February 2009, a Wansley Unit 9 maintenance team member was promoted into the Maintenance Manager position. The Maintenance Manager is responsible for tracking maintenance/testing requirements and schedules. While this transition period in staffing by itself is not a valid excuse for missing the required maintenance/testing activities, it likely did contribute to diversion of attention from the plant maintenance activities as the individual was filling both roles.

The plant's Environmental, Health & Safety Manager maintains an on-site compliance calendar to schedule and track performance of certain EHS activities that are required by other external regulatory agencies. The quality compliance calendar is now being utilized as an independent and redundant tool in addition to Maximo for scheduling and tracking the maintenance/testing activities of PRC-005.



## **Attachment d**

**MEAG's Certification of Completion, dated  
December 7, 2009**



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

### **SERC Reliability Corporation Violation Mitigation Plan Closure Form**

Name of Registered Entity submitting certification: [Municipal Electric Authority of Georgia \(MEAG Power\)](#)

Date of Certification: [December 7, 2009](#)

Name of Standard and the Requirement(s) of mitigated violation(s): [PRC-005-1 requirements R1.1 and R2.1](#)

SERC Tracking Number (contact SERC if not known): [09-025 and 09-068](#)

NERC Violation ID Number (if assigned):

**Date of completion of the Mitigation Plan:** [December 7, 2009](#)

Summary of all actions described in Part D of the relevant mitigation plan:

1. [Wansley Unit 9 has incorporated PRC-005 maintenance and testing activity reminders into its compliance calendar tool. The compliance calendar automatically generates emails to the appropriate managers a prescribed number of days prior to the due date for the activity. If a completion date is not entered into the compliance calendar, reminder emails will be generated after the due date. Note that this is a redundant tool that supplements the plant's work order tracking system and focuses a second manager on the required compliance actions.](#)
2. [MEAG Power managers conducted a training session for plant staff on the importance of compliance with NERC standards.](#)
3. [MEAG Power submitted a revised mitigation plan to SERC on September 15, 2009 to correct typographical errors and to address other minor concerns identified by SERC reviewers.](#)

Municipal Electric Authority of Georgia  
1470 Riveredge Parkway NW  
Atlanta, Georgia 30328-4686

1-800-MEAG      770-563-0300



4. Wansley Unit 9 has revised its Protection System Maintenance and Testing Procedures Manual (WI 07.2.2, Revision 1, July 7, 2009). The revision removes the daily battery inspection activity from the list of tasks required for compliance with NERC Standard PRC-005. Operating staff may still conduct battery inspections on days when the plant is operational, but evidence of this activity is no longer needed to demonstrate compliance with the standard. In addition, this revision adds grace periods, where technically appropriate, to the certain maintenance and testing intervals.
5. The plant's computerized maintenance management system (CMMS) has been upgraded from the on-site licensing arrangement to a web-based application, which provides for full-time IT support and enhanced data backup capability.

Description of the information provided to SERC for their evaluation:

1. Screen images of the compliance calendar tool are attached, showing several NERC compliance-related activities and calendar capabilities.
2. A copy of the presentation materials used to train plant staff on NERC compliance issues is attached, along with a copy of the sign-in sheet showing the names of personnel in attendance.
3. The revised mitigation plan was sent to SERC on September 15, 2009.
4. Revision 1 of the plant's Protection System Maintenance and Testing Procedures Manual is attached.
5. A screen image of the CMMS is attached, showing the version identification. Also attached is a Gantt chart (titled "Upgrade Schedule – MEAG") showing the schedule for the software upgrade.

I certify that the mitigation plan for the above-named violation has been completed on the date shown above. In doing so, I certify that all required mitigation plan actions described in Part D of the relevant mitigation plan have been completed, compliance has been restored, the above-named entity is currently compliant with all of the requirements of the referenced standard, and that all submitted information is complete and correct to the best of my knowledge.

Name: Steven M. Jackson

Title: Vice President, Power Supply

Entity: Municipal Electric Authority of Georgia (MEAG Power)

Email: [sjackson@meagpower.org](mailto:sjackson@meagpower.org)

Phone: 770-563-0314

Designated Signature \_\_\_\_\_/s/\_\_\_\_\_ Date December 7, 2009

**(Form Revised August 13, 2008)**

**Attachment e**

**Notice of Filing**

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Municipal Electric Authority of Georgia

Docket No. NP10-\_\_\_\_-000

NOTICE OF FILING  
February 12, 2010

Take notice that on February 12, 2010, the North American Electric Reliability Corporation (NERC) filed a Notice of Penalty regarding Municipal Electric Authority of Georgia in the SERC Reliability Corporation region.

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