



NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

March 31, 2010

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

**Re: NERC Notice of Penalty regarding Entergy
FERC Docket No. NP10-_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty¹ regarding Entergy (Entergy), NERC Registry ID# NCR01234,² 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)).³

On December 22, 2008, Entergy self-reported a possible violation of BAL-005-0 R8 to SERC for Entergy's failure to ensure that data acquisition for certain Remote Terminal Units (RTUs) that was used for the calculation of Area Control Error (ACE) occurred at least every six seconds. This Notice of Penalty is being filed with the Commission because, based on information from

¹ *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 (2009). *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).

² SERC Reliability Corporation (SERC) confirmed that Entergy was included on the NERC Compliance Registry as a Balancing Authority, Distribution Provider, Generator Owner, Generator Operator, Load Serving Entity, Planning Authority, Purchasing-Selling Entity, Resource Planner, Transmission Owner, Transmission Operator, Transmission Planner and Transmission Service Provider on May 31, 2007 and as an Interchange Authority on March 20, 2008. The Settlement Agreement omits Planning Authority function as one of the functions for which Entergy is registered on the NERC Compliance Registry. As a Balancing Authority, Entergy is subject to the requirements of NERC Reliability Standard BAL-005-0 R8. "Entergy," as listed on the NERC Compliance Registry, includes all six of the Entergy Operating Companies (Entergy Arkansas, Inc., Entergy Gulf States Louisiana, L.L.C., Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc. and Entergy Texas, Inc.), as well as Entergy Services, Inc., and is the authorized responsible entity for compliance with Reliability Standards for these individual companies within Entergy Corporation for the registered functions that operate in the SERC Region. Entergy Services, Inc. provides technical and administrative services to the Entergy Operating Companies.

³ See 18 C.F.R. § 39.7(c)(2).

SERC, SERC and Entergy⁴ 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 alleged violation of BAL-005-0 R8. According to the Settlement Agreement, Entergy neither admits nor denies the alleged violation, but has agreed to the proposed penalty of ten thousand dollars (\$10,000) to be assessed to Entergy, in addition to other remedies and actions to mitigate the instant violation and facilitate future compliance under the terms and conditions of the Settlement Agreement. Accordingly, the alleged violation identified as NERC Violation Tracking Identification Number SERC200800244 is being filed in accordance with the NERC Rules of Procedure and the CMEP.

Statement of Findings Underlying the Alleged Violation

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement executed on September 17, 2009, by and between SERC and Entergy, which is included as Attachment b. The details of the findings and basis for the penalty are set forth in the Settlement Agreement and herein. This Notice of Penalty filing contains the basis for approval of the Settlement Agreement by the NERC Board of Trustees Compliance Committee (NERC BOTCC). In accordance with Section 39.7 of the Commission's regulations, 18 C.F.R. § 39.7 (2007), NERC provides the following summary table identifying each alleged 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	Entergy	NOC-382	SERC200800244	BAL-005-0 ⁵	8	Medium	10,000

BAL-005-0 R8

The purpose of Reliability Standard BAL-005-0 is to establish requirements for Balancing Authority Automatic Generation Control (AGC) necessary to calculate ACE and to routinely deploy the Regulating Reserve. The Standard also ensures that all facilities and load electrically synchronized to the Interconnection are included within the metered boundary of a Balancing Area so that balancing of resources and demand can be achieved.

⁴ The Settlement Agreement is between SERC and Entergy Services, Inc., as agent for Entergy Operating Companies. On December 30, 2009, NERC filed a Notice of Penalty at FERC regarding an alleged violation of FAC-003-1 R2, which was designated as Docket No. NP10-22-000 and was for a Settlement Agreement between SERC and Entergy Services, Inc., as agent for Entergy Mississippi, Inc. On January 29, 2010, the Commission issued an order stating it would not engage in further review of the alleged violation addressed in the December 30, 2008 Notice of Penalty.

⁵ BAL-005-0 was enforceable from June 18, 2007 through August 27, 2008. BAL-005-0b was approved by the Commission and became enforceable on August 28, 2008. This was the enforceable standard at the time of discovery. BAL-005-0.1b is the current enforceable Standard as of May 13, 2009. The subsequent interpretations provide clarity regarding the responsibilities of a registered entity and do not change the meaning or language of the original NERC Reliability Standard and its requirements.

BAL-005-0 R8 requires a Balancing Authority, such as Entergy, to ensure that data acquisition for and calculation of ACE occur at least every six seconds. Specifically, each Balancing Authority shall provide redundant and independent frequency metering equipment that shall automatically activate upon detection of failure of the primary source. This overall installation shall provide a minimum availability of 99.95%. BAL-005-0 R8 has a “Medium” Violation Risk Factor (VRF).

On December 22, 2008, Entergy submitted a Self-Report to SERC because it had identified a problem with the data acquisition for certain RTUs used to calculate ACE. Specifically, during annual testing in December 2008, Entergy discovered that two of 167 RTUs, one at its Moril Substation and one at its Hope Substation, were reporting information at intervals longer than six seconds.

The results of the annual testing showed that an RTU at Moril Substation in South Louisiana was updating approximately every 10 seconds. This RTU collected data on the system tie located at the Moril Substation and reported information to Entergy’s Beaumont Transmission Operations Center (TOC). The Beaumont TOC then reported the information to the Entergy System Operation Center (SOC), which acts as the Balancing Authority. In January 2008, Entergy had completed the physical installation work on a project to install a new RTU at Moril Substation that would communicate directly to the SOC, rather than routing the information through the TOC. However, the new RTU was not put into service at that time, because the SOC believed that the system tie information supplied by the TOC was accurate and timely and the old RTU was working properly. The SOC’s decision to delay putting the new RTU into service was based on a May 2007 review which erroneously reported that the old RTU was updating at two second intervals. The root cause of this event was determined to be human error, specifically in attention to detail.

At the Hope Substation, Entergy found that one RTU was reporting at approximately thirty second intervals. The RTU utilized an old communications protocol called Conitel 2020 (C2020). The scan rate of 30 seconds for this RTU had likely been in place since the equipment was originally installed. EMS configuration records for C2020 protocol RTUs are different than the current Entergy standard. C2020 RTU configurations have multiple analog address records and an analyst must ensure they are checking the correct address record to verify the reporting timing. In the May 2007 review, the wrong address record was checked and the Hope Substation RTU was mistakenly reported as scanning at two second intervals. The root cause for this event was determined to be human error, specifically inadequate knowledge of C2020 protocol.

After the December 2008 review identified that the RTU scan rates at the Moril and Hope Substations were greater than the required six seconds, action was quickly taken to bring both installations into compliance. On December 17, 2008, the Moril Substation system tie information was corrected through the commissioning of the new RTU reporting directly to the SOC. The Hope Substation system tie information was also corrected on December 17, 2008, by adjusting the update time of the Hope Substation RTU to two seconds.

While performing the mitigation actions associated with this issue, Entergy discovered that an additional RTU at the Nelson Substation was also reporting at an interval longer than six seconds. In the May 2007 review, Entergy discovered that this RTU, along with two others, was reporting at 10 second intervals. An action plan was created to correct the timing prior to June 18, 2007, when the Reliability Standards became mandatory and enforceable. The necessary update to one of the RTUs was mistakenly declared to be complete on May 31, 2007. Data reporting for this system tie was similar to that of Moril Substation in that data was reported to the TOC which, in turn, reported to the SOC. A new RTU was commissioned on January 22, 2008. In March 2009, after filing its December 22, 2008 Self-Report, Entergy decided to double-check the work that had been done on this RTU. At this time, it was discovered that due to confusion over the name, the Nelson RTU had not been modified on May 31, 2007 as originally reported, but the RTU that was commissioned in January 2008 had corrected the scan rate time.

SERC Staff commenced its detailed compliance assessment and requested that Entergy provide the date the scan rate timing was first checked on the Moril and Hope Substation RTUs in question, the date that Entergy determined that the scan rate for these two RTUs exceeded six seconds, and whether redundant equipment operates as required in support of NERC Reliability Standard BAL-005-0 R8.1.

SERC determined that Entergy had an alleged violation of BAL-005-0 R8 because the evidence reviewed showed that Entergy did not calculate ACE every six seconds for three RTUs. SERC determined the duration of the alleged violation to be from June 18, 2007, the date the Standard became enforceable, through December 17, 2008, when Entergy RTUs' errors were corrected.

Regional Entity's Basis for Penalty

According to the Settlement Agreement, SERC has assessed a penalty of ten thousand dollars (\$10,000) for the referenced alleged violation. In reaching this determination, SERC considered the following mitigating factors: (1) the alleged violation constituted Entergy's first violation of BAL-005-0 during the mandatory reliability period; (2) the alleged violation was self-reported; (3) Entergy cooperated in a timely and satisfactory manner throughout the enforcement process; (4) there was no evidence that Entergy intended to conceal the violation; (5) Entergy agreed to resolve this issue via settlement before receiving a Notice of Alleged Violation and Proposed Penalty or Sanction; and (6) SERC determined that the alleged violation did not pose a serious or substantial risk to the bulk power system because of the small number of RTUs (*i.e.*, 3 out of 164 that represented less than 0.1% of the total system load) for which data was not being accumulated every six seconds. Additionally, during the period from June 18, 2007 to the time the RTUs' errors were corrected, the overall ACE for the Entergy system was calculated every six seconds for the entire Balancing Area using information from all RTUs. The calculation used the last known value from the faulty RTUs, whose values were no more than 10 to 30 seconds old, respectively.

After consideration of the above factors, SERC determined that, in this instance, the penalty amount of ten thousand dollars (\$10,000) is appropriate and bears a reasonable relation to the seriousness and duration of the alleged violation.

Status of Mitigation Plan⁶

Entergy's completed Mitigation Plan to address its alleged violation of BAL-005-0 R8 was submitted to SERC on March 19, 2009 with a completion date of March 4, 2009. The Mitigation Plan was accepted by SERC on April 21, 2009 and approved by NERC on April 29, 2009. The Mitigation Plan for this alleged violation is designated as MIT-07-1639 and was submitted as non-public information to FERC on April 30, 2009 in accordance with FERC orders.

Entergy's Mitigation Plan stated that Entergy completed the following actions:

- At Moril Substation, the new RTU was put into service and the SOC began to receive information directly. The work was completed on December 17, 2008 with the system scanning at two second intervals;
- For the Hope Substation RTU, a change was made to the computer system that scans the RTU so that the system scans at two second intervals. The work was completed on December 17, 2008;
- At Nelson Substation, the new RTU was put into service and the SOC began to receive information directly. The work was completed on January 22, 2008 with the system scanning at two second intervals;
- Training courses were originally given on January 19, 2009 and January 21, 2009 to the Entergy EMS Database and Hardware Teams, which are the personnel who perform the timing tests. The training focused on details of the timing test procedure for Conitel and non-Conitel protocols as well as the lessons learned from this event. This training was also included in the Entergy procedure *TD-ERS-BAL-001* which governs the timing test. A step has been added to the test process requiring training to be retaken before the annual test is performed; and
- Entergy management determined that the original training course did not adequately address the root cause of inattention to detail. Therefore, the training was modified and again presented to the Entergy EMS Database and Hardware teams on March 4, 2009.

Entergy certified on April 14, 2009 that its Mitigation Plan was completed as of March 4, 2009. As evidence of completion of its Mitigation Plan, Entergy submitted the following:

- Moril Remedy 332599 – ticket showing summary of work to be performed on RTU, date work order reported, and resolution;
- Hope Remedy 332606 – ticket showing summary of work to be performed on RTU, date work order reported, and resolution;
- EMS Database change summary *FGDATABASE121708_C.pdf* detailing description of work to be performed, initials of person performing work, and date work completed;
- EMS Database change summary *FGDATABASE122908_C.pdf* detailing description of work to be performed, initials of person performing work, and date work completed;
- EMS Database change summary *FGDATABASE12208_C.pdf* detailing description of work to be performed, initials of person performing work, and date work completed;

⁶ See 18 C.F.R § 39.7(d)(7).

- System Tie Scan Rate Testing Procedure Training, The training course for personnel who perform the timing test focusing on details of timing test, lessons learned, and inattention to detail as well as the attendees for each course.
- The procedure which governs the timing test was revised to reflect training requirements prior to performing annual test;
- Automatic Generation Control Procedure that documents the process for ensuring the Transmission Business complies with NERC Reliability Standard BAL-005-0; and
- E-mail Subject Mitigation Closure Form –Entergy NCR01234, SERC Compliance Assessment Notice 08-168 sent May 18, 2009 regarding Nelson remedy ticket, closure for items in EMS database, and confirmation of current procedure with hand written dates providing clarification regarding Remedy system.

On May 19, 2009, after reviewing Entergy's submitted evidence, SERC verified that Entergy's Mitigation Plan was completed as of March 4, 2009 and that Entergy was in compliance with BAL-005-0 R8.

Statement Describing the Proposed Penalty, Sanction or Enforcement Action Imposed⁷

Basis for Determination

Taking into consideration the Commission's direction in Order No. 693, the NERC Sanction Guidelines and the Commission's July 3, 2008 Guidance Order,⁸ 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 ten thousand dollars (\$10,000) against Entergy 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) Entergy self-reported the alleged violation;
- (2) the alleged violation constituted Entergy's first violation of BAL-005-0 during the mandatory reliability period;
- (3) SERC reported that Entergy was cooperative throughout the enforcement process;
- (4) there was no evidence of any attempt to conceal a violation nor evidence of intent; and
- (5) SERC determined that the alleged violation did not pose a serious or substantial risk to the bulk power system, as discussed above.

For the foregoing reasons, the NERC BOTCC approves the Settlement Agreement and believes that the proposed penalty of ten thousand dollars (\$10,000) is appropriate for the violation and

⁷ See 18 C.F.R § 39.7(d)(4).

⁸ *North American Electric Reliability Corporation*, "Guidance Order on Reliability Notices of Penalty," 124 FERC ¶ 61,015 (2008).

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 are the following documents and material:

- a) Entergy's Self-Report for BAL-005-0 R8 dated December 22, 2008, included as Attachment a;
- b) Settlement Agreement by and between SERC and Entergy executed September 17, 2009, included as Attachment b, with the following appendices:
 - i) Entergy's Mitigation Plan designated as MIT-07-1639 for BAL-005-0 R8 submitted March 19, 2009, included in the Settlement Agreement as Appendix A-1;
 - ii) Entergy's Certification of Completion of the Mitigation Plan for BAL-005-0 R8 dated April 14, 2009, included in the Settlement Agreement as Appendix A-2; and
 - iii) SERC's Verification of Completion of the Mitigation Plan BAL-005-0 R8 dated May 19, 2009, included in the Settlement Agreement as Appendix A-3.

A Form of Notice Suitable for Publication⁹

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

⁹ See 18 C.F.R § 39.7(d)(6).

Notices and Communications

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

<p>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, N.J. 08540-5721 (609) 452-8060 (609) 452-9550 – facsimile gerry.cauley@nerc.net david.cook@nerc.net</p> <p>Marcus V. Brown* Vice President & Deputy General Counsel for Litigation Entergy Services, Inc. 639 Loyola Avenue 26th Floor New Orleans, LA 70113 (504) 576-2765 (281) 297-5302 – facsimile Mbrown7@entergy.com</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* Assistant General Counsel Holly A. Hawkins* Attorney North American Electric Reliability Corporation 1120 G Street, N.W. Suite 990 Washington, D.C. 20005-3801 (202) 393-3998 (202) 393-3955 – facsimile rebecca.michael@nerc.net holly.hawkins@nerc.net</p> <p>Thomas J. Galloway* Interim President and Chief Executive Officer SERC Reliability Corporation 2815 Coliseum Centre Drive Charlotte, NC 28217 (704) 940-8205 (704) 357-7914 – facsimile tgalloway@sercl.org</p> <p>Marisa A. Sifontes* Interim Director of Compliance and Compliance Legal Counsel SERC Reliability Corporation 2815 Coliseum Centre Drive, Suite 500 Charlotte, NC 28217 (704) 494-7775 (704) 357-7914 – facsimile msifontes@sercl.org</p> <p>Kenneth B. Keels, Jr.* Manager of Compliance Enforcement SERC Reliability Corporation 2815 Coliseum Centre Drive Charlotte, NC 28217 (704) 940-8214 (704) 357-7914 – facsimile kkeels@sercl.org</p>
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Conclusion

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

Respectfully submitted,

/s/ Rebecca J. Michael

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cc: Entergy
SERC Reliability Corporation

Attachments

Attachment a

Entergy's Self-Report for BAL-005-0 R8 dated December 22, 2008



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

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

Date of Report: 22 December 2008

NAME OF PERSON REPORTING POSSIBLE STANDARD VIOLATION(S)		
CONTACT NAME	CONTACT TELEPHONE NUMBER	
Neil Saia	(504) 576-4792	
CONTACT E-MAIL	CONTACT FAX	
NSAIA@entergy.com	(504) 576-5123	
REPORTING COMPANY NAME	ANONYMOUS? (Y/N)	
Entergy Services, Inc.	N	
NERC OR REGIONAL STANDARD(S) AND SPECIFIC REQUIREMENT(S) POSSIBLY VIOLATED		
NAME OF COMPANY POSSIBLY VIOLATING STANDARD(S)		ENTITY FUNCTION TYPE(S)
Entergy Services, Inc.		BA
STANDARD # AND VERSION	MEASURE / REQUIREMENT	DATE OF POSSIBLE VIOLATION(S)
BAL-005-0b	R8	15 December 2008
POSSIBLE VIOLATION DESCRIPTION, REASON FOR COMPLAINT, OR QUESTION		
Requirement R8 of BAL-005-0b states that the Balancing Authority shall ensure that data acquisition for and calculation of Area Control Error (ACE) occur at least every six seconds. During annual testing it was discovered that 2 of 167 Remote Terminal Units (RTU) used to calculate ACE were reporting information to the BA at intervals longer than six seconds. Entergy has corrected the situation ensuring that all RTU's now report the required data within the six second interval.		
RELIABILITY IMPACT (IF KNOWN)		
Since the calculation of ACE uses the last known good data for each point, the slight difference in input should have had no more than a minor impact on the calculated value of ACE.		

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.

Attachment b

Settlement Agreement by and between SERC and Entergy executed September 17, 2009

SETTLEMENT AGREEMENT

OF

SERC RELIABILITY CORPORATION

AND

ENTERGY SERVICES, INC.,
AS AGENT FOR ENTERGY OPERATING COMPANIES

I. INTRODUCTION

1. SERC Reliability Corporation (“SERC”) and Entergy Services, Inc. on behalf of the Entergy Operating Companies (hereinafter collectively referred to as “Entergy”) 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 an alleged violation by Entergy of NERC Reliability Standard BAL-005-0b, Requirement 8 (Automatic Generation Control) (SERC Tracking No. 08-168, NERC Violation ID No. SERC200800244).

II. STIPULATION

2. The facts stipulated herein are stipulated solely for the purpose of resolving, between Entergy and SERC, the matters discussed herein and do not constitute stipulations or admissions for any other purpose. Entergy and SERC hereby stipulate and agree to the following:

Background

3. The Entergy System is comprised of six operating companies: Entergy Arkansas, Inc., Entergy Gulf States Louisiana, L.L.C., Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc., and Entergy Texas, Inc. that operate in the SERC region (the “Entergy Operating Companies”). Entergy Services, Inc. provides technical and administrative services to the Entergy Operating Companies.
4. The Entergy Operating Companies operate an integrated electric system and are engaged primarily in electric power production and retail distribution operations.

The Entergy Operating Companies deliver electricity to 2.7 million utility customers in Arkansas, Louisiana, Mississippi and Texas.

5. The Entergy Operating Companies own and operate power plants with approximately 30,000 megawatts of electric generating capacity.
6. Entergy is registered with SERC as a Balancing Authority (BA), Distribution Provider (DP), Generator Owner (GO), Generator Operator (GOP), Interchange Authority (IA), Load Serving Entity (LSE), Purchasing-Selling Entity (PSE), Resource Planner (RP), Transmission Owner (TO), Transmission Operator (TOP), Transmission Planner (TP), and Transmission Service Provider (TSP). The combined Entergy System Operating Companies and ESI are listed as “Entergy” on the NERC Compliance Registry (NCR01234).

Alleged Violation

Alleged Violation of NERC Reliability Standard BAL-005-0b, Requirement 8

7. The purpose of NERC Reliability Standard BAL-005-0b is to establish requirements for Balancing Authority Automatic Generation Control (AGC) necessary to calculate Area Control Error (ACE) and to routinely deploy the Regulating Reserve.
8. NERC Reliability Standard BAL-005-0b, Requirement 8 requires that a Balancing Authority ensure that data acquisition for and calculation of ACE occur at least every six seconds.¹
9. On December 22, 2008, Entergy submitted a self-report to SERC stating that as a Balancing Authority, it had identified a problem with the data acquisition for certain Remote Terminal Units (RTUs) used to calculate ACE. Specifically, during annual testing in December 2008, Entergy discovered that two (2) of 167 RTUs, one at its Moril substation and one at its Hope Substation, that were used to calculate ACE were reporting information at intervals longer than six seconds.
10. The results of the annual testing showed that the RTU at Moril Substation was updating approximately every 10 seconds. In January 2008, Entergy had completed the physical work on a project to install a new RTU at Moril. However the new RTU was not put into service at that time, because it was believed that the old RTU was reporting accurately and timely. The decision to delay putting into service the new RTU was based on a May 2007 review which erroneously reported that RTU was updating at two second intervals.

¹ NERC Standard BAL-005-0b –Automatic Generation Control, approved by NERC Board of Trustees on February 12, 2008, approved by FERC on July 21, 2008. This has since been superseded by NERC Reliability Standard BAL-005-0.1b, effective May 13, 2009.

11. At the Hope substation, Entergy found that one RTU was reporting at approximately thirty seconds intervals. The RTU utilizes an old communications protocol called Conitel 2020 (C2020). In the early days of the remotely-monitored Energy Management Systems (EMS), RTU scan rates had to be carefully managed so that all data and controls could be processed and handled with analog communications circuits. The scan rate of 30 seconds for this RTU had likely been in place since the equipment was originally installed. EMS configuration records for C2020 protocol RTU's are different than the current Entergy standard. C2020 RTU configurations have multiple analog address records and an analyst must ensure they are checking the correct address record to verify the reporting timing. In the May 2007 review, the wrong address record was checked and the Hope RTU was mistakenly reported as scanning at two second intervals.
12. While performing the mitigation actions associated with this issue, Entergy discovered that a separate RTU at the Nelson Substation was also reporting at an interval longer than 6 seconds. In May 2007, during an internal review, Entergy discovered that this RTU, along with two others, was reporting at 10 second intervals. An action plan was created to correct the timing prior to the date the reliability standards became mandatory and enforceable, in June of 2007. The necessary update to the RTU was declared to be complete on May 31, 2007 and a new RTU was later commissioned on January 22, 2008. In March 2009, after filing its December 22, 2008 self-report, Entergy decided to double-check the work that had been done on this RTU. At this time, it was discovered that due to confusion over the name, the Nelson RTU had not been modified in 2007, but the RTU that was commissioned in 2008 had corrected the scan rate time.
13. During the period from June 18, 2007 to the time the RTUs errors were corrected, the overall ACE for the Entergy system was calculated every six seconds for the entire Balancing Area using information from all of the RTUs. The calculation used the last known value from the faulty RTUs, whose values were no more than 10 to 30 seconds old respectively.
14. After confirming Entergy's NERC registration status, SERC Staff commenced its detailed compliance assessment. On January 6, 2009, SERC Staff issued to Entergy a Compliance Assessment Notice advising Entergy of the initiation of a formal assessment to determine, in part, its compliance relative to Reliability Standard BAL-005-0b and directing Entergy to preserve all relevant records and information. At this time, SERC Staff provided Entergy with a set of detailed questions, as part of its assessment, to which Entergy promptly responded. Specifically, SERC Staff requested that Entergy provide the date the scan rate timing was first checked on the two RTUs in question, the date that Entergy determined that the scan rate for these two RTUs exceeded six seconds, and if redundant equipment operate as required in support of NERC Reliability Standard BAL-005-0b, R8.1.

15. SERC Staff promptly established direct contact with representatives of Entergy to begin the process of gathering information and documentation for the detailed compliance assessment. SERC Staff also reported the possible violations to NERC, which, in turn, reported the possible violations to the Federal Energy Regulatory Commission (“Commission”) in accordance with the Compliance Monitoring Enforcement Program (“CMEP”) of the NERC Rules of Procedure.
16. SERC Staff concluded that the facts and evidence supported a finding that Entergy violated NERC Reliability Standard BAL-005-0b, Requirement 8, because the evidence reviewed showed that Entergy did not calculate ACE every six seconds for three RTUs, as required by the standard. Requirement 8 of NERC Reliability Standard BAL-005-0b is assigned a “Medium” Violation Risk Factor (“VRF”) consistent with the VRF filed by NERC and approved by the Commission. SERC Staff concluded that the actual or foreseeable risk to the reliability of the bulk power system as a result of this alleged violation was low because of the small number of RTUs, 3 out of 164 that represented less than 0.1% of the total system load, for which data was not being accumulated every six seconds.

III. PARTIES’ SEPARATE REPRESENTATIONS

Statement of SERC and Summary of Findings

17. SERC finds that beginning on June 18, 2007 and continuing until December 17, 2008, Entergy, as a Balancing Authority, failed to ensure that data acquisition for and calculation of ACE occurred at least every six seconds. This is a violation of NERC Reliability Standard BAL-005-0b, Requirement 8.
18. SERC Staff concluded that the actual or foreseeable impact of the alleged violations on the reliability of the bulk power system was low, as discussed above.
19. 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 Entergy

20. Entergy neither admits nor denies that the facts set forth and agreed to by the parties for purposes of this Agreement constitute a violation of NERC Reliability Standard BAL-005-0b. Entergy believes its operation and maintenance of the facilities, and its compliance program contribute to the reliability of the bulk electricity system.
21. Entergy has entered into this settlement agreement to avoid lengthy proceedings and expedite the settlement of alleged violations. Although Entergy does not admit to, nor does it deny, the alleged violations of NERC Reliability Standard BAL-005-0b, Requirement 8, Entergy 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. Entergy agrees that this agreement is in the best interest of the parties and in the best interest of maintaining a reliable electric infrastructure.

22. Entergy agrees with SERC that the actual or foreseeable impact of the alleged violations on the reliability of the bulk power system was low.
23. Entergy has a strong commitment to compliance with regulatory requirements. FERC has identified basic elements that it considers when evaluating a company's "commitment to compliance" and the compliance measures in existence at the time of the violation.²
24. Entergy is fully committed to complying with regulatory requirements and demonstrates this commitment not only through staffing and funding a broad array of compliance functions, but also by encouraging participation in compliance work at every level of the company. Entergy has created an extensive formal compliance program with a variety of compliance organizations that work with business units to ensure that all business units meet their regulatory requirements, create the necessary procedures and controls, and foster a culture of compliance. Entergy has further illustrated its commitment to compliance through continuous senior management involvement in compliance activities.
25. Entergy's overall Ethics and Compliance Program is one of the key components supporting Entergy's commitment to high standards of corporate conduct. A key element of compliance is the existence of controls to ensure that processes and programs are operating within designed guidelines and limits and to identify occurrences of non-compliance. Entergy has formalized extensive automated and manual programs for tracking compliance. The formal nature of Entergy's compliance culture is shown by its programmatic approach to compliance, which consists of standardized business practices related to compliance. Elements of the compliance programs include a broad range of policies, procedures, and manuals.
26. The effectiveness of Entergy's culture of compliance is demonstrated in the actions leading up to this settlement. The problem RTU's were identified as part of the ongoing, systemized application of standardized procedures to ensure compliance with Reliability Standards. Upon identifying a potential violation, Entergy took prompt systematic action to minimize potential impacts, cure the problem, and report the potential violation to SERC. These actions are outlined above in the factual discussion, and illustrate key evidence of Entergy's culture of compliance. The rapid reaction and commitment of resources shows Entergy's commitment to compliance,

² *Revised Policy Statement on Enforcement*, 123 FERC ¶ 61,156 at P 57 (May 15, 2008). FERC considers these elements when determining penalties: systems and protocols for monitoring, identifying, and correcting possible violations; a management culture that encourages compliance among company personnel, and tools and training sufficient to enable employees to comply with Commission requirements.

including the support of senior management. The fact that there was a competent and professional staff ready to take immediate action, and who had the organization, procedures, and resources at the ready for a comprehensive, immediate response shows that Entergy has a vigorous, strong compliance organization in place – which in turn is evidence of the company's commitment to compliance.

IV. MITIGATING ACTIONS, REMEDIES AND SANCTIONS

27. Entergy's Mitigation Plan MIT-07-1639 for NERC Reliability Standard BAL-005-0b, Requirement 8 dated March 19, 2009, was accepted by SERC on April 21, 2009 and submitted to NERC for its approval on April 23, 2009. Entergy's Mitigation Plan was completed on March 4, 2009. On April 14, 2009, Entergy certified completion of its mitigation plan and SERC verified its completion on May 19, 2009. Entergy's Mitigation Plan MIT-07-1639 is attached hereto as Appendix A-1.
28. Actions implemented by Entergy in Mitigation Plan MIT-07-1639 will help to prevent a recurrence of any similar violation. Specifically:
 - a. Entergy repaired or replaced the two RTUs that were not updating on intervals of at least six seconds.
 - b. Entergy modified its training courses for its EMS Database and Hardware Teams, the personnel who perform the timing tests on the RTUs, to focus on the details of the timing test procedure for Conitel and non-Conitel protocols and to address the lessons learned from this event.
 - c. Entergy updated its procedure TD-ERS-BAL-001 to require that employees retake the training prior to performing the annual test.
29. SERC has reviewed the preventative measures described in the Mitigation Plan and has determined that these measures will assist Entergy in improving prospective compliance with the requirements of NERC Reliability Standard BAL-005-0b and will enhance the reliability of the bulk power system within an appropriate time-frame.
30. To verify Entergy's satisfactory completion of Mitigation Plan MIT-07-1639, SERC reviewed the following documents provided by Entergy:
 - i. Moril Remedy 332599 – ticket showing summary of work to be performed on RTU, date work order reported, and resolution;
 - ii. Hope Remedy 332606 – ticket showing summary of work to be performed on RTU, date work order reported, and resolution;
 - iii. EMS Database change summary FGDATABASE121708_C.pdf detailing description of work to be performed, initials of person performing work, and date work completed;

- iv. EMS Database change summary FGDATABASE122908_C.pdf pdf detailing description of work to be performed, initials of person performing work, and date work completed;
- v. EMS Database change summary FGDATABASE12208_C.pdf pdf detailing description of work to be performed, initials of person performing work, and date work completed;
- vi. System Tie Scan Rate Testing Procedure Training;
- vii. Automatic Generation Control Procedure that documents the process for ensuring the Transmission Business complies with NERC Standard BAL-005-0b; and
- viii. Email Subject Mitigation Closure Form –Entergy NCR01234, SERC Compliance Assessment Notice 08-168 sent 5/18/09 regarding Nelson remedy ticket, closure for items in EMS database, and confirmation of current procedure with hand written dates providing clarification regarding Remedy system.

31. SERC Staff also considered the specific facts and circumstances of the violation and Entergy’s actions in response to the alleged violation 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 [Entergy] to remedy the violation in a timely manner.”³ The factors considered by SERC Staff in the determination of the appropriate penalty for Entergy’s alleged violations of NERC Reliability Standard BAL-005-0b pursuant to this Settlement Agreement included the following:

- a. Entergy has no prior violation history for this reliability standard during the mandatory reliability period.
- b. Entergy cooperated in a timely and satisfactory manner with SERC Staff during the investigation.⁴ Entergy provided prompt responses to all of SERC Staff’s data requests and cooperated with SERC Staff during meetings between the parties to discuss these events. Entergy proactively initiated its own internal investigation and voluntarily provided supporting information to SERC Staff to assist in SERC Staff’s review of the facts and circumstances. This included the submission of detailed mitigation plans, chronological evidence resulting from internal assessments, and copies of procedures for review. Entergy’s comprehensive response to SERC Staff’s questions enabled SERC Staff to conduct a thorough investigation in an efficient manner.

³ 16 U.S.C. § 824o(e)(6).

⁴ Revised Policy Statement on Enforcement, 123 FERC ¶ 61,156, P 65 (May 15, 2008).

- c. Entergy self-reported the alleged violation. Once Entergy became aware of potential deficiency in its compliance, it filed a self-report with SERC on December 22, 2008. SERC commends Entergy for self-reporting the alleged violation. This action is a factor in the reduction of the penalty.⁵
 - d. There is no evidence that Entergy intended to conceal this information.
 - e. Entergy agreed to resolve this issue via settlement and promptly initiated various mitigation actions and preventative measures before receiving a Notice of Alleged Violation from SERC.
 - f. Entergy implemented a range of measures in its mitigation plan, as set forth in Paragraph 28 to protect against future violations of the same or similar requirement.⁶
30. Based on the above factors, as well as the mitigation actions and preventative measures taken, Entergy shall pay \$10,000 to SERC as set forth in this Settlement Agreement. Entergy 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 Entergy 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 Entergy 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.
31. 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, may subject Entergy to new or additional enforcement, penalty or sanction actions in accordance with the NERC Rules of Procedure. Entergy will retain all rights to defend against such enforcement actions in accordance with the NERC Rules of Procedure.

V. ADDITIONAL TERMS

32. 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 Entergy has been made to induce the signatories or any other party to enter into the Settlement Agreement. The

⁵ Policy Statement on Compliance, 125 FERC ¶ 61,058, P 19 (October 16, 2008).

⁶ Policy Statement on Compliance, 125 FERC ¶ 61,058 (October 16, 2008).

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.

33. 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 Entergy 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 Entergy 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.
34. 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.
35. Entergy agrees that this Settlement Agreement, when approved by NERC and the Commission, shall represent a final settlement of all matters set forth herein and Entergy waives its right to further hearings and appeal, unless and only to the extent that Entergy 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 Entergy in accordance with the NERC Rules of Procedure in the event that Entergy fails to comply with the mitigation plan agreed to in this Settlement Agreement. In the event Entergy 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 Entergy 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, Entergy shall retain all rights to defend against such enforcement actions, also according to the NERC Rules of Procedure.
36. 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.
37. 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

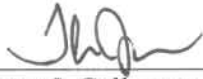
that he or she understands that the Settlement Agreement is entered into by such party in express reliance on those representations, provided, however, that such affirmation by each party's representative shall not apply to the other party's statements of position set forth in Section III of this Settlement Agreement.

38. The Settlement Agreement may be signed in counterparts.

39. This Settlement Agreement is executed in duplicate, each of which so executed shall be deemed to be an original.

*Remainder of page intentionally blank.
Signatures to be affixed to the following page.*

Agreed to and accepted:



Thomas J. Galloway
Vice President and Director of Compliance
SERC RELIABILITY CORPORATION

9/17/09
Date



Mark McCulla
Vice President, Transmission Regulatory Compliance
ENTERGY SERVICES, INC.,
on behalf of the Entergy Operating Companies

9-11-09
Date

**APPENDIX A
TO
SETTLEMENT AGREEMENT
OF
SERC RELIABILITY CORPORATION
AND
ENTERGY CORPORATION**

- (1) Entergy's Mitigation Plan for BAL-005-0b, R8**
- (2) Entergy's Certification of Mitigation Plan Completion for BAL-005-0b, R8**
- (3) Statement of SERC Reliability Corporation Compliance Staff Regarding
Completion of Entergy's Mitigation Plan for BAL-005-0b, R8**



Mitigation Plan Submittal Form

Date this Mitigation Plan is being submitted: 3/19/2009

If this Mitigation Plan has already been completed:

- Check this box ☒ and
- Provide the Date of Completion of the Mitigation Plan: 3/4/2009

Section A: Compliance Notices

- Section 6.2 of the CMEP¹ 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 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.

¹ "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.



- 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: Entergy

Company Address: 639 Loyola Ave. New Orleans, LA 70113

NERC Compliance Registry ID **[if known]**: NCR01234

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: Neil K. Saia

Title: Senior Staff Analyst

Email: nsaia@entergy.com

Phone: 504-576-4792



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: BAL-005-0b
[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 # [if known]	SERC Violation ID # [if known]	Requirement Violated (e.g. R3.2)	Violation Date ^(*)
SERCYYYYnnnnn	08-168	R8	12/22/2008
		R8	03/19/2009

(*) 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:

During annual testing in December 2008, as specified in Entergy procedure TD-ERS-BAL-001 - Automatic Generation Control, it was discovered that 2 out of 167 system ties used to calculate Area Control Error (ACE) were not being updated within the six second interval as described in Requirement 8 of BAL-005-0b.

1. Moril Susbtation

A Remote Terminal Unit (RTU) installed at Moril Substation in South Louisiana collecting data on the system tie located at that substation reported information to Entergy's Beaumont Transmission Operations Center (TOC). The Beaumont TOC in turn reported the information to the Entergy System



Operation Center (SOC), which acts as the Balancing Authority. The system tie update interval was approximately ten seconds. In January 2008, Entergy completed the physical installation work on a project to install a new RTU at Moril that would communicate directly to the SOC, rather than routing the information through the TOC. However, the new RTU was not immediately put into service because the SOC believed that the system tie information supplied by the TOC to be accurate and timely. The SOC's decision to delay the in service date of the new RTU was based on a May 2007 review which erroneously reported that the Moril system tie information updated at two second intervals. The root cause of this event was determined to be human error, specifically inattention to detail.

2. Hope Substation

The RTU installed at Hope Substation is legacy equipment that was reporting information every thirty seconds. The Hope RTU utilizes an old communications protocol called Conitel 2020 (C2020). In the early days of the remotely monitored Energy Management Systems (EMS), RTU scan rates had to be carefully managed so that all data and controls could be processed and handled with analog communications circuits. The scan rate of 30 seconds for this RTU had likely been in place since the equipment was originally installed. EMS configuration records for C2020 protocol RTU's are different than the current Entergy standard. Conitel 2020 RTU configurations have multiple analog address records and an analyst must ensure they are checking the correct address record. In the May 2007 review, the wrong address record was checked and the Hope tie was mistakenly reported as scanning at two second intervals. The root cause for this event was determined to be human error, specifically inadequate knowledge of C2020 protocol.

After the December 2008 review identified the RTU scan rates at these two substations were greater than the required six seconds, action was quickly taken to bring both installations into compliance. The Moril Substation system tie information was corrected through the commissioning of the new RTU reporting directly to the SOC. This new RTU was put in service on 12/17/2008. The Hope Substation system tie information was corrected on 12/17/2008 by adjusting the update time of the Hope RTU to two seconds.

3. Nelson Substation

The May 2007 review did discover three system ties that were being updated at intervals longer than six seconds. An action plan was created to bring these three system ties into compliance before the electric reliability standards



became mandatory in June 2007. One of the system ties in question, located at Nelson Substation in Southwest Louisiana, was mistakenly declared to be complete by the Beaumont TOC on 5/31/2007. Data reporting for this system tie was similar to that of Moril Substation in that data was reported to the TOC which in turn reported to the SOC. Likewise, the update time was ten seconds. The new RTU was not commissioned until 1/22/2008, which effectively corrected the scan rate time. Similar to Moril, the root cause of this incident was determined to be human error, specifically inattention to detail.

[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:

This event had little effect on the reliability of Entergy's Bulk Electric System in that the EMS software continues to report the last known good value. The same RTU value would continue to be used in the ACE equation allowing for ACE to be continuously calculated.

[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:

At Moril Substation, the new RTU was put into service and the SOC began to receive information directly. This work was completed on 12/17/2008, and the system is now scanning at two second intervals.

At Nelson Substation, the new RTU was put into service and the SOC began to receive information directly. This work was completed on 1/22/2008, and the system is now scanning at two second intervals.

For the Hope RTU, a change was made to the computer system that scans the RTU, and the system is now scanning at two second intervals. This work was completed on 12/17/2008.

Training courses were originally given on 1/19/2009 and 1/21/2009 to the Entergy EMS Database and Hardware Teams, which are the personnel who perform the timing tests. The training focused on details of the timing test procedure for Conitel and non-Conitel protocols as well as the lessons learned from this event. This training was also included in the Entergy procedure TD-ERS-BAL-001 which governs the timing test. A step has been added to the test process to retake the training before performing the annual test.

Entergy management determined that the original training course did not adequately address the root cause of inattention to detail. Therefore, the training was modified and again presented to the Entergy EMS Database and Hardware teams on 3/4/2009.

[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: The Mitigation plan was completed on 3/4/2009. This section is not applicable.

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

Milestone Activity	Proposed Completion Date* (shall not be more than 3 months apart)
N/A	N/A

(*) 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:

All pertinent information regarding the mitigation plan is found in sections D1.

[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:

Mitigation plan completed. This section is not applicable.

[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:

The system tie issues at Moril and Hope were identified during the December 2008 annual review as specified in Entergy's operating



procedure TD-ERS-BAL-001 . The incident was promptly reported to Entergy's Transmission Compliance department by Operations personnel and actions were immediately taken to correct the situation.

The Nelson system tie issue was discovered by the Transmission Compliance department during a review of information associated with developing this mitigation plan. The information shows that the Nelson RTU was scheduled to be replaced in time to meet the electric reliability standards compliance date, and that the SOC believed it was in compliance based on information provided by the TOC. The situation was unknowingly but effectively corrected through the commissioning of the new RTU equipment.

The root cause of all three RTU issues has been identified as human error, specifically inattention to detail at Moril and Nelson, and inadequate knowledge at Hope. Following Entergy's established procedures, communication of this incident and personnel training will minimize the chance of this happening again in the future.

[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:

The actions described in Section E2 adequately addressed the issue. The scan rate timing errors were uncovered by performing an annual process established to ensure ongoing compliance. No further actions are necessary.

[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 the Vice President, Transmission Regulatory Compliance of Entergy.
 2. I am qualified to sign this Mitigation Plan on behalf of Entergy.
 3. I have read and understand Entergy 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. Entergy 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

Mark McCulla

(Electronic signatures are acceptable; see CMEP)

Name (Print): Mark McCulla

Title: Vice President, Transmission Regulatory Compliance

Date: 19 March 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 an 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.

Please direct any questions regarding completion of this form to:

Ken Keels
Manager, Compliance Enforcement
SERC Reliability Corporation
704-357-7372
kkeels@serc1.org



Entergy

Appendix A-2

Entergy Services, Inc.
Transmission Business
P.O. Box 61000
New Orleans, LA 70161

Certification of a Completed Mitigation Plan

SERC Reliability Corporation Violation Mitigation Plan Closure Form

Name of Registered Entity submitting certification: [Entergy](#)

Date of Certification: [04/14/2009](#)

Name of Standard and the Requirement(s) of mitigated violation(s): [BAL-005-0b, R8](#)

SERC Tracking Number (contact SERC if not known): 08-168

NERC Violation ID Number (if assigned): SERC200800244

Date of completion of the Mitigation Plan: 3/4/2009

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

1. At Moril Substation, a new RTU was put into service and the Entergy's System Operations Center (SOC) began to receive information directly. This work was completed on 12/17/2008, and the system is now scanning at two second intervals.
2. For the Hope RTU, a change was made to the computer system that scans the RTU, and the system is now scanning at two second intervals. This work was completed on 12/17/2008.
3. At Nelson Substation, a new RTU was put into service and the SOC began to receive information directly. This work was completed on 1/22/2008, and the system is now scanning at two second intervals.
4. Training courses were originally given on 1/19/2009 and 1/21/2009 to the Entergy EMS Database and Hardware Teams, which are the personnel who perform the timing tests. The training focused on details of the timing test procedure as well as the lessons learned from this event.
5. The training course was also included in the Entergy procedure TD-ERS-BAL-001 which governs the timing test. A step has been added to the test process to retake the training before performing the annual test.
6. Entergy management determined that the original training course did not adequately address the root cause of inattention to detail. Therefore, the training was modified and again presented to the Entergy EMS Database and Hardware teams on 3/4/2009.

Description of the supporting documentation provided to SERC for evaluation:

- 1a. Moril Substation Remedy Ticket 332599 (1a- Moril Remedy 332599.pdf)
- 1b. Moril Substation EMS Database Change Request (1b- FGDATABASE121708_C.pdf)
- 2a. Hope Substation Remedy Ticket 332606 (2a- Hope Remedy 332606.pdf)
- 2b. Hope Substation Database Change Request (2b- FGDATABASE122908_C1.pdf)
3. Nelson Substation EMS Database Change Request (3- FGDATABASE012208_C.pdf)
- 4a. Original training course dated 1/19/2009 (4a- TD-ERS-BAL-001 ver3.pdf)
- 4b. Makeup training course for personnel who missed the original, given 1/21/09 (4b- TD-ERS-BAL-001 ver4.pdf)
5. Revised procedure TD-ERS-BAL-001, Revision 2 (5- TD-ERS-BAL-001.pdf)

Appendix A-2

6. Training course modified to address the root cause of inattention to detail, given 3/4/2009 (6-TD-ERS-BAL-001 ver9.pdf)
7. Mitigation Plan (7- MP Entergy (BAL-005-0b) 03-19-08.pdf)

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 information submitted information is complete and correct to the best of my knowledge.

Name: [Mark McCulla](#)
Title: [Vice President, Transmission Regulatory Compliance](#)
Entity: [Entergy](#)
Email: mmccul1@entergy.com
Phone: [\(504\) 576-6123](tel:(504)576-6123)

Designated Signature *Mark McCulla* Date 14 April 2009

[NOTE – Closure Form should be signed by same individual that signed Mitigation Plan]

(Form Revised August 13, 2008)



**Statement of SERC Reliability Corporation Compliance Staff Regarding
Completion of Mitigation Plan**

Registered Entity:	Entergy
SERC Tracking ID:	08-168
NERC Violation No:	SERC200800244
NERC Mitigation Plan ID:	MIT-07-1639
Standard:	BAL-005-0b
Requirement:	8

Violation Summary:

Entergy is in violation of BAL-005 R8 because they failed to ensure that data acquisition for and calculation of Area Control Error (ACE) occurred at least every six seconds. A violation of R8 carries a Medium VRF, as approved by the Commission. The duration of this violation is from June 18, 2007 until December 17, 2008 when the RTU's were updated or replaced. Staff concluded that the actual or foreseeable risk to the reliability of the bulk power system as a result of this alleged violation was low because of the small number of RTUs, 3 out of 164 that represented less than 0.1% of the total system load, for which data was not being accumulated every six seconds.

Mitigation Plan Summary:

Entergy's Mitigation Plan to address the referenced violation was submitted on March 19, 2009 and was accepted by SERC on April 21, 2009 and approved by NERC on April 29, 2009. The Mitigation Plan is identified as MIT-07-1639 and was submitted as non-public information to FERC on April 30, 2009 in accordance with FERC orders.

The RTU's that were not updating on intervals of at least 6 seconds have been repaired or replaced. To prevent recurrence, Entity will modify training courses for the Entergy EMS Database and Hardware Teams, which are the personnel who perform the timing test to focus on details of the timing test procedure for Conitel and non-Conitel protocols, to address the lessons learned from this event regarding the attention to detail. This training is also included in the Entergy procedure TD-ERS-BAL-001 which governs the timing test. A step has been added to the test process to retake the training before performing the annual test. The mitigation plan was completed on March 4, 2009.

SERC's monitoring of Registered Entity's Mitigation Plan Progress:

In this case, Entergy submitted the Mitigation Plan as complete and no additional monitoring of progress was necessary.

Mitigation Plan Completion Review Process:

Entergy certified on April 14, 2009 that the subject Mitigation Plan was completed on March 4, 2009. A SERC compliance staff member reviewed the evidence submitted in a manner similar



to a compliance audit. That action was followed by another compliance staff member's peer review of the initial conclusion.

Evidence Reviewed:

Entergy submitted and SERC Staff reviewed the following evidence in support of its certification that its Mitigation Plan was completed in accordance with its terms:

- i. Moril Remedy 332599 – ticket showing summary of work to be performed on RTU, date work order reported, and resolution;
- ii. Hope Remedy 332606 – ticket showing summary of work to be performed on RTU, date work order reported, and resolution;
- iii. EMS Database change summary FGDATABASE121708_C.pdf detailing description of work to be performed, initials of person performing work, and date work completed;
- iv. EMS Database change summary FGDATABASE122908_C.pdf detailing description of work to be performed, initials of person performing work, and date work completed;
- v. EMS Database change summary FGDATABASE12208_C.pdf detailing description of work to be performed, initials of person performing work, and date work completed;
- vi. System Tie Scan Rate Testing Procedure Training;
- vii. Automatic Generation Control Procedure that documents the process for ensuring the Transmission Business complies with NERC Standard BAL-005-0b; and
- viii. Email Subject Mitigation Closure Form –Entergy NCR01234, SERC Compliance Assessment Notice 08-168 sent 5/18/09 regarding Nelson remedy ticket, closure for items in EMS database, and confirmation of current procedure with hand written dates providing clarification regarding Remedy system.

Conclusion:

On May 19, 2009 SERC Reliability Corporation Compliance Staff ("SERC Staff") completed its review of the evidence submitted by Entergy in support of its Certification of Completion of the subject Mitigation Plan. Based on its review of the evidence submitted, SERC Staff verifies that, in its professional judgment, all required actions in the Mitigation Plan have been completed and Entergy is in compliance with the subject Reliability Standard Requirements.

This Statement, along with the subject Mitigation Plan, may become part of a public record upon final disposition of the possible violation.

Respectfully Submitted,

Andrea Koch
Mike Vastano

Attachment c

Notice of Filing

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Entergy

Docket No. NP10-____-000

NOTICE OF FILING
March 31, 2010

Take notice that on March 31, 2010, the North American Electric Reliability Corporation (NERC) filed a Notice of Penalty regarding Entergy 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, or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

Comment Date: [BLANK]

Kimberly D. Bose,
Secretary