Attachment a

Source Document

COMPLIANCE MONITORING AND ENFORCEMENT PROGRAM
VIOLATION SELF-REPORTING FORM

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

1. **Reliability Standard (XXX-###-#** or XXX-###-RFC-##**)** PRC -005-1

2. **Violation(s):** Check the appropriate box(s) to identify violation(s) of any of the applicable requirement(s) referenced in the standard.

For violations of requirements with Levels of Non-Compliance or Violation Severity Levels (VSL) specified in the standard:

☐ Entity is Level 1 Non-Compliance or has Lower VSL for the following: requirement(s): _____ for function(s):_____

☒ Entity is Level 2 Non-Compliance or has Moderate VSL for the following: requirement(s):R.2.1 for function(s):Transmission Owner

☐ Entity is Level 3 Non-Compliance or has High VSL for the following: requirement(s):_____ for function(s):_____

☐ Entity is Level 4 Non-Compliance or has Severe VSL for the following: requirement(s):_____ for function(s):_____

For violations of requirements with no Levels of Non-Compliance or Violation Severity Levels specified in the standard:

☐ Entity is in violation of requirement(s) not referenced in the Levels of Non-Compliance or Violation Severity Levels section of the standard:

requirement(s): _____ for function(s):_____

3. **Description of the violation:** The ComEd relay maintenance program is a formally documented Performance Centered Maintenance process. A key component of the program involves the selction of preventive maintenance activities designed to minimize consequential failures. The program provides for the scheduling of relay maintenance tasks in accordance with set intervals defined within maintenance templates. While planning future work associated with protective relay maintenance tasks, a Work Planner discovered an error within the maintenance scheduling tool where some of the automatic relay maintenance work order triggers were incorrectly set to "inactive" within the system. As a result, automatic notifications to schedule work for these items were not generated. The system was immediately reviewed to determine the extent of the issue. An initial investigation of 14,587system maintenance tasks was conducted and it was determined that a total of eleven transmission relay work orders were not generated to assure our maintenance program intervals were met. All of the transmission maintenance tasks at issue had either a 4 year test interval or a 9 year test interval. A full investigation is underway now and will be completed as part of the preparation of a mitigation plan (discussed in the next section).

4. **Additional information:** The Information Technology group is currently investigating the cause for the status change within the maintenance scheduling tool. The initial investigation team has reviewed all of the outstanding items for any significant safety, reliability or security concerns and found none. Outage contingency studies, simulating a mis-operation of the affected equipment and adjacent equipment, have been performed to verify abnormal load flows and voltages condition would not exist under the present system summer base case. The studies did not reveal any system problems for a peak load summer day. A review of historical relay maintenance test data did not reveal any past problems or issues to be concerned about. All calibration information, instrumentation input checks and functional checks were previously found normal.

Historical system fault operational performance data was also reviewed for relay response associated with the affected schemes. Faults associated with the affected equipment, as well as faults on adjacent equipment, were reviewed since the time that the relay maintenance was last completed. In all instances, faults on the affected equipment have cleared as expected and there have not been any associated mis-operations for faults on adjacent equipment. A review of the corrective maintenance history for the equipment since the last maintenance was performed has not identified any relay scheme issues.

The formal mitigation plan is being prepared to assure the maintenance tasks are completed as soon as possible and to prevent future similar occurrences and will follow.

5. **Mitigation Plan attached:** ☐ Yes ☒ No

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

Officer's Name: John Tyler Anthony,

Officer's Title: Vice President Transmission & Substation

Officer's e-mail address: John.Anthony@Exeloncorp.com Phone: 630-576-7065

Registered Company Name: Commonwealth Edison CDMS User ID: COMEDDP

Primary Compliance Contact (PCC)/Alternate: John Kruse

Email: John.Kruse@Exeloncorp.com Phone: 630-437-2769 Date: 12/4/2007

E-mail Submittals to: compliance@rfirst.org or Fax#: 330- 456-5408 – Attention Compliance Dept.
For any questions regarding compliance submittals, please e-mail: compliance@rfirst.org.

Attachment b

Settlement Agreement(s)

August 18, 2009

Linda Lynch
Senior Engineering Technical Specialist
Commonwealth Edison Company
Two Lincoln Centre
9-NE-021
Oakbrook Terrace, Illinois 60181

Re: Notice of Proposed Expedited Disposition of Pending Violations or Alleged Violations

Dear Linda Lynch:

This letter is giving notice that Reliability*First* Corporation ("Reliability*First*") proposes expedited disposition of the pending violation or alleged violation listed in **Attachment B**. **Please review the information below and respond in writing no later than five (5) business days from the date of this Notice.** Responses should be directed to Abby Sheatzley, Paralegal, at abby.sheatzley@rfirst.org. If you have questions, please call Megan Mahany at (330) 247-3083.

Reliability*First* intends to submit to the North American Electric Reliability Corporation ("NERC") for filing with the Federal Energy Regulatory Commission ("FERC" or "Commission") a request to expedite resolution of the pending violation or alleged violation listed in **Attachment B** and to accept disposition of these violation or alleged violation under the terms of the Agreement in **Attachment A** hereto, based on the following factors:

- The violation does not pose a serious or substantial risk to system reliability.
- The violation occurred prior to July 3. 2008.
- The violation has been mitigated with mitigation plan completion verified by Reliability*First* or the violations are being mitigated under the terms of a mitigation plan that has been approved by Reliability*First* and NERC.

This proposed expedited disposition will result in the assessment of the penalty identified for each of the respective violation listed in **Attachment B** if this disposition is accepted by Commonwealth Edison Company (DP) and by NERC and FERC.

If Commonwealth Edison Company (DP) accepts this proposed expedited disposition, sign the attached Agreement and return it to Reliability*First* within **five (5) business days** after the date of this Notice. ***If Commonwealth Edison Company (DP) does not wish to accept this proposed expedited disposition, sign the attached Decision to Opt Out and return it to ReliabilityFirst within five (5) business days after the date of this Notice.***

Sincerely,

Raymond J. Palmieri

Raymond J. Palmieri
Vice President and Director of Compliance

Attachments:
A – Agreement
B – List of Violation and associated Penalty

ATTACHMENT A

AGREEMENT

Commonwealth Edison Company (DP) and Reliability*First* agree to the following:

1. Acceptance of this Agreement results in the assessment of zero USD for the violation listed in **Attachment B,** subject to approval or modification by the North American Electric Reliability Corporation ("NERC") and the Federal Energy Regulatory Commission ("FERC" or "Commission"). Monetary penalty payments, to the extent applicable, must be made by Wire transfer to a Reliability*First* account that will be outlined in an invoice sent to Commonwealth Edison Company (DP) within twenty days after the Agreement is either approved by the Commission or is rendered effective by operation of law. Payment of this invoice shall be made within twenty days after the receipt of the invoice, and Reliability*First* shall notify NERC if the payment is not received.

2. The violation listed in **Attachment B** will be considered Confirmed Violations for all purposes and may be used as aggravating factors in accordance with the NERC Sanction Guidelines for determining appropriate monetary penalties or sanctions for future violations.

3. Any repeat occurrences of the violation listed in **Attachment B** by Commonwealth Edison Company (DP) will be addressed in separate Notice of Penalty filings.

4. The expedited disposition agreed to herein represents a full and final disposition of the violation listed in **Attachment B**, subject to approval or modification by NERC and FERC.

5. If Commonwealth Edison Company (DP) does not make the monetary penalty payment above at the times agreed by the parties, interest payable to Reliability*First* will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. § 35.19(a)(2)(iii) from the date that payment is due, in addition to the penalty specified above.

Accepted:
Commonwealth Edison Company (DP)

_____, as August 24, 2009
Date

Vice President - Transmission & Substation
(Title) on Behalf of the Commonwealth Edison Company (DP)

Reliability*First* Corporation

R.J. Palmieri 8/25/09
By Raymond J. Palmieri Date

ATTACHMENT B

List of Violations

NERC Violation ID	Registered Entity	Standard	Requirement	Penalty
RFC200700013	Commonwealth Edison Company (DP)	PRC-005-1	2	$0.00USD

Attachment c

Mitigation Plan

Mitigation Plan Submittal Form

Date this Mitigation Plan is being submitted January 16, 2008

If this Mitigation Plan has already been completed:

- Check this box ☐ and
- Provide the Date of Completion of the Mitigation Plan: December 10, 2008

Section A: Compliance Notices & Mitigation Plan Requirements

A.1 Notices and requirements applicable to Mitigation Plans and this Submittal Form are set forth in "Appendix A - Compliance Notices & Mitigation Plan Requirements" to this form. **Review the notices and check this box ☒ to indicate that you have reviewed and understand the information provided therein**. This Submittal Form and the Mitigation Plan submitted herein are incomplete and cannot be accepted unless the box is checked.

Section B: Registered Entity Information

B.1 Identify your organization:

Company Name: Commonwealth Edison ("ComEd")
Company Address: Two Lincoln Centre Oakbrook Terrace IL 60181
NERC Compliance Registry ID: COMEDDP

B.2 Identify the individual in your organization (Reference: Part I.(1) of Attachment A) who will be the Entity Contact to COMEDDP regarding this Mitigation Plan.

Name: John Kruse
Title: Senior Engineer
Email: John.Kruse@Exeloncorp.com
Phone: 630-437-2769

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

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C.2 Requirement(s) violated and violation dates:

NERC Violation ID # [if known]	Violation ID # [if known]	Requirement Violated (e.g. R3.2)	Violation Date(*)
PRC-005-1	RFC200700013	R.2.1	12/04/07

(*) Note: The Violation Date shall be: (i) 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 [RE acronym]. Questions regarding the date to use should be directed to the [RE acronym].

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

The ComEd relay maintenance program is a formally documented Performance Centered Maintenance process. A key component of the program involves the selection of preventive maintenance activities designed to minimize consequential failures. The program provides for the scheduling of relay maintenance tasks in accordance with set intervals defined within maintenance templates. While planning future work associated with protective relay maintenance tasks, a Work Planner discovered an error within the maintenance scheduling tool where some of the automatic relay maintenance work order triggers were incorrectly set to "inactive" within the system. Automatic notifications about scheduled work for these items were not generated, resulting in routine maintenance and testing not being performed within the ComEd Performance Centered Maintenance process intervals. The system was immediately reviewed to determine the extent of the issue. An initial investigation of 14,587 system maintenance tasks was conducted and it was determined that a total of eleven transmission relay work orders were not generated. All of the transmission maintenance tasks at issue had either a 4 year test interval or a 9 year test interval. The 11 exceptions to the process have been traced to a data migration issue from the former maintenance database to the current maintenance database.

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

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The initial investigation team has reviewed all of the outstanding items for any significant safety, reliability or security concerns and found none. Outage contingency studies, simulating a mis-operation of the affected equipment and adjacent equipment, have been performed to verify abnormal load flows and voltage conditions would not exist under the present system summer base case. The studies did not reveal any system problems for a peak load summer day. A review of historical relay maintenance test data did not reveal any past problems or issues to be concerned about. All calibration information, instrumentation input checks and functional checks were previously found normal.

Historical system fault operational performance data was also reviewed for relay response associated with the affected schemes. Faults associated with the affected equipment, as well as faults on adjacent equipment, were reviewed since the time that the relay maintenance was last completed. In all instances, faults on the affected equipment have cleared as expected and there have not been any associated mis-operations for faults on adjacent equipment. Finally, a review of the corrective maintenance history was conducted for the equipment covering the present period back to the date(s) last maintenance was performed and no relay scheme issues were identified.

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:

Completed Mitigation Plan Tasks: On discovery of the issue, the 11 relay maintenance packages were immediately scheduled for maintenance and as of January 5, 2008 all of the maintenance has been completed. The maintenance database was then thoroughly reviewed for additional instances of triggers set to inactive. The maintenance trigger issue in the database has been reviewed and resolved by Information Technology (IT). IT also reviewed the database to assure that it is working as designed and no issues were found. Though it was not determined to be the cause of the issue here, security was also improved by restricting access rights on certain database entry and modification functions. IT reviewed database audit table entries for previously known data changes to assure that IT is following database processes and procedures with regard to production controls that have been put in place and no issues were found.

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Remaining Mitigation Plan Tasks: To verify that the maintenance database has accurately captured equipment applicable to NERC relay system standards, a self-audit of relaying system equipment installed within the past 8 years will be completed per D.3 below.

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 remaining tasks are being completed as part of a three step process.

Step 1: Prepare a list of relaying equipment to be reviewed and assemble an audit team.

Step 2: Prepare a list of bulk electric system related maintenance packages currently in the maintenance database for in-service equipment identified in step 1.

Step 3: Compare the list of in-service equipment developed from engineering documentation and online data systems to the list of bulk electric system related maintenance packages developed in step 2.

This work is expected to be completed no later than December 10, 2008 per the milestone timeline included in 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* (shall not be more than 3 months apart)
Step 1 prepare audit criteria and assemble qualified audit team	Complete by April 2, 2008
Complete step 2 and 3 audit for 1/3rd of the identified sites and equipment	Complete by June 25, 2008
Complete step 2 and 3 audit for 1/3rd of the identified sites and equipment	Complete by September 17, 2008
Complete step 2 and 3 audit for the remaining identified sites and equipment	Complete by December 10, 2008

(*) 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.

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[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:

The initial investigation team has reviewed all of the outstanding items for any significant safety, reliability or security concerns and found none. Outage contingency studies, simulating a mis-operation of the affected equipment and adjacent equipment, have been performed to verify abnormal load flows and voltage conditions would not exist under the present system summer base case. The studies did not reveal any system problems for a peak load summer day. A review of historical relay maintenance test data did not reveal any past problems or issues to be concerned about. All calibration information, instrumentation input checks and functional checks were previously found normal.

The 11 known instances of relay maintenance packages identified to be in violation have been corrected. The remaining mitigation tasks are being completed to confirm the findings of the initial investigation and identify any additional unknown problems associated with this violation. Based on our established processes to analyze all relay operations, the likelihood of

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finding relay equipment that is not included in a current work package is judged to be low. Consequently, the Bulk Power System is not at a higher risk than normal during the performance of this continuing mitigation effort.

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:

All maintenance triggering data has been reviewed and inactive triggers identified and corrected so that going forward maintenance will be performed in accordance with our process. Please refer to D.1 above and E.3 below for additional information about corrective action that will prevent future issues. Additional data reviews are in the process of being performed to confirm that recently installed in-service relay and control equipment has a corresponding active maintenance package and trigger.

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:

Exelon IT now utilizes a process (IT-DO-360 dated 4/1/07) to validate the migration of data, such that end users verify data accuracy before data moves into production. ComEd has implemented additional access restrictions for systems that allow modification of the maintenance data and triggers.

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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 Reliability First for acceptance by RFC 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, Transmission and Substation of Commonwealth Edison.

2. I am qualified to sign this Mitigation Plan on behalf of Commonwealth Edison.

3. I have read and understand Commonwealth Edison's obligations to comply with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure, 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. Commonwealth Edison agrees to be bound by, and comply with, the Mitigation Plan, including the timetable completion date, as approved by RFC and approved by NERC.

Authorized Individual Signature _____ 1/15/08
(Electronic signatures are acceptable, *see* CMEP)

Name (Print): John Tyler Anthony
Title: Vice President, Transmission and Substation, Commonwealth Edison
Date: 1/14/08

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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.

Please direct any questions regarding completion of this form to:

[RE's assigned staff name and contact information]

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Attachment A – Compliance Notices & Mitigation Plan Requirements

I. Section 6.2 of the CMEP[1] 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.

II. This submittal form may be used to provide a required Mitigation Plan for review and approval by [Regional Entity acronym] and NERC.

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

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[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.

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IV. 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.

V. If the Mitigation Plan is approved by [Regional Entity acronym] 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.

VI. [Regional Entity acronym] or NERC may reject Mitigation Plans that they determine to be incomplete or inadequate.

VII. Remedial action directives also may be issued as necessary to ensure reliability of the bulk power system.

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March 28, 2008

Subject: RFC Mitigation Plan Milestone Activity Update for NERC Violation ID# RFC200700013

To: compliance@rfirst.org

RFC Compliance Staff,

Below please find a milestone activity update for the referenced NERC Violation.

- NERC Violation ID# RFC200700013
- NERC Registry ID# NRC08013
- Commonwealth Edison Company (ComEd) Mitigation Plan submitted to RFC on January 15, 2008.
    - Section D.1 of the Mitigation Plan identifies the immediate corrective actions that were completed on January 5, 2008.
    - In accordance with the accepted Mitigation Plan, section D.2-Timeline and section D.3 - Milestones, ComEd is performing a self-audit to verify that its maintenance database has accurately captured equipment applicable to NERC Relaying System maintenance standards within the past eight (8) years.
    - Step 1 of D.3-Milestones, with a 4/2/2008 completion date was finished on 3/26/2008. A list of relaying projects to be reviewed was created and an audit team was assembled to complete steps 2 & 3 of the mitigation plan.

Mitigation Plan Timeline and Milestones D.3 - Step 1 Detail

The audit criteria have been established and include a review of Transmission Project Diagrams dating back to the year 2000. This period of time coincides with the start of an infrastructure reinforcement program that resulted in a significant increase in protective relaying systems. A qualified audit team has been assembled. An Engineering firm, [redacted], has been contracted to perform a review of applicable Project Diagrams and identify new relaying systems that have been commissioned during the completion of the projects. ComEd will use the results from [redacted] and determine if the equipment is in service and has active maintenance programs defined by our maintenance database.

Please feel free to contact me directly if you need any additional information.

John Kruse
Commonwealth Edison
john.kruse@exeloncorp.com
630-437-2769

For Public Release - September 17, 2009

June 25, 2008

Subject: RFC Mitigation Plan Milestone Activity Update for NERC Violation ID# RFC200700013

To: compliance@rfirst.org

RFC Compliance Staff,

Below please find a milestone activity update for the referenced NERC Violation.

- NERC Violation ID# RFC200700013
- NERC Registry ID# NRC08013
- Commonwealth Edison Company (ComEd) Mitigation Plan submitted to RFC on January 15, 2008.
    - Section D.1 of the Mitigation Plan identifies the immediate corrective actions that were completed on January 5, 2008.
    - In accordance with the accepted Mitigation Plan, section D.2-Timeline and section D.3 - Milestones, ComEd is performing a self-audit to verify that its maintenance database has accurately captured equipment applicable to NERC Relaying System maintenance standards within the past eight (8) years.
    - The first Milestone of D.3 was complete March 26, 2008, where a list of relaying projects to be reviewed was created and an audit team assembled.
    - The second Milestone of D.3 to complete 1/3 of steps 2 & 3 of section D.2 of the mitigation plan has been achieved.

Mitigation Plan Milestone D.3 - Steps 2 & 3 Detail

.
An engineering firm, [redacted] was contracted to perform a review of BES planning Project Diagrams that were generated from 2000 to 2008. [redacted] has identified and provided a list of the resulting protective relaying systems that would have been required as a result of the ComEd BES project completion over the past 8 years. An internal ComEd audit team is reviewing the list provided by [redacted] to determine if the relay systems are currently in service and if they have active maintenance programs defined by our maintenance-tracking database. As of June 20, 2008, 35% of the list (versus a milestone target of 33%) has been reviewed by the audit team.

Please feel free to contact me directly if you need any additional information.

John Kruse
Commonwealth Edison
john.kruse@exeloncorp.com
630-437-2769

ComEd
An Exelon Company

September 17, 2008

To: compliance@rfirst.org

RFC Compliance Staff,

Below please find a milestone activity update for the referenced NERC Violation.

- NERC Violation ID# RFC200700013
- NERC Registry ID# NRC08013
- Commonwealth Edison Company (ComEd) Mitigation Plan submitted to RFC on January 15, 2008.
    - Section D.1 of the Mitigation Plan identifies the immediate corrective actions that were completed on January 5, 2008.
    - In accordance with the accepted Mitigation Plan, section D.2-Timeline and section D.3 - Milestones, ComEd is performing a self-audit to verify that its maintenance database has accurately captured new equipment, applicable to the NERC BES Protective System relay maintenance standards over the past eight (9) years.
    - Section D.3 - Milestones, with a 67% data review completion requirement and a 9/17/2008 status date is now complete.

Mitigation Plan Timeline and Milestones D.3 - Detail

The review of ComEd transmission Project Diagrams dating back to the year 2000 using ComEd established audit criteria to identify new Protective Systems was completed as reported in the 2nd Quarter Update. This 9-year period of time coincides with the start of an infrastructure reinforcement program that resulted in a significant increase in protective relaying systems. ComEd is presently utilizing the data obtained from the Project Diagram review to determine if the equipment has been placed in-service and an active maintenance task is defined in our maintenance database. Using dedicated personnel, the 67% target completion level to be complete by September 17, 2008 has been achieved and the Mitigation Plan is on track to be complete by the December 10th, 2008 target date.

As part of the Mitigation Plan to evaluate maintenance tasks in our database, it was identified on August 29, 2008 that two in-service BES Protective System relay packages were not defined in our database. The two maintenance packages not defined were 138kV bus protection routines installed at [redacted] in 2002. A search of field records failed to produce any record that maintenance testing had been performed on these two packages since initial installation. A request to perform relay maintenance on these two packages was initiated. The relay maintenance for these two packages is currently scheduled to be complete on Friday, September 19, 2008.

A review of the original relay test data did not reveal any problems or issues that warranted concern. Historical system fault data was also reviewed for relay response with the affected schemes. There have not been any faults on the affected equipment. All adjacent equipment fault events were reviewed since installation, and in all instances, faults on the adjacent equipment have cleared as expected. A high level analysis was performed based on historical, normal, and post contingency loading patterns; no risk was identified to the Bulk Power System.

Please feel free to contact me directly if you need any additional information.

John Kruse
Commonwealth Edison
john.kruse@exeloncorp.com
630-437-2769

NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Attachment d

Registered Entity's Certification of Completion

ComEd
An Exelon Company

December 10, 2008

To: compliance@rfirst.org

RFC Compliance Staff,

Below please find a milestone activity update for the referenced NERC Violation.

- NERC Violation ID# RFC200700013
- NERC Registry ID# NRC08013
- Commonwealth Edison Company (ComEd) Mitigation Plan submitted to RFC on January 15, 2008.
    - Section D.1 of the Mitigation Plan identifies the immediate corrective actions that were completed on January 5, 2008.
    - On the 9/17/2008 Milestone update it was reported that two BES Protective System relay maintenance packages installed in 2002 were not defined in our database. Maintenance for these work packages was complete on September 19, 2008.
    - In accordance with the accepted Mitigation Plan, section D.2-Timeline and section D.3 - Milestones, ComEd has performed a self-audit to verify that its maintenance database has accurately captured new equipment, applicable to the NERC BES Protective System relay maintenance standards over the past nine (9) years. This data review requirement is complete as required per the status reporting date of 12/10/2008.

Mitigation Plan Timeline and Milestones - Detail

The review of ComEd transmission Project Diagrams dating back to the year 2000, using ComEd established audit criteria, to identify new Protective Systems was completed as reported in the 2nd Quarter Update. This 9-year period of time coincides with the start of an infrastructure reinforcement program that resulted in a significant increase in protective relaying systems. In the 3rd & 4th quarters ComEd has utilized the data obtained from the Project Diagram reviews to determine if the equipment has been placed in-service and an active relay maintenance task is defined in our maintenance database. The completion of this review has been achieved by the December 10th, 2008 target date.

The review of ComEd Transmission Planning Project Diagrams for planned system additions from 2000 to 2008 resulted in identifying 1007 protective relay system maintenance packages (using the current RFC BES definition) that could potentially have been added to the transmission system if the projects were completed as planned. Of this total number, 973 were found to be installed and in-service, based on actual project completion. As reported in the 3rd quarter update, two of the maintenance packages were found not entered in our maintenance database and past the maximum interval date. These were added to our database, scheduled, risk to the system analyzed and maintenance completed within three weeks.

In response to our findings, a new centralized process has been developed to enter the relay maintenance work packages into our database by our Relay & Control Engineering work group as project design documents are completed. This measure will ensure that Preventative Maintenance for new or updated Bulk Electric System protective relay protection packages will be entered into the maintenance tracking tool pursuant to existing project completion documentation.

Please feel free to contact me directly if you need any additional information.

John Kruse
Commonwealth Edison
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630-437-2769

For Public Release - September 17, 2009

Attachment e

Regional Entity's Verification of Completion

September 3, 2008

Summary and Review of Evidence of Mitigation Plan Completion

NERC Violation ID #:	**RFC200700013**
NERC Plan ID:	**MIT-07-0385**
Registered Entity;	**Commonwealth Edison Company (DP)**
NERC Registry ID:	**NCR08013**
Standard:	**PRC-005-1**
Requirement:	**2.1**
Status:	**Ongoing**

Review Process:

Commonwealth Edison Company (ComEd) has certified that Step 1 of this Mitigation Plan has been completed and substantial progress has been made in achieving the last two steps of the Mitigation Plan. Reliability*First* requested and received evidence of the status of the steps taken to bring ComEd into compliance as specified in the Mitigation Plan. Reliability*First* performed an audit-like review to verify that the milestone actions specified in the Mitigation Plan were successfully completed.

Evidence Provided:

A number of relay sets on the ComEd system had not been calibrated and maintained within the four year interval defined by PJM. Work order triggers within the maintenance scheduling tool were incorrectly set to inactive and as a result automatic notifications about scheduled work were not generated. The maintenance trigger issue in the database has been reviewed and resolved. Information Technology reviewed the revised database to assure that it is working properly and ComEd has submitted a memo from a Lead Analyst within the Passport Support (Work Management database) group indicating that it would be difficult for the situation to reoccur with the current database structure.

ComEd also submitted the detailed calibration data sheets for each of the relays affected indicating the maintenance and testing has been completed. In addition, screenshots from the Passport database for each of the relays in question have been submitted. These screen shots show details for each of the relays, including but not limited to work order status with relevant dates, active/inactive status, etc.

ComEd submitted to Reliability*First* a Mitigation Plan Milestone Activity Update for NERC Violation ID#RFC200700013 on March 28, 2008 in which it detailed the audit criteria and immediate corrective steps to ensure compliance with PRC-005-1 R. 2.1.

ComEd submitted to Reliability*First* a Mitigation Plan Milestone Activity Update for NERC Violation ID#RFC200700013 on June 25, 2008 in which it described the engineering firm contracted to perform a review of BES planning Project Diagrams generated from 2000-2008.

ComEd submitted to Reliability*First* a Mitigation Plan Milestone Activity Update for NERC Violation ID#RFC200700013 on September 17, 2008 a document indicating that, "Section D.3 - Milestones, with a 67% data review completion requirement and a 9/17/2008 status date is now complete…" and that "the 67% target completion level to be complete by September 17, 2008 has been achieved and the Mitigation Plan is on track to be complete by the December 10th, 2008 target date."

Review Results:

The Reliability*First* Compliance Staff has reviewed the evidence discussed above that was provided by Commonwealth Edison Company and has determined, in their professional judgment, that the Commonwealth Edison Company has submitted sufficient evidence to conclude that the Commonwealth Edison Company has completed the initial steps specified in Section D.1 of the Mitigation Plan that was approved by Reliability*First* and NERC.

As specified in Section D.2 of the Mitigation Plan Commonwealth Edison Company is continuing its effort to perform a self-audit to verify that its maintenance database has accurately captured equipment applicable to relaying system maintenance standards within the past eight years. This period of time coincides with the start of an infrastructure reinforcement program that resulted in a significant increase in protective relaying systems.

Commonwealth Edison has provided a Mitigation Plan Milestone update in an email from John Kruse dated June 25, 2008. Commonwealth Edison certified that the first milestone of Section D.3 was completed on March 26, 2008, where a list of projects to be reviewed was created, and an audit team was assembled. Commonwealth Edison also certifies that the second milestone of Section D.2 to complete 2/3 of steps 2 and 3 of Section D.2 of the mitigation plan has been achieved.

Commonwealth Edison is on target to complete this effort by December 10, 2008 as specified in the Mitigation Plan.

Respectfully Submitted,

Robert K. Wargo
Manager of Compliance Enforcement
Reliability*First* Corporation

February 23, 2009

NERC Violation ID#:	**RFC200700013**
NERC Plan ID:	**MIT-07-0385**
Registered Entity:	**Commonwealth Edison Company (DP)**
NERC Registry ID:	**NRC08013**
Standard:	**PRC-005-1**
Requirement:	**2.1**
Status:	**Compliant**

Verification of Completion of December 10, 2008 Milestone Activity for MIT-07-0385

Commonwealth Edison Company (ComEd) has certified completion and Reliability*First* has verified completion of the final milestone activity of the ComEd Mitigation Plan (MIT-07-0385). The final milestone activity states that ComEd shall "Complete step 2 and 3 audit for the remaining identified sites and equipment" by December 10, 2008. Reliability*First* requested and received evidence of the steps taken to bring ComEd into compliance as specified in the Mitigation Plan. Reliability*First* performed an audit-like review to verify that the final milestone specified in the Mitigation Plan was completed.

In accordance with the accepted Mitigation plan, Section D.2 -Timeline and section D.3 – Milestones, ComEd performed a self-audit to verify that its maintenance database has accurately captured new equipment applicable to the NERC BES Protective System relay maintenance standards over the past nine years.

The review of ComEd transmission Project Diagrams dating back to the year 2000, using ComEd established audit criteria, to identify new Protective Systems was completed. This 9-year period of time coincides with the start of an infrastructure reinforcement program that resulted in a significant increase in protective relaying systems. ComEd has utilized the data obtained from the Project Diagram reviews to determine if the equipment has been placed in-service and an active relay maintenance task is defined in the maintenance database. The completion of this review has been achieved by the December 10, 2008 target date.

The review of ComEd Transmission Planning Project Diagrams for planned system additions from 2000 to 2008 resulted in identifying 1007 protective relay system maintenance packages (using the current BES definition) that could potentially have been added to the transmission system if the projects were completed as planned. Of this total number, 973 were found to be installed and in-service, based on actual project completion. As reported in the September 17, 2008 Milestone Update from ComEd, two of the maintenance packages were found not entered in the maintenance database and past the maximum interval date. These were added to the database, scheduled, risk to the system analyzed and maintenance completed within three weeks.

Evidence Provided:

Reliability*First* verified completion of the self-audit and review by requesting and receiving documentation of the maintenance database tracking tool in spreadsheet form. The documentation submitted by ComEd to Reliability*First* shows the Project Number, Division, Voltage, Equipment Identifier Number, the type of equipment, Review Date, whether or not it is included in the testing and maintenance scheduling database (Passport) and if the equipment is classified as active. Of the possible 1007 protective relay system maintenance packages, it was found that two of the maintenance packages were not entered in the maintenance database and were past the maximum interval date. The two maintenance packages in question are identified as Item Number 90 (PD # 0P010045), New Relay Communication Packages 20 and 21 (columns FT to GJ on the spreadsheet) and are highlighted in blue. The two maintenance packages were reported to Reliability*First* as discussed in the next paragraph.

Reliability*First* requested evidence from ComEd to verify that the two maintenance packages that were not entered in the maintenance database were in fact added to the database, scheduled, risk to the system analyzed and maintenance completed. ComEd submitted screenprints of the two BES Protective System relay maintenance packages that were added to the maintenance and tracking database on September 19, 2008. The screenprints, from ComEd's Passport database, are entitled "TSS955 Blue Bus Relay Test" and "TSS955 Red Bus Relay Test". These are bus differential relays at ComEd's TS955 switching station and the screenprints show the work order task number, the name of the relay technicians that performed the testing and maintenance, and the actual finish date of September 19, 2008. Each report indicates that no problems were found.

Review Results:

The Reliability*First* Compliance Staff has reviewed the evidence discussed above that was provided by ComEd and has determined that ComEd has submitted sufficient evidence to prove that ComEd has successfully completed all actions specified in the Mitigation Plan MIT-07-0385 for NERC Violation ID Number RFC200700013.

Respectfully Submitted,
Robert K. Wargo /s/
Robert K. Wargo
Manager of Compliance Enforcement
Reliability*First* Corporation