



**MEETING MINUTES
MIDWEST RELIABILITY ORGANIZATION**

Protective Relay Subcommittee

Radisson Hotel – Duluth, MN

August 26, 2008 – 1:00pm – 5:00pm

August 27, 2008 – 8:00am – 12:00pm

1. Call to Order

Protective Relay Subcommittee (PRS) Chair Bhan called the joint PRS/TAS (Transmission Assessment Subcommittee) meeting to order at 1:00pm. Subsequently, he requested that TAS Chair Zhu would operate as chairman of the joint session. TAS Chair Zhu consented to the arrangement.

2. Welcome

TAS Chair Zhu welcomed all those in attendance:

PRS Members Present

Deven Bhan, Chair, WAPA

Keith Orsted, ATC

Mark Peterson, GRE

Terry Hopkins, DPC

Len Yee, SPC

Richard Quest, XEL (PAC Liaison)

Steve Wadas, NPPD

Don Raveling, MDU, Vice Chair

David Bisel, MP

Ken Birt, MEC

Ron McIvor, OPPD

Dede Subakti, (MISO Liaison)

Ding Lin, MH

PRS Members Absent

Steve Mittelsteadt, BEPC (RTC Liaison) Russ Miller, ALT

TAS Members Present (Joint Meeting Only)

Dave Diakiw, MH

Dan Belk, WAPA

Jason Weiers, OTP

Jeff Hart, MEC (phone)

Dave Kempf, GRE

Dale Catherall, ITC (phone)

Wenchun Zhu, ATCLLC, Chair

Salva Andiappan, MRO

Terry Torgerson, DPC, Vice-Chair

Zhixin Miao, MISO Liaison

Peter Schommer, MP

Andrew Lucero, MRO (8-27 only)

TAS Members Absent

Wayne Guttormson, SPC

Guests

Tom Weedman, NERC (second day)

Staff Present

Dan Jesberg, MRO, Secretary

John Seidel, MRO, Alt. Secretary

Salva Andiappan, MRO (Joint Meeting Only)

3. Standards of Conduct and Anti-Trust Guidelines

Pursuant to Policy and Procedure 4, Mr. Jesberg reviewed the Standards of Conduct and Anti-Trust Guidelines.

4. MRO Guideline for NERC PRC-014

a. Finalize and Approve MRO Guideline for PRC-014

The PRS and TAS discussed the most recent version of the MRO Procedure for PRC-014, "Special Protection System Assessment" dated 6-12-08. There was a lengthy discussion on this document. Section 1.2.4 states that if an SPS has operated within the past five years, the review team shall "...review and evaluate the effectiveness of the SPS performance." The group was not clear on what "effectiveness" means. The group discussed whether the process for PRC-012 should be modified such that the effectiveness of each SPS operation could be reported in the quarterly report for SPS operations/mis-ops. They also discussed removing section 1.2.4 since NERC does not require normal SPS operations to be reviewed for effectiveness.

After much discussion, the group decided to cut some of the language from the existing PRC-014 procedure and insert it into the PRC-012 procedure for SPS review.

Action Item:

Brian Brownlow agreed to modify the PRC-014 procedure to reflect the changes discussed. Dede Subakti agreed to modify and update the PRC-012 procedure to include the 5 year review of SPSs. These drafts are to be completed and made available for comment to PRS and TAS members before the next joint meeting is held.

b. Complete Regional SPS Review Schedule

This item was tabled until further progress has been made on PRC-014.

c. Complete RFC SPS Review Coordination Plan

This item was tabled until further progress has been made on PRC-014.

The PRS/TAS joint session recessed at 5:00pm on August 26th, 2008. The PRS reconvened independently at 8:00am on August 27th, 2008.

5. Consent Agenda

Chair Bhan reviewed the meeting agenda and solicited the subcommittee for comments, additions, or changes.

a. Approve Minutes of May 22 & 23, 2008 Meeting

Mr. Jesberg called for discussion on the meeting minutes of the July 15th, 2008 meeting.

Upon motion duly made by Mr. Raveling and seconded by Mr. McIvor, the Protective Relay Subcommittee unanimously approved the minutes of the May 22 & 23, 2008 Protective Relay Subcommittee meeting as amended.

Action Item:

Dan Jesberg to forward the email notice sent by MRO staff to RFC, WE Energies and ATCLLC regarding the PRS approval of MRO/RFC coordination of ATCLLC misoperations reporting.

6. Chairman's Report

Chair Bhan discussed NERC reliability standards that are being worked on by the NERC SPCTF. Protection system redundancy practices utilized in the MRO region were discussed. Chair Bhan noted that a relay reliability white paper is being finalized by the SPCTF and it will then likely move on to a Standard Drafting Team.

It was noted by Chair Bhan that the *"Technical Reference Paper on Thermal Overload vis a vis Effect on CTs, Relays, Meters RTU Scales"* white paper had received little attention during 2008. The subcommittee agreed that work should continue and Chair Bhan called on members for a volunteer to come forward and take over the project.

7. MRO September 18th Event Analysis Update

Mr. Quest updated the subcommittee and the recent activities of the MRO September 18th Event Analysis Team as well as the preliminary conclusions they had drawn.

a. Suggested Locations for Digital Fault Recorders

Tom Wiedman, NERC consultant, joined the meeting via conference call at 9:00 am. Tom Wiedman has been evaluating the relay performance as it played out during the Sept 18, 2007 MRO system disturbance. Mr. Wiedman has reviewed the MRO procedure for PRC-002, Disturbance Monitoring Equipment, and proposed some additional locations for DFRs. Key locations include: Byron, Tioga, Boundary Dam, Kenora/White Shell. Some of these locations may meet the criteria in the PRC-002 procedure and can be phased in over the next four years per PRC-018. Some of the sites already have some recording equipment, but it may be aged or inadequate. The PRS was receptive to considering these and any other locations identified in the Sept 18, 2007 final report recommendations. The PRS agreed that they should discuss further how best to track/coordinate future disturbance monitoring equipment installations per the new PRC-002 procedure.

8. Update on NERC Relay Maintenance Standard

Mark Peterson gave an update on the Reliability Based Relaying standard that is being worked on at NERC. Currently the group is working to the definition of terms related to the standard. Work is expected to be complete by the end of the year. The PRS engaged in a brief discussion on this topic.

9. Relay Mis-Operations

a. 2008 Mis-operations Review

The Mis-Operations Review Team stated that about 30% of the 94 mis-operations reported so far in 2008 do not have corrective actions identified. Furthermore, a significant number of reports do not fall under the category of a relay mis-operation as defined in the MRO procedure for NERC PRC-003.

Several reports were too vague in description for the review team to analyze. This is due to the reporter's use of internal nomenclature, jargon, and numbering scheme that would not be familiar to an external reviewer.

The Mis-Operations Review Team requested that MRO staff perform a preliminary filtering of the quarterly submissions to remove reports which obviously do not fall under the category of an MRO defined mis-operation.

b. NERC Misoperations Review Update

Mr. Jesberg reported that NERC had requested the MRO's misoperations data for 2007 and 2008. This collection was for the purpose of populating NERC's misoperations database as well as to begin the initial groundwork for future studies. Of special interest to both NERC and the MRO is the question of how the data should be used in tracking commonly recurring events.

Action Item:

The company representatives on the PRS agreed to go back to their departments and request the corrective actions.

Action Item:

Mr. Jesberg will modify the mis-operations data request letter so as to instruct data representatives to report only on those mis-operations/events in which PRC-003 requests. Furthermore, the request letter shall also instruct data representatives to be appropriately descriptive and to use global terminology and naming conventions when filling out the spreadsheet.

10. Technical Reference Paper on Recommended Auto-Reclosing

The group discussed the draft reclosing document that Len Yee has prepared. Len Yee tracked changes to the doc as it was reviewed.

The group discussed reclosing as it occurred on Sept 18, 2007 during the system disturbance. Tom complimented the MRO members on how successful reclosing was on Sept 18, 2007. The island was reconnected via auto-reclosing with syncho-check in about 9 minutes, which was remarkably fast when compared with other islanding events. Tom stated he would like to learn more about the angles and times used for syncho-check within the MRO region to better understand why reconnection was so successful.

Per the request of PRS members, Mr. Weedman provided some comments and suggestions on the auto-reclosing draft paper.

Action Item:

Mr. Lee will compile comments and suggests discussed during the meeting and use them to revise the white paper. This revision must be completed in time for discussion during the next PRS face-to-face meeting.

11. NERC PRC-023: Beyond Zone 3 Mitigation Plan Update

Don Raveling handed out the BZ3 summary sheet. The BZ3 efforts thus far have been voluntary. PRC-023, once final approval is obtained, will be used in the future.

Mr. Petersen was requested to find out from Mr. Charles Rogers of the SPCTF as to whether or not Z3 and BZ3 reporting to NERC need be continued now that PRC-023 is a NERC approved standard.

12. MRO-UFLS Standard Drafting Team-possible collaboration with PRS

Dave Bisel stated that the MRO Standards Drafting Team is being formed to develop a regional standard for UFLS. The MRO study completed in March 2007 by the UFLS TF will be the guiding document for this drafting team.

13. Other Business

No other business

14. Next Meetings

a. Scheduled

November 13-14 12:00pm – 5:00pm 8:00am – 12:00pm

b. Additional Meetings (if needed)

MRO staff will coordinate between the PRS and the TAS to setup a joint conference call to continue discussion of PRC-014 and PRC-012. This meeting shall take place in late September.

15. Adjourn

Having no further business, Chair Bhan adjourned the meeting at 11:50am.

Prepared by:

John Seidel, Alternate Secretary,
Midwest Reliability Organization

Reviewed and Submitted by:

Dan Jesberg, Secretary, Midwest Reliability Organization