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## References

1. CROP.27002 Telemetry and Topology Problems
2. M/LCC 15 - System Operating Limits Methodology
3. M/LCC 1 – Attachment C Millstone Nuclear Power Station
4. M/LCC 1 – Attachment D Seabrook Nuclear Power Station
5. OP 19 - Transmission Operations
6. OP 19 - Appendix J - Contingency List and Criteria/Limits

## Procedure Background

In this procedure “Guide” is an all-inclusive term for: TOG Stability, TOG Text, TOG RAS/ACS, and TOG temporary.

The word Unit is inclusive to all dynamic reactive equipment found under the UNIT display in EMS applications Powerflow, STCA, RTNET, RTCA, and CAJR.

Control Room Operators, NERC certified at the RC level, determine valid contingencies after analysis of the RTCA output.

NOTE: When ESTIMATES executes the following are triggered to run: ISORRM, OP12B, and MLCC15H N-0

For a manual initiation of the Network Sequence (Run Sequence is clicked) the following items will run:

- RTNET (ESTIMATES and LOSSES), ILC, EMSOUT/UDSWRITE function, RTCA, EMSOUT/AOL function (if pre-line switching active: STCA will run), CLOGGER and CAJR.


For an automatic execution of the Network Sequence the following occurs:

- For all sequence executions the following items run: RTNET (ESTIMATES and LOSSES), ILC, and EMSOUT/UDSWRITE function.
- For every second execution the following items run after the items that run each time have completed: RTCA, EMSOUT/AOL (if pre-line switching active: STCA will run), CLOGGER and CAJR.

RSYNCR is **NOT** a part of the Network Sequence (Run Sequence) process. It runs every 4 seconds.

- RSYNCR SE FILES time/date stamp indicates that the process has updated the associated files after RTNET has completed running.
- RSYNCR CLOGGER time/date stamp indicates that the process has updated the associated files after CLOGGER has completed running.

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Reclosing badge

A flow bandwidth is required when reclosing either 390/3016, 3001, or 396 lines. RTCA monitors this bandwidth through the use of non-field SPS's that measure the flow between NB and NE. Special Process Contingency badges in RTCA provide an indication if reclosing is allowed. If reclosing is or isn't allowed, the applicable CTGY ID will be displayed in the "Special Processed contingencies that triggered an SPS" column of the "Contingency Branch Violations" RTCA EMS display with an indication of (RECL) to the right, accompanied by a "Reclosure allowed" or "Reclosure not allowed" message on the display.

STCA

STCA has a Solution Control panel that allows the user to select different modes of operation. The modes of operation are as follows:


- Default mode - Unit MVAR, Shunt Switching and Xfmr Tapping: Has the same settings as RTCA. It will allow STCA to use Units on AVR, Shunt Devices on AVR and Xfmrs on AVR in the contingency solution. Used for all studies, except for ones involved with CAJR.
- Enable Unit MVAR Control: has the same setting as CAJR. It will allow STCA to only use Units on AVR in the contingency solution. Used for studies associated with CAJR.
- Enable Unit MVAR and Shunt Switching. It will allow STCA to use Units on AVR and Shunt Devices on AVR in the contingency solution. No defined use requirement at this time.
- Enable Unit MVAR and Xfmr Tapping. It will allow STCA to use Units on AVR and Xfmrs on AVR in the contingency solution. No defined use requirement at this time.
- Enable Unit MVAR, Phase shifter changing (Maintain MW sched). It will allow STCA to use Units on AVR and Phase shifters on AWR in the contingency solution. Represents CAJR post contingent flows with Phase shifter brought back to schedule.
- Apply All. It will allow STCA to use Units on AVR, Shunt Devices on AVR2I52 Tc 0.07.1 (IP7a)1EMC /L.2 95Unn AADeVR

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## Procedure

### Condition(s) to perform this section:

- RTCA, CAJR or STCA indicates a contingency and corrective actions need to be determined; Or
- An RTCA or CAJR unsolved contingency needs to be studied; Or
- An LCC Operator notifies the ISO of a potential issue.

### Section 1 : Studying a contingency

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**Step 1.1** Primary Responsibility: Security Operator  
**Verify the Pre CTG Value is consistent with the RTNET and SCADA value.**

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**Step 1.1.1** Primary Responsibility: Security Operator

#### Condition(s) to perform this step:

- The RTCA or CAJR Pre CTG Value is NOT consistent with RTNET.

**Determine what is causing the issue and correct it using CROP.27002 Telemetry and Topology Problems.**

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**Step 1.2** Primary Responsibility: Security Operator

#### Condition(s) to perform this step:

- For 115 kV lines with more than 3 terminals; Or
- Indication a node (ND) is exceeded.

**Identify the contingency definition of the contingency to be studied.**

#### Instructions

Access the Contingency Definition display and locate the contingency definition by:

Opening the "Analyst Displays" or "Related Displays" menu then

Hovering over "Contingency Analysis Displays"

Clicking on Contingency Definition; and

Typing "find ctg=XXXX" or "find ctg=XXX" in the command line, where XXXX and XXX is the contingency ID; Or

Using





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## Step 1.5.2

Primary Responsibility: Security-2.3 (3.6 82.34T2 1 Tf03 (i.e-2.5pe /Header /d0 >>BDC Qq85.8







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**Condition(s) to perform this section:**

- RTCA indicates post contingent exceedance of a cable pair limit.

## Section 3 : Indication of a special processed cable contingency

**Step 3.1** Primary Responsibility: Security Operator

### Identify the cable contingency and applicable limits.

**Instructions**

The single cable limit with no oil circulation rating can be found by:

- Access the "In use Cable Pair ratings" display in ILC
- Locate the applicable cable / cable section
- Determine the limit(s)

**OR**

- Access the NX-9 database
- Find the applicable cable / cable section

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**Step 4.7** Primary Responsibility: Security Operator

**Condition(s) to perform this step:**

- The unsolved contingency is solving in ISONE Contingency Analysis tool; And
- Affected LCC and RC/BA (if applicable) were performing Real Time Assessments for the contingency.

**Notify the affected LCC and RC/BA (if applicable) that the contingency is now solving in ISONE Contingency Analysis.**

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### Step 5.6

Primary Responsibility: Security Operator

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**Condition(s) to perform this section:**

- A contingency definition needs to be activated for evaluation in STCA; Or
- A contingency no longer needs to be evaluated in STCA and needs to be deactivated.

**Section 6 : Activate or Deactivate a Contingency Definition in STCA**

**Notes**

If a new STCA CTGS savecase is retrieved this will overwrite any changes made to the current STCA clone until Power System Modeling creates an updated CTGS savecase.

**Step 6.1** Primary Responsibility: Any Control Room Operator

**Access the STCA Contingency Activation Control display.**

**Instructions**

Access the Contingency Activation Control display by:

Clicking the "CTG ACT" button.

**OR**

Opening the Analyst Displays menu, hovering over Contingency Analyst Display then clicking on Contingency Activation Control.

**OR**

Opening the Related Displays menu, hovering over Contingency Analyst Display then clicking on Contingency Activation Control.

**Step 6.2** Primary Responsibility: Any Control Room Operator

**Locate and modify the status of the contingency definition.**

**Instructions**

To locate a contingency using the command line, type "find ctg=XXXX" or "find ctg=XXX" where XXXX and



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