

# Events Analysis Regional Insights or NERC Lessons Learned Review

Prepared by Task Force/Working Group \_\_\_\_\_ TFSP \_\_\_\_\_

Date: March 25, 2015

<p>Regional Insights(Regional LLs) or NERC Lessons Learned reviewed : NERC LL20150201: Digital inputs to protection systems</p>	<p>Description: A converter station was lost due to the erroneous initiation of a top-oil temperature trip signal from a transformer protection system. It was identified that transient signals were mistaken as a full-contact closure due to arcing or high resistive bridging of the trip contact. This was a case of the protection digital inputs being too sensitive to transient signals, signal noise, or high-resistance contact bridging from outdoor mounted devices.</p>
<p>Describe Area of Concern Addressed:</p>	<p>False assertion of digital relay input attributed to a transient.</p>
<p>TF/ WG Action Taken( if any): No Action required-</p>	<p>Action Taken – TFSP added a guide, Section 2.4.3.1, in Appendix A of draft Directory 4 making members aware of this issue.</p>
<p>Identify Similar Experience ( if applicable):</p>	<p>This is a common industry issue.</p>
<p>State Any Supplemental Insights( i.e. any additional lessons that were learned from other experiences or those that can be seen within the existing LL but were missed.)</p>	<p>This lesson learned identified only one of many possible solutions, some of which may be better suited to a particular installation or application.</p>

<p>As a result of this review, has a Reliability Gap been Identified in a NERC Standard or an NPCC Criterion or Guideline?</p>	<p>Yes, as mentioned above under TF Action Taken section.</p>
<p>Where additional specificity can be added to existing NPCC Criteria, Guidelines or procedures, cite reference and propose addition or change :</p>	<p>As indicated above in the TF Action Taken.</p>