Enclosure 3

Modification to the MSPI Calculations in the Consolidated Data Entry System – G. Masters, INPO

Proposal

1. Change the algorithm for rounding that is applied to the calculation of the final MSPI value.
   Currently: The URI and UAI values are rounded to two significant digits, and then the rounded values are added to produce an MSPI value that is rounded to two significant digits. A value of 0 is assumed for all significant digits past two in the addition of URI and UAI.
   Desired: The URI and UAI will be added prior to rounding to product an unrounded MSPI number. The displayed (and submitted) values for all three will then be rounded to two significant digits.
   Most Probable Consequences: The number of instances where the displayed UAI and the displayed URI do not appear to add up to the displayed MSPI value will increase. An explanation note will be added to explain the apparent contradiction to the mathematically unsophisticated. The overall number of nongreen indicators is very unlikely to change as a result of this calculation change.

2. The NRC submittal files will be modified to include an MSPI value.
   Currently: the MS06-MS10 rows of the NRC submittal file contain the rounded UAI, URI, and PLE values along with system generated and user supplied comments.
   Desired: : the MS06-MS10 rows of the NRC submittal file contain the rounded MSPI, UAI, URI, and PLE values along with system generated and user supplied comments.
   Most Probable Consequences: There is one set of code that does the MSPI calculation and produces the rows for the NRC submittal file. Implementation of this modification will result in a change file for all units and all quarters since MSPI inception. Policy needs to be established on how to deal with these change files prior to the implementation. They can be created and discarded, submitted, or conditionally submitted. This means, prior to the swap over, all units must have cleared all change files that exist for any reason other than the MSPI conversion. This need constrains the timing for the conversion to the middle of a quarter.

3. The risk cap will be applied in the green performance band as well as the white.
   Currently: The equation for applying the risk cap in CDE is
   URI = If (1.00E-06 < ($URI_{calculated}$ + UAI) <= 1.00E-05) Then $URI_{limited}$ Otherwise $URI_{calculated}$ = **-4.7E-07** the fact that the risk cap is "turned" on as one approaches the white performance band from below means that the final MSPI value can actually go down with an increasing number of failures or unavailable hours, making MSPI an indicator that is not trendable in a meaningful way.
   Desired: : : The equation for applying the risk cap in CDE is
   URI = If (($URI_{calculated}$ + UAI) <= 1.00E-05) Then $URI_{limited}$ Otherwise $URI_{calculated}$ = **-4.7E-07** the fact that the risk cap is "turned" only as one exceeds the white performance band means that the final MSPI value can never go down with an increasing number of failures or unavailable hours, making MSPI an indicator that is trendable in a meaningful way.
   Most Probable Consequences: MSPI becomes useful as a trend indicator

4. The CDE Margins Report and What-if calculations will be modified to use the new algorithm. Otherwise, units will have no means of predicting the impact of scheduled train outages or PRA updates on their MSPI status.