Attachment 9

PROPOSED PI IMPROVEMENTS

1 Unplanned Scrams per 7,000 critical hours

Background:
One concern during the development of this PI was that a plant that experienced several scrams and then shut down for a significant part of the year would not be captured. Therefore the staff proposed and industry agreed to count scrams per critical hours, using the industry average number of critical hours (availability) per year from 1995 to 1997 to calculate the PI. At the time the ROP PI program began, industry average availability was close to 80 percent, which converts to about 7,000 critical hours per year. The green-white threshold was set at 3 scrams per 7,000 critical hours (a value greater than 3 is required for the PI to be white). Plants with lower than average availability will be white with 3 scrams, while those with higher than average availability will not.

The white-yellow and yellow-red thresholds were established using generic PRAs to identify changes in core damage frequencies of 10^{-5} and 10^{-4} respectively. The white-yellow threshold is 6 and the yellow-red threshold is 25.

Issue 1:
The industry average availability has increased to about 91 percent, or about 8,000 critical hours per year, while the PI calculation continues to use 7,000 critical hours. This allows plants with 3 scrams and lower than the industry average availability to remain green. In effect, the threshold has gone up.

Proposed Resolution:
Change the PI to Unplanned Scrams per 8,000 Critical Hours.

Issue 2:
The yellow-red threshold of 25 scrams per 7,000 critical hours, while risk-informed, is too high to be of any practical value, as pointed out by the Advisory Committee on Reactor Safety. A more reasonable value would be one that could conceivably be reached and that the NRC would consider unacceptable.

Proposed Resolution:
Change the yellow-red threshold to 10 scrams per 8,000 critical hours.

2 Unplanned Power Changes per 7,000 critical hours

Background:
The change in industry average availability discussed above affects this PI in the same way that it affects the unplanned scram PI. In addition, this PI currently counts only events in which a power reduction of greater than 20 percent occurs