

Proposed Addition to IMC 0608 Performance Indicator Program

0608-07 PI Data Submission

07.03 PI Submission for New Start Plants and Plants Restarting from Extended Shutdown

New start plants and plants which restart from extended shutdown, for example the 2007 restart of Browns Ferry Unit 1, intrinsically lack historical operating and performance data for most of the plant systems, and therefore must transition to the full Reactor Oversight Process (ROP) over a period of time. The purpose of this section is to discuss the submission of Performance Indicator (PI) data for plants in these conditions. PI data corresponding to the Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Occupational Radiation Safety, Public Radiation Safety, and Security cornerstones of the ROP shall be submitted according to the following:

Initiating Events

Since the Unplanned Scrams per 7000 Critical Hours and Unplanned Power Changes per 7000 Critical Hours are rate-type PIs and use critical hours in their calculations, some period of time is needed before the results are used in the assessment program. NEI 99-02 states that these indicators are not considered valid if there are fewer than 2400 critical hours in the previous four quarters. Based on this information, the PIs should normally be used after two full quarters of operation. Since the PI uses four quarters of data, 1750 hours should be assumed in the one or two quarters with no plant operation time.

With respect to the Unplanned Scrams with Complications PI, since this indicator counts just the number of scrams and does not use critical hours in its calculation, it can be implemented immediately on startup. The first PI data submittal should be for the quarter the plant started up in.

Mitigating Systems

The Mitigating Systems Performance Index (MSPI) PIs require twelve quarters of historical data to make them meaningful representations of the systems they attempt to analyze. New start plants as well as those restarting from extended shutdown may lack appropriate historical data required by MSPI until the plant has been operating for twelve quarters. Despite this, it is in the best interest of the NRC and the public to have access to this data, even if it is not being used for ROP calculations. Therefore plants that have operational data should submit MSPI data to the NRC prior to completing 12 quarters of historical operational data. The staff should discuss with each licensee to arrive at an agreeable time period in which the MSPIs would be submitted, since the nature and impact of submitting MSPI data with less than 12 quarters is different for each licensee. The NRC will make it clear to the public that MSPI data that constitutes less than 12 quarters of historical data may be used as information only and will not have assessment implications.

The Safety System Functional Failure PI counts the number of events or conditions that prevented, or could have prevented, the fulfillment of the safety function of structures or systems over the previous four quarters. Since it counts just the number of events and does not use critical hours in its calculation, it can be implemented immediately on startup. The first data submittal should be for the quarter the plant started up in.

Barrier Integrity

The Reactor Coolant System Specific Activity and Reactor Coolant System Leakage PIs use maximum monthly values and Technical Specification limits in their calculations. Since they use just the maximum monthly value and do not depend on critical hours or any other rate-type information in their calculations, they both can be implemented on startup. The first PI data submittal should be for the quarter the plant started up in.

Emergency Preparedness

The Drill/Exercise Performance PI measures the percentage of timely and accurate classifications, notifications, and protective action recommendations (PARs) out of the total number of opportunities to perform classifications, notifications, and PARs, while the Emergency Response Organization Drill Participation PI measures the percentage of number of emergency response organization (ERO) members assigned to key positions that have participated in drill, exercise, or actual events out of the total number of key positions assigned to ERO members. Both of these PIs are measured over the previous 8 quarters of reactor operation. In order to have a statistically relevant amount of data, the first data submittal should occur one calendar year after initial power operations and be based upon all applicable PI data gathered until that time. However, the crossing of a performance threshold may only occur from the quarter where data is officially reported.

The Alert and Notification System (ANS) Reliability PI is very similar to the other Emergency Preparedness PIs in that it is a percentage calculation. It is the number of successful siren-tests out of the total number of siren-tests, however it is measured over the previous four quarters of reactor operation. The first data submittal for the ANS PI should be in the quarter after the final siren system design report has been approved by the Federal Emergency Management Agency. This may occur after power operations have begun.

Occupational Radiation Safety

The Occupational Exposure Control Effectiveness PI counts the number of Technical Specification high radiation area occurrences, very high radiation occurrences, and unintended exposure occurrences over the previous four quarters of reactor operation. Since it counts just the number of events and does not use critical hours in its calculation, it can be implemented immediately on startup. The first data submittal should be for the first quarter the plant started up in.

Public Radiation Safety

The RETS/ODCM Radiological Effluent Occurrence PI counts the number of radiological effluent release occurrences per site that exceed the values listed in the table in NEI 99-02, measured over the previous four quarters of plant operation. Since it counts just the number of events and does not use critical hours in its calculation, it can be implemented immediately on startup. The first data submittal should be for the quarter the plant started up in.

Security

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that the related performance indicator, inspection, and assessment information will not be publically available. PI data for new start plants and those restarting from extended shutdown will be submitted based on discussions between the licensee and NRC staff.