

Proposed MSPI Guidance Change
Changes to CDE for Basis Document Parameters

Introduction

This paper proposes a guidance change to improve consistency of the guidance and allow flexibility in the timing of CDE entries made to reflect changes in site MSPI basis documents.

The current MSPI guidance (NEI 99-02, Rev 5) states the following regarding changes to baseline information:

Page 30, lines 35-40 and Page 31, lines 1-12 (regarding changes to PRA parameters):

The MSPI calculation uses coefficients that are developed from plant specific PRAs. The PRA used to develop these coefficients should reasonably reflect the as-built, as-operated configuration of each plant. Updates to the MSPI coefficients developed from the plant specific PRA will be made as soon as practical following an update to the plant specific PRA. The revised coefficients will be used in the MSPI calculation the quarter following the update. Thus, the PRA coefficients in use at the beginning of a quarter will remain in effect for the remainder of that quarter. Changes to the CDE database and MSPI basis document that are necessary to reflect changes to the plant specific PRA of record should be incorporated as soon as practical but need not be completed prior to the start of the reporting quarter in which they become effective. The quarterly data submittal should include a comment that provides a summary of any changes to the MSPI coefficients. Any PRA model changes will take effect the following quarter (model changes include error, corrections, updates, etc.)

For example, if a plant's PRA model of record is approved on September 29 (3rd quarter), MSPI coefficients based on that model of record should be used for the 4th quarter. The calculation of the new coefficients should be completed (including a revision of the MSPI basis document if required by the plant specific processes) and input to CDE prior to reporting the 4th quarter's data (i.e., completed by January 21).

Page F-8, line 44 and following to Page F-9, line 3 (regarding changes to baseline planned unavailability):

The baseline planned unavailability should be revised as necessary during the quarter prior to the planned maintenance evolution and then removed after twelve quarters. A comment should be placed in the comment field of the quarterly report to identify a substantial change in planned unavailability. The baseline value of planned unavailability is changed at the discretion of the licensee. Revised values will be used in the calculation the quarter following their update.

Page F-23, lines 38-40 (regarding changes in estimates of demands):

The new estimates will be used in the calculation the quarter following the input of the updated estimates into CDE.

The concern is that the guidance is unnecessarily restrictive regarding CDE entry for changes in baseline planned unavailability and estimated demands, especially when compared to the guidance for PRA model changes. If a plant makes a change to its basis document for baseline planned unavailability or estimated demands, these values should not be used until the quarter following the change. However, sites should be allowed the flexibility to enter these changes into CDE during the data submittal period at the beginning of the new quarter following basis document revision. This allows the site time to make the entry into CDE. The site basis document can be easily audited to ensure that the change was approved prior to the beginning of the new quarter.

Proposed Guidance Changes

Plant Specific PRA (Page 30, line 35 – Page 31, line 12)

The MSPI calculation uses coefficients that are developed from plant specific PRAs. The PRA used to develop these coefficients should reasonably reflect the as-built, as-operated configuration of each plant.

Specific requirements appropriate for this PRA application are defined in Appendix G. Any questions related to the interpretation of these requirements, the use of alternate methods to meet the requirements or the conformance of a plant specific PRA to these requirements will be arbitrated by an Industry/NRC expert panel. If the panel determines that a plant specific PRA does not meet the requirements of Appendix G such that the MSPI would be adversely affected, an appropriate remedy will be determined by the licensee and approved by the panel. The decisions of this panel will be binding.

Clarifying Notes (Page 32, lines 4-8)

Documentation and Changes

Each licensee will have the system boundaries, monitored components, and monitored functions and success criteria which differ from design basis readily available for NRC inspection on site. Design basis criteria do not need to be separately documented. Additionally, plant-specific information used in Appendix F should also be readily available for inspection. An acceptable format, listing the minimum required information, is provided in Appendix G.

Changes to the site PRA of record, the site basis document, and the CDE database should be made in accordance with the following.

Changes to PRA coefficients. Updates to the MSPI coefficients developed from the plant specific PRA will be made as soon as practical following an update to the plant specific PRA. The revised coefficients will be used in the MSPI calculation the quarter following the update. Thus, the PRA coefficients in use at the beginning of a quarter will remain in effect for the remainder of that quarter. Changes to the CDE database and MSPI basis document that are necessary to reflect changes to the plant specific PRA of record should be incorporated as soon as practical but need not be completed prior to the start of the reporting quarter in which they become effective. The quarterly data submittal should include a comment that provides a summary of any changes to the MSPI coefficients. Any PRA model changes will take effect the following quarter (model changes include error, corrections, updates, etc.). For example, if a plant's PRA model of record is approved on September 29 (3rd quarter), MSPI coefficients based on that

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Changes to non-PRA information. Updates to information that is not directly obtained from the PRA (e.g., unavailability baseline data, estimated demands/run hours) will become effective in the quarter following an approved revision to the site MSPI basis document. Changes to the CDE database that are necessary to reflect changes to the site basis document should be incorporated as soon as practical but need not be completed prior to the start of the reporting quarter in which they become effective. The quarterly data submittal should include a comment that provides a summary of any changes to the basis document.

Section F 1.2.2 (Page F-8, line 44 through Page F-9, line 3)

The initial baseline planned unavailability is based on actual plant-specific values for the period 2002 through 2004. (Plant specific values of the most recent data are used so that the indicator accurately reflects deviation from expected planned maintenance.) These values are expected to change if the plant maintenance philosophy is substantially changed with respect to on-line maintenance or preventive maintenance. In these cases, the planned unavailability baseline value should be adjusted to reflect the current maintenance practices, including low frequency maintenance evolutions.

Some significant maintenance evolutions, such as EDG overhauls, are performed at an interval greater than the three year monitoring period (5 or 10 year intervals). The baseline planned unavailability should be revised as necessary in the basis document during the quarter prior to the planned maintenance evolution and then removed after twelve quarters. A comment should be placed in the comment field of the quarterly report to identify a substantial change in planned unavailability. The baseline value of planned unavailability is changed at the discretion of the licensee. Revised values will be used in the calculation the quarter following the basis document revision.

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Section F 2.2.2 (Page F-23, lines 38-40)

Estimated demands are not reported to CDE on a periodic (monthly or quarterly) basis, rather, they are entered initially, typically for the period of a refueling cycle (e.g., 48 demands in 24 months) then updated as required. An update is required if a change to the basis for the estimate results in a >25% change in the estimate of the total (operational/alignment + test) value for a group of components within an MSPI system. For example, a single MOV in a system may have its estimated demands change by greater than 25%, but revised estimates are not required unless the total number of estimated demands for all MOVs in the system changes by >25%. The new estimate will be used in the calculation the quarter following the input of the updated estimates into the site basis document.

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