

## Action Item MSPI-05

Proposed changes to NEI 99-02 to address “failures identified during post maintenance tests”

**Background – MSPI-05** The survey respondents requested a revision to the guidance for reporting maintenance induced failures caused by damage or other issues caused by the maintenance activity and identified during PMT performed prior to restoring the component to operable status. The survey response matches the concerns raised during the reviews and appeal of FAQ 428. The conduct of maintenance activities involves numerous support activities during which a failure may be introduced. These failures will most likely be identified during the post maintenance testing and are not independent of the maintenance performed. Therefore they should not be counted as they are **not** indicative of the reliability of the equipment that was undergoing maintenance.

Recommended Change to NEI 99-02

Page F-26, line 34 - Insert the following new section

**Treatment of failures discovered during post maintenance tests:**

Failures identified during post-maintenance tests (PMT) are not counted unless the cause of the failure was independent of the maintenance performed. The maintenance scope of work includes the activities required to be performed to conduct the maintenance, including support activities, the actual maintenance activities, and the activities required for restoration of the monitored component(s) to their available and operable conditions. This includes, but is not limited to, typical tasks such as scaffolding erection and removal, coatings applications, insulation removal and installation, rigging activities, health physics activities, interference removal and restoration, as required to support and perform the required maintenance activity. Support activities may be planned, scheduled and implemented on separate work orders from the work order for the monitored component(s). System or component failures introduced during the scope of work are not indicative of the reliability of the equipment, since they would not have occurred had the maintenance activity not been performed. In addition, the potential exists that components or devices not included in the direct scope of work may be affected by the ongoing activities. Such failures are not counted providing:

- They are identified during or prior to the post-maintenance testing and are corrected prior to the component(s) being returned to operable status,
- The repair is documented in a work package, and
- The critical components not directly in the scope of work, but that have the potential to be affected by the maintenance activity, are noted by means such as cautions in the procedures, inclusion in the pre-job briefings, protection by signs, placards or padding.
- The licensee uses the corrective action program to document the basis for the determination that the cause of the failure was dependent on the

maintenance performed. This determination must establish a clear relationship between the maintenance performed and the failure.

If a maintenance-related failure occurs during the PMT and the component was considered to be inoperable but available during the PMT, unavailability shall be counted from the time the component was declared available. No MSPI failure would be counted. The example below illustrates that six hours of unavailability would be counted for a PMT failure caused by the maintenance activity.

PMT Failure

$$\frac{[\text{Maintenance Activity} - \text{Component Unavailable}]}{1200} \frac{[\text{Component Available}]}{2400 \text{ 0001} \quad 0600}$$