

FAQ 16-03, Tornado Missile Protection (TMP) Potential Safety System Functional Failure
(Final)

Plant: ALL

Date of Event: n/a

Submittal Date: 09/21/2016

Engineer/Licensee Contact: _____

Tel/email: _____

NRC Contact: _____

Tel/email: _____

Performance Indicator:

MS05 Safety System Functional Failures (SSFF)

Site-Specific FAQ (Appendix D)? No

FAQ requested to become effective: November 2016.

Question Section:

1. Do TMP nonconforming conditions rendering multiple trains of safety related equipment inoperable requiring a 10 CFR 50.73(a)(2)(v) report need to be reported for this SSFF indicator?
2. If so, must each identified deficiency be counted as a separate SSFF?

NEI 99-02 Guidance needing interpretation (include page and line citation): N/A

- "A single event or condition that affects several systems: counts as only one failure. (Page 32, Line 9)

Event or circumstances requiring guidance interpretation: Licensees initiated structural design reviews and walkdowns evaluating the operating experience provided in RIS 2015-006 and are identifying very low risk significance examples of gaps in original design and plant construction for TMP affecting Technical Specification (TS) controlled systems. When a licensee completes an operability determination for TMP nonconforming conditions and concludes the nonconforming condition affects TS operability of a structure, system or component (SSC), NRC provided three to five years of enforcement discretion relaxing the shutdown requirements in TS and allowing appropriate time to resolve these low risk issues. In situations where the operability of multiple redundant trains of TS equipment is affected by TMP nonconforming conditions, those nonconforming conditions could represent a SSFF.

If licensee and NRC resident/region do not agree on the facts and circumstances explain: N/A

Potentially relevant existing FAQ numbers: N/A

Response Section:

Proposed Resolution of FAQ:

Background

Utilities are evaluating compliance with their licensing basis regarding tornado missile protection in response to Regulatory Issue Summary (RIS) 2015-06. Some plants are finding TS controlled safety-related SSCs affected by minor gaps in the original plant TMP design. As TMP

FAQ 16-03, Tornado Missile Protection (TMP) Potential Safety System Functional Failure
(Final)

nonconforming conditions are identified, they are evaluated for operability impact. If operability is not affected, the item is resolved through the Corrective Action Program.

If it is determined that TMP nonconforming conditions render a TS-required SSC inoperable, the action specified in the TS must be taken. If it is determined that TMP nonconforming conditions render multiple trains of TS SSCs inoperable, the issue could represent a SSFF. Enforcement Guidance Memorandum (EGM) 15-002, "Enforcement Discretion for Tornado Missile Protection Noncompliance" can be applied by the licensee to relax the TS shutdown requirements if compensatory actions are taken to reduce impact of tornado missile(s) so that, while the plant may not be fully protected, the impact is reduced. Because of the low-risk nature of these TMP nonconforming conditions, the NRC has granted time to resolve these issues, either by fully protecting the equipment or by changing the plant licensing basis.

When TS operability is impacted, a number of plants are reporting these deficiencies under 10 CFR 50.72 and 10 CFR 50.73. In some cases, where the operability of redundant trains of TS equipment are affected, licensees are reporting the condition as a SSFF under 10 CFR 50.73(a)(2)(v).

The SSFF performance indicator guidance in NEI 99-02, Revision 7, page 32, Line 9 states:

"A single event or condition that affects several systems: counts as only one failure."

It is understood that:

- The "single event" could be considered the potential occurrence of a tornado and/or the "single condition" could be considered the engineering work performed many years ago that did not comprehensively incorporate the tornado missile protection concepts into the structural design;
- The issues being identified:
 - Are not representative of current facility performance;
 - Are part of a comprehensive industry-wide reevaluation of the original facility tornado missile protection design; and
 - Have very low safety significance.

In the case where multiple TMP nonconforming conditions are identified creating multiple SSFFs, only the first SSFF is reportable under the performance indicator.

As a point of clarification, NEI 99-02 page 30, lines 27-29 state:

"Engineering analyses: events in which the licensee declared a system inoperable but an engineering analysis later determined that the system was capable of performing its safety function are not counted, even if the system was removed from service to perform the analysis."

Nothing in this FAQ precludes a licensee performing such an analysis. If the licensee reports a nonconforming condition under 10 CFR 50.73(a)(2)(v) and subsequently performs an engineering analysis demonstrating that the system was capable of performing its safety

FAQ 16-03, Tornado Missile Protection (TMP) Potential Safety System Functional Failure
(Final)

function, that nonconforming condition reported under 10 CFR 50.73(a)(2)(v) does not need to be reported under the SSFF performance indicator.

Restatement of Question

1. Do TMP nonconforming conditions rendering multiple trains of safety related equipment inoperable requiring a 10 CFR 50.73(a)(2)(v) report need to be reported for this SSFF indicator?
2. If so, must each identified deficiency be counted as a separate SSFF?

Response

1. Yes, if the situation is reportable per 10 CFR 50.73(a)(2)(v), it should be counted under the SSFF indicator.
2. The first SSFF identified should be counted under the SSFF performance indicator. Additional items identified as part of the RIS 2015-06 evaluation would not need to be counted separately, as they would be treated as additional failures under NEI 99-02 because they were part of the *“single event or condition that affects several systems.”* As appropriate, additional failures identified as a result of the same evaluation need not be reported separately. Licensees should write in the comments that multiple failures related to Tornado Missile Protection, if they existed, are being reported under this one PI. Additional examples may be added through the LER supplement process, if discovered.

If appropriate, provide proposed rewording of guidance for inclusion in next revision: N/A

PRA update required to implement this FAQ? No

MSPI Basis Document update required to implement this FAQ? No

NRC Response

The staff concurs with the proposed response to this FAQ. For performance indicator reporting purposes, if utilizing this criteria, licensees should enter in the comment field along with the LER number the following statement: “Multiple failures related to Tornado Missile Protection reported as one in accordance with FAQ 16-03 guidance.”

This FAQ should be used as justification only for situations that fall under discretion granted by EGM 15-002, any other exemption a licensee claims should reference to the appropriate NEI 99-02 criteria.

This FAQ is effective as of July 1st, 2016, so that licensees may invoke it when reporting their PI data for the 3rd quarter, 2016.