

RG 1.160 Language clarification for Step 8.2.1.3 in NUMARC 93-01

1. Non-safety related SSCs that are used in Emergency Operating Procedures

Section 8.2.1.3, “Nonsafety-Related SSCs that are used in Emergency Operating Procedures,” of revision 4E to NUMARC 93-01 addresses the question of “Are the nonsafety-related SSCs used in plant Emergency Operating Procedures (EOPs)?” In Revision 4E, two new paragraphs were added to address FLEX Support Guidelines (FSGs). FSGs were developed to provide an extra level of defense-in-depth in addition to the EOP mitigating function and do not change the existing requirements of that function. These two additions are discussed below.

The first addition sets forth that FSGs are not considered to be part of the EOPs:

FLEX Support Guidelines (FSGs) are not considered to be EOPs.
Equipment described only in FSGs would not be in scope of the
Maintenance Rule unless otherwise required by paragraph 50.65(b)

The added language above addresses the FLEX equipment used to comply with NRC Order EA 12-049, Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Effective Immediately), (March 12, 2012) (ADAMS Accession No. ML12054A735). The language is very similar to the wording in Section 8.2.1.3 of NUMARC 93-01, Rev. 4A (stating that SAMGs “are not considered to be EOPs” and stating that “[E]quipment used in support of 10 CFR 50.54(hh)(2) (Loss of Large Areas) would not be in scope of the Maintenance Rule unless otherwise required by paragraph 50.65(b).”) (unchanged in Rev. 4E).

The second addition takes a position that FSGs are not “used” in EOPs for purposes of scoping into the Maintenance Rule under 50.65(b)(2)(i) (stating that the scope of the monitoring program includes nonsafety related SSC that “are used in plant emergency operating procedures (EOPs).”).

By way of background, Section 8.2.1.3 of Rev. 4A (unchanged in Rev. 4E) of NUMARC 93-01 defines “explicitly used” and “implied use” in order to clarify the scoping criteria. “Explicitly used means “called out in the EOP” and associated supporting SSC not called out, while “implied use” means SSCs that are “understood to be essential.” NUMARC 93-01 also discusses how “[w]hen the EOPs direct the user to another procedure, the associated SSCs required to perform the EOP mitigating function are included in the scope of the Maintenance Rule.” Further, “SSCs whose use is implied and is necessary to perform the EOP steps in the necessary response times, such as emergency lighting or communication SSCs, are included in the scope of the Maintenance Rule.”

These descriptions of “to use” inform how “used” may be applied to FSGs. Fundamentally, the EOPs address design basis accidents, whereas the FSGs are the “guidance and strategies to maintain or restore core cooling, containment and SFP cooling capabilities following a beyond-design-basis external event” as described in EA 12-049. Because the FSG equipment is not essential to the EOPs, it’s not considered to be used by the EOPs; the EOPs can be

carried out even if no FSG equipment is available. Reflecting this concept, section 8.2.1.3 of Rev. 4E of NUMARC 93-01 adds the following:

When steps are added to an EOP only to direct to FSGs for implementing non-safety related SSCs, those SSCs should not be considered used in the EOP, as long as the changes associated with these steps made to the EOP do not impede the successful implementation of other SSCs used in the EOP. An appropriate technical basis should be documented that demonstrates that these changes do not impede the successful implementation of the other SSCs. These uses of non-safety-related SSCs should be evaluated against all other 10 CFR 50.65(b) scoping criteria.

The above language applies to the use of non-safety related equipment implemented through the use of FSGs as an additional level of defense-in-depth in a design basis accident, and as a means to address a beyond design basis accident as described in EA 12-049.

Section 8.2.1.3 defines “Mitigate or Mitigating” as “actions or steps taken to lessen the severity or the adverse consequences of the event/symptom that necessitated entry into the EOP.” While it is true that utilizing the FSG could lessen the severity or the adverse consequences of the initiating event or symptom that led into the EOPs, the FSGs are not required to mitigate the within-design-basis accidents addressed by the EOPs; the FSGs are not essential to the successful mitigation. Therefore, FSG equipment used to address a beyond-design-basis external event condition is not required to perform the EOP mitigating function and is not “used” for that purpose. Accordingly, it’s not scoped into the Maintenance Rule under 50.65(b)(2)(i).

This is also consistent with the language in the draft Mitigation of Beyond Design Basis Events Rule, which provides for the integration of certain strategies and guidelines with EOPs (proposed § 50.155(b)(4)) and contains a separate maintenance provision for such equipment (proposed § 50.155(c)(3)).

The following two items apply when EOP steps are added that direct operators to FSGs for additional defense-in-depth measures. If these are met, then the non-safety-related equipment in the FSGs is not considered “used” in the EOPs:

1. Differentiate the non-safety-related equipment in the FSGs from the equipment providing EOP mitigation function in the Maintenance Rule scoping evaluation or EOP basis document.
2. Equipment already scoped into the Maintenance Rule under the “used in plant EOPs” criteria should not be removed from the Maintenance Rule scope based solely on the addition of non-safety-related equipment in the FSGs as a defense-in-depth measure.