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**Docket:** NRC-2018-0142  
Backfitting, Forward Fitting, and Issue Finality Guidance

**Comment On:** NRC-2018-0142-0001  
Backfitting, Forward Fitting, and Issue Finality Guidance

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### Submitter Information

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### General Comment

See attached file(s)

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### Attachments

Comments on NUREG-1409 Rev 1

Comments on NUREG-1409, Rev. 1 (NRC-2018-0142)

p. 1-1, footnote 2

"Licensee" is a defined term in 10 CFR 50.4. Use of this term in a manner that is inconsistent with the definition may cause confusion. The backfit rule applies to some licensees and not others, and it applies to some non-licensed applicants. Table 1-1 uses "affected entities," which would be a more appropriate term to use consistently throughout the document.

Commented [KA1]: ANSM-01

The term "licensee" includes a CoC under Part 76. Footnote 5 states that "this NUREG does not provide specific guidance for implementation of 10 CFR 76.76." By including the CoC under the generic term "licensee" it is not clear what guidance is intended to apply to the CoC under part 76. All references to Part 76 should be removed since this regulation is obsolete given that the CoCs under part 76 have been terminated and most likely cannot be restored.

Commented [KA2]: ANSM-02

Section 1.3, "Forward Fitting"

Section 1.3.1 states: "a forward fit happens when the NRC's approval of a licensee-initiated request for a licensing action includes a condition that the licensee comply with a new or modified requirement or regulatory staff position **that the licensee did not request.**"

NRC approval of licensing actions intrinsically establish new or modified requirements. The implication that the forward fit guidance applies to anything the licensee did not request is too broad. Licensing actions are often very narrow in scope.

Limitations on the scope of the NRC staff's approval should be excluded from forward fit review. For example, a licensee may request a TS change to support a major plant modification. The licensee does not request approval of the plant modification, but the basis for the TS change assumes the plant modification is completed. However, the licensee does not demonstrate or request approval of the TS change for its current plant configuration. The NRC may need to condition the approval of the TS change to the completion of the plant modification. The NUREG guidance for a forward fit suggests that if the NRC were to impose such a condition it would need to evaluate the condition as a forward fit.

Commented [KA3]: ANSM-03

The forward fitting guidance should only be applied if the requirements and staff positions within the current licensing basis that the NRC proposes to revise are already applicable to the proposed licensing action. For example, the licensing basis may include a methodology that the NRC considers to be obsolete. Suppose the licensee uses this methodology to support the proposed licensing action. If the methodology is applicable to the action, then the NRC staff would need to use the forward fit guidance if it wants to condition its approval on the use of a different methodology. However, if the methodology is not applicable (e.g., the methodology was never approved for this purpose), the NRC staff should **not** use the forward fit guidance when conditioning the approval.

Commented [KA4]: ANSM-04

### Section 3.2, "Forward Fitting Determinations"

10 CFR 50.109 states:

Backfitting is defined as the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position.....

MD 8.4 states:

A forward fit is defined as the imposition of a new or modified requirement or regulatory staff interpretation of a requirement that results in the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility as a condition of approval by the NRC of a licensee-initiated request for a licensing action when the underlying request did not propose to comply with the new or revised requirement or interpretation.

However, to simplify the discussion these definitions are rewritten using defined terms in bold:

Backfitting is defined as the **modification of the facility** which may result from a **new NRC requirement**.

A forward fit is defined as the imposition of a **new NRC requirement** that results in the **modification of the facility** as a condition of approval by the NRC of a licensee-initiated request for a licensing action when the underlying request did not propose to comply with the **new NRC requirement**.

Where the terms in bold are:

**modification of the facility:** modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility

**new NRC requirement (backfit):** new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position

**new NRC requirement (forward fit):** new or modified requirement or regulatory staff interpretation of a requirement

Based on NUREG Section 1.2.2, "Terminology," it appears that, although the wording is different, a new NRC requirement has the same meaning for both backfit and forward fit.

The backfit rule applies if a new NRC requirement has the potential to result in a modification of the facility. The NRC does not need to determine that the new NRC requirement *will* result in a modification of the facility. However, for a forward fit, the NUREG requires (Section 3.2, Step 4) the NRC staff to determine if the new NRC requirement *will* result in a modification of the facility.

Inherently, approval of a licensing action is a new NRC requirement. Most licensing actions are associated with the modification of the facility but do not request approval for the modification. Typically, NRC approval is only required for a small portion of the overall facility change. The NRC typically does not approve the modification of the facility, rather it approves a change in requirements that permits a licensee to fully implement the modification.

For a forward fit, it is not clear what the NRC staff will use as the baseline to determine if a new NRC requirement *will* result in a modification of the facility.

For example, suppose a power reactor licensee decides to replace a diesel fuel tank with a tank that is a different geometry (wider base and shorter). In order to make the change, the TS required fuel level must be revised (lower since new tank is shorter). The licensee submits the license amendment request for the TS change and does not request approval to replace the tank. The LAR does not provide any information to demonstrate that the revised fuel level would be acceptable for the currently installed tank. Since the NRC staff's review and approval relies upon the installation of the new fuel tank, the staff requires the installation to be completed as a condition of the approval.

Based on the guidance in the NUREG, this condition would be viewed as a new NRC requirement. Given that the licensee only requested the TS change, the underlying request did not explicitly propose to comply with the new NRC requirement (i.e., installation of the new tank).

If the NRC must consider the current tank design as the baseline, then the condition will result in a modification of the facility. However, if the NRC staff considers the new tank design as the baseline, then the condition does not result in a modification of the facility. However, the NUREG does not clearly define which baseline the NRC staff should use to determine if there is a potential forward fit.

If there is margin in the current fuel level, then the licensee could demonstrate that the revised fuel level is adequate for the current fuel tank. If this change can be done under 50.59 without prior NRC approval, then imposing the condition would limit the licensee's ability to retain the current fuel tank. Would such a limitation be viewed as a forward fit?

The NUREG needs to provide guidance on what the NRC staff will use as the baseline to determine if a new NRC requirement *will* result in a modification of the facility. It is not clear if the NRC staff will consider the current state of the facility, the state of the facility following implementation of the licensing action, the state of the facility once all related

modifications are completed, or all possible future states allowed under the current licensing basis.

Commented [BH5]: ANSM-05

The NRC staff does not have direct access to all the design documents, procedures, and organizational information about a facility. Thus, it will be difficult for the NRC staff to determine that a new NRC requirement *will* result in a modification of the facility. The licensee may already be in compliance with the new NRC requirement. For example, facility procedures may have operational limitations that are consistent with the new NRC requirement. The NUREG does not explain how the NRC staff will be able to make this determination. Thus, to determine if a new NRC requirement needs to be evaluated as a forward fit, the NRC staff may need to request more information than what the regulations require. This request would likely have to comply with 50.54(f) since the information needed to make a forward fit determination in this situation is outside the scope of the regulations.

Commented [KA6]: ANSM-06

The scope of actions that are considered forward fits needs to be more clearly described in the NUREG. The NUREG should exclude limitations on the scope of the NRC staff's approval from the forward fit process. This will avoid some of the potential confusion regarding what is considered a forward fit. The forward fitting guidance should only be applied when the requirements and staff positions within the current licensing basis that the NRC proposes to revise are already applicable to the proposed licensing action.

Instead of evaluating statements 3 and 4, Section 3.2 of the NUREG should ask the following questions:

1. Has the NRC staff determined that it needs to impose a condition on the approval?
  - a. Yes – continue to next question
  - b. No – not a forward fit
2. Does the condition deny part of the request?
  - a. Yes – not a forward fit
  - b. No – continue to the next question
3. Does the condition merely limit the scope of the approval?
  - a. Yes – not a forward fit (could be a partial denial if the limit was narrower than the scope of the request)
  - b. No – continue to next question
4. Does the request indicate that the condition will be met?
  - a. Yes – not a forward fit
  - b. No – continue to next question
5. Is the current requirement in the licensing basis applicable to the proposed change? For example, an older RG on instruments may not be applicable to digital instruments.
  - a. Yes – continue to next question in Section 3.2
  - b. No – not a forward fit

Each part of the proposed condition should be considered separately. For example, if the NRC staff required a licensee to update to a new version of RG, the staff would only consider the aspects of the new version that are different when answering these questions.

Commented [KA7]: ANSM-07

p. 1-5, lines 34-39

Delete: However, if the inspection report states, "The licensee complied with [Requirement X]," then that language would constitute a staff position. If the NRC subsequently determines there is a non-compliance with "Requirement X" related to the inspected sample, then the NRC may need to consider that discovery a change in staff position subject to the backfitting provisions.

The NRC staff does not accept inspection report findings of compliance as NRC approval. This position is likely to lead to abuse and only encourage licensees to seek advice from inspectors. This would remove the impartiality of the inspection staff. Typically, such statements in inspection reports are not properly vetted and not sufficiently detailed to provide a basis for the statement. The NRC should instead discourage the use of such statements and follow the current practice of stating that the staff did not identify any issues.

Commented [KA8]: ANSM-08

p. 1-8, lines 30-32

Delete: In other circumstances (e.g., the issuance of orders), to implement the administrative exemption, the Commission should, unless immediate action is necessary, provide the public with an opportunity to comment on the proposed action.

This is a meaningless statement given the history and purpose of administrative exemptions.

Commented [KA9]: ANSM-9

p. 1-9, lines 6-11

"In most cases, the Commission will review generic backfitting actions unless the Commission has delegated the Commission's authority to the EDO (although the Commission must review all proposed backfits invoking the adequate protection exception). This authority may have been redelegated to a program office director (e.g., Section III.B.8 of MD 6.3, "The Rulemaking Process," dated July 3, 2019, lists the rulemakings under 10 CFR 50.55a, "Codes and 10 standards," as being delegated from the EDO to the NRR Office Director.)."

MD 8.4 states that changes or updates to ASME Code requirements in 50.55a are an example of regulatory actions that do not meet the definition for backfitting. The example above is inconsistent with that position. The delegation to the NRR Office Director for the 50.55a rulemaking does not include changes to 50.55a that would be subject to the backfit rule.

The statement that the authority "may have been" redelegated suggests that the EDO will not redelegate in the future.

Commented [KA10]: ANSM-10

p. 1-9, lines 21-24

"Backfitting actions that apply to a single unit, a single licensee, a site that has multiple units of similar design, sites that share an updated final safety analysis report, or sites that may have more than one reactor type but where the reactors share common

sections of an updated final safety analysis report, are considered facility-specific backfitting actions.”

The sentence should be clarified. This section should provide examples of facility-specific backfits rather than attempt to be all inclusive. However, this sentence appears to provide a very narrow scope of backfits that would be considered facility-specific. Issues with this sentence include the following:

- The statement appears to be focused on currently operating reactors, so it is not clear how it applies to fuel facilities, ISFSIs, design certificates, SMRs, applicants, etc.
- “unit” commonly refers to a single reactor, but it is not clear if this is also intended to refer to other types of facilities
- Many facilities have multiple licensees (e.g., multiple owners, owner and an operator), so it is not clear what is intended by stating “a single licensee”
- It is not clear why sharing common portions of the UFSAR is used as a criterion. Sites may have common procedures among the different unites without sharing the UFSAR.
- Large utilities often have corporate procedures. Would such procedures fall under facility-specific or generic backfit guidance? If they fall under the generic backfit guidance, then this would result in unequal treatment between small utilities and large utilities.
- If the backfit is unrelated to the shared UFSAR, would the facility-specific backfit still apply.

Commented [KA11]: ANSM-11

#### Section 2.5.2.2, “Compliance Exception Determinations”

The NRC should not have to consider cost in cases of willful omission, false statements, or failure to correct errors. As written, this Section may incentivize applicants to withhold pertinent information during the review of licensing action. In addition, if errors or omission are identified before implementation of a change then the NRC staff should not have to consider costs.

Commented [KA12]: ANSM-12

p. 2-14, lines 16-18

An omission can occur when a license does not “consider or address information that the NRC requires be addressed through a legal obligation (e.g., for nuclear power plant licensees, the change control provisions of 10 CFR 50.59, ‘Changes, tests, and experiments’).”

It is not clear why 50.59 is referenced in this context. 10 CFR 50.59 is used to determine when a license amendment is needed to make a change to the facility. It does not specify what information needs to be provided to the NRC to make the change. The NRC cannot approve a change to a facility if the licensee did not describe the change.

Commented [KA13]: ANSM-13

p. 3-2, line 44, and Section 5.3

Escalating regulatory commitments into license conditions is provided as an example of forward fitting. However, this is inconsistent with previous statements that a forward fit

happens with the NRC imposes a requirement as a condition of approval “and the licensee’s underlying request did not propose to comply with the new or revised requirement or interpretation.” A regulatory commitment is a written statement made by a licensee to take a particular action. Thus, by making the regulatory commitment the licensee has proposed to voluntarily comply with the proposed action. The act of changing a commitment to an obligation does not result in a change to the facility, since the applicant has already committed to make such changes.

Escalation of regulatory commitments into obligations should not be included within the scope of this NUREG if they are provided as part of a requested licensing action. This process is already addressed in other NRC documents (e.g., NRR LIC-101). Escalation of commitments made under other processes (e.g., in response to generic communications) should be within the scope of the NUREG.

Applicants often use regulatory commitments to identify changes to its facility that it will make in relation to the requested licensing action. These can include major plant modifications, procedure changes, and analyses. Requiring the NRC staff to use the forward fit process to escalate regulatory commitments into obligations will result in more staff hours, longer reviews, and greater costs to applicants with no clear benefit. The alternative is that the NRC may need to defer approval of licensing actions associated with major plant modifications until the modifications are completed.

Commented [BH14]: ANSM-14

For example, suppose a power reactor licensee decides to replace a diesel fuel tank with a tank that is a different geometry. In order to make the change, the TS required fuel level must be revised. The licensee submits the license amendment request for the TS change and commits to completing the installation of the fuel tank with the implementation of the TS change. The NRC staff’s review and approval assumes that the new fuel tank will be installed. The NRC staff cannot approve the TS change for the old fuel tank, and the licensee cannot be permitted to implement the TS change until the new fuel tank is installed. Requiring a forward fit justification in this circumstance unnecessarily complicates a straightforward decision.

If the NRC staff delayed its approval until the new tank is installed, then the condition would not be necessary. Thus, one could argue, the condition is not necessary for adequate protection and that a cost justification is necessary to proceed.

p. 5-2, lines 12-14

“Therefore, for nuclear power reactor licensees, the staff would need to take a backfitting or forward fitting action to escalate a regulatory commitment into a requirement if the licensee did not voluntarily do so.”

The statement “if the licensee did not voluntarily do so” is unclear. A licensee cannot make a commitment an obligation. Only the NRC can make something an obligation.

Commented [KA15]: ANSM-15

p. 5-10, lines 31-34

“The backfitting provisions do not apply to voluntary licensee requests for changes to its licensing basis. ‘Voluntary’ is considered to be any action or request to the NRC by the licensee that was made of the licensee’s own accord, without the force of a legally

binding requirement or an NRC representation of further licensing or enforcement action."

It is not clear what is meant by "without the force of a legally binding requirement or an NRC representation of further licensing or enforcement action." If the NRC requires a licensee to submit a licensing action by order, then the backfit implications should be considered at the time of the order not with the licensing action. Additionally, 50.59 (for example) requires licensees to submit amendments if certain conditions are met. The NRC should consider such actions to be voluntary even though there is a legally binding requirement.

Typically, licensees can decide what to request even if they are obligated to make the request by rule, license condition, or order. Licensing requests where the licensee has a choice regarding the proposed change should all be considered voluntary.

Commented [BH16]: ANSM-16

P 5-12, lines 21-27

"Under 10 CFR 50.55a(z), the NRR Office Director may authorize the use of alternatives to the requirements of 10 CFR 50.55a(b) through (h) or portions thereof. A proposed alternative must be submitted by the licensee and authorized by the NRC prior to implementation. In contrast to 10 CFR 50.55a(f)(6)(i) and (g)(6)(i), 10 CFR 50.55a(z) does not permit the NRC to impose alternatives to the requirements. Therefore, if the NRC intends to impose an alternative to the requirement, then the NRC would need to subject its proposed alternative to a backfitting or forward fitting assessment."

This statement is confusing. One way to read this statement is that the NRC cannot, on its own initiative, impose an alternative under 50.55a(z). However, alternatives approved under 50.55a(z) are always optional since the licensee may continue to comply with current ASME Code requirements. Another way to read this statement is that the NRC cannot condition its approval of a proposed alternative.

The last two sentences in the statement appear to contradict each other. One sentence says alternatives cannot be imposed and the next sentence implies they can.

Commented [KA17]: ANSM-17

Section 5.22, "Topical Reports"

This section does not appear to fully address the topical report process. Typically, it takes two steps for a topical report to become part of the licensing/design basis: (1) the topical report is reviewed and approved by the NRC and (2) a separate action is taken by the licensee to add the topical report to the licensing/design basis for the facility. In some cases, the second action also requires NRC approval and in others the licensee may adopt an NRC-approved topical report without seeking NRC approval.

Section 5.22 appears to focus only on licensing actions where the licensee adopts a topical report. It does not appear to address the topical report review process itself. Thus, it is not clear if the NRC may impose conditions or limitations on a topical report without consideration of a backfit/forward fit.

Commented [BH18]: ANSM-18

It is also not clear if the NUREG requires different treatment of topical reports submitted by operating reactor licensees than reports submitted by vendors.

Commented [BH19]: ANSM-19

p. 5-13, lines 21-22

"If the licensee submits information that the NRC is reviewing for the first time, the NRC has no existing staff position applicable to the licensing action under review, and the staff is considering a forward fit, then the staff needs to perform a site-specific cost consideration."

This statement conflicts with the requirement in the AEA that the NRC cannot consider cost if the action is necessary for adequate protection.

Additionally, the NRC staff should be given broad latitude in situations where there is no existing staff position. Such situations have the greatest uncertainty and may require more limitations in order to approve. Thus, NRC conditions in this situation are often necessary for the NRC staff to have reasonable assurance of adequate protection.

Commented [KA20]: ANSM-20

#### Forward Fitting – Additional Considerations

Requiring the NRC staff to use the forward fit process will result in more staff hours, longer reviews, and greater costs to applicants when the NRC staff considers it necessary to condition a licensing action. In some cases, the costs associated with the forward fit review process may greatly exceed the cost of the forward fit. For example, a delay in an approval that impacts a refueling outage can substantially impact a licensee's revenue.

Commented [BH21]: ANSM-21

When the NRC staff is considering the imposition of a condition for a licensing action, the current practice is for the NRC staff to provide the proposed condition to the licensee and allow the licensee to comment on the proposed condition. This process ensures the condition is understood by both parties and allows the licensee the opportunity to propose an alternative which may satisfy both parties. It is not clear that the forward fitting guidance will permit this practice. The NRC staff should continue this practice for forward fits.

The licensee should be notified of the proposed condition and be provided the opportunity to voluntarily agree to the condition, propose alternatives to the condition, and provide input regarding the cost. This should occur before the NRC staff expends resources to fully develop the forward fit justification. This can avoid unnecessary costs to the licensee when the proposed condition is acceptable to the licensee or if the licensee can propose an alternative to the proposed condition that is acceptable to the staff.

Commented [KA22]: ANSM-22

In addition, procedures, analysis, plant modifications, and other facility changes are typically developed in parallel with the NRC approval. If a licensee is informed of a proposed forward fit earlier in the process, they can potentially avoid substantial rework of these products (reducing overall cost the licensee).