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RS-15-322

10 CFR 50.109

December 8, 2015

Mr. William M. Dean  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Braidwood Station, Units 1 and 2  
Facility Operating License Nos. NPF-72 and NPF-77  
NRC Docket Nos. 50-456 and 50-457

Byron Station, Units 1 and 2  
Facility Operating License Nos. NPF-37 and NPF-66  
NRC Docket Nos. 50-454 and 50-455

**Subject:** Appeal of Imposition of Backfit Regarding Compliance with 10 CFR § 50.34(b), GDC 15, GDC 21, GDC 29, and Licensing Basis

**Reference:** Letter from Anne T. Boland (U.S. NRC) to Bryan Hanson, "Braidwood Station, Units 1 and 2, and Byron Station, Unit Nos. 1 and 2 – Backfit Imposition Regarding Compliance with 10 CFR § 50.34(b), GDC 15, GDC 21, GDC 29, and Licensing Basis (TAC NOS. MF3206, MF3207, MF3208, and MF3209)," dated October 9, 2015

In an October 9, 2015 letter and Safety Evaluation, the NRC concluded that the Braidwood and Byron stations are not in compliance with 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 15, "Reactor Coolant System Design," GDC 21, "Protection System Reliability and Testability," and GDC 29, "Protection Against Anticipated Operational Occurrences." The NRC also found that Braidwood and Byron are not in compliance with 10 CFR § 50.34(b) and the plant-specific licensing basis regarding the prohibition of Condition II events propagating into Condition III events.

Specifically, based on the NRC's review of the Braidwood and Byron Updated Final Safety Analysis Report (UFSAR), Chapters 15.5.1, "Inadvertent Operation of Emergency Core Cooling System during Power Operation (IOECCS)," 15.5.2, "Chemical and Volume Control System (CVCS) Malfunction that Increases Reactor Coolant Inventory (CVCS) Malfunction," and 15.6.1, "Inadvertent Opening of a Pressurizer Safety or Relief Valve (IOPORV)," the NRC concluded that the UFSAR predicts water relief through a valve that is not qualified for water relief. The NRC determined that the UFSAR does not contain analyses that demonstrate the structures, systems, and components will meet the design criteria for Condition II faults as stated in the Braidwood and Byron UFSAR. The NRC therefore concluded that the UFSAR analyses do not demonstrate compliance with GDCs 15, 21, and 29.

The NRC acknowledged that its position regarding Exelon Generation Company, LLC's (EGC) compliance with GDCs 15, 21, and 29, and 10 CFR § 50.34(b) is a change in NRC position

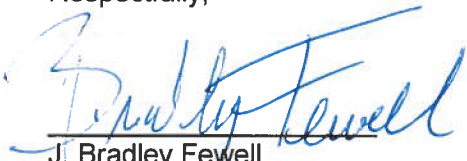
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constituting a backfit under 10 CFR § 50.109(a)(1). However, the NRC concluded that the backfit analysis required by 10 CFR § 50.109(a)(2) is not necessary because the backfit is covered by the compliance exception in 10 CFR § 50.109(a)(4)(i).

EGC disagrees with the NRC's conclusion that the compliance exception applies in this case and is therefore appealing the NRC's backfitting determination in accordance with Management Directive 8.4, "Management of Facility-Specific Backfitting and Information Collection." As detailed in the Enclosure to this letter, the NRC has twice approved the inadvertent operation of the emergency core cooling system analysis underlying the Braidwood and Byron licensing bases. The NRC now appears to claim that because these prior approvals were erroneous, it may invoke the compliance exception in lieu of performing a backfit analysis. Although the compliance exception may be invoked in certain circumstances in which the backfit is necessary to bring a facility into compliance with its license or other NRC requirements, the compliance exception requires more than simply asserting that the prior staff approvals were wrong – the NRC must demonstrate that the prior approvals were erroneous because of an omission or mistake of fact at the time of the approval. The NRC has not made that case here. Therefore, the compliance exception is not applicable and the NRC must conduct a cost-justified, substantial safety backfit analysis.

If you have any questions, please contact David Gullott at (630) 657-2807.

Respectfully,



J. Bradley Fewell  
Senior Vice President Regulatory Affairs  
Exelon Generation Company, LLC

Encl.

cc: Executive Director for Operations  
NRC Regional Administrator, Region III  
Illinois Emergency Management Agency – Division of Nuclear Safety  
NRC Senior Resident Inspector – Braidwood Station  
NRC Senior Resident Inspector – Byron Station

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**Background**

On October 9, 2015, the NRC staff imposed a compliance backfit on Exelon Generation Company, LLC (EGC) regarding compliance with 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 15, "Reactor Coolant System Design," GDC 21, "Protection System Reliability and Testability," GDC 29, "Protection Against Anticipated Operational Occurrences," and 10 CFR § 50.34(b) for Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2.<sup>1</sup> The NRC concluded that, based on its review of the Braidwood and Byron Updated Final Safety Analysis Report (UFSAR), Chapters 15.5.1, "Inadvertent Operation of Emergency Core Cooling System during Power Operation (IOECCS)," 15.5.2, "Chemical and Volume Control System (CVCS) Malfunction that Increases Reactor Coolant Inventory (CVCS) Malfunction," and 15.6.1, "Inadvertent Opening of a Pressurizer Safety or Relief Valve (IOPORV)," the UFSAR predicts water relief through a valve that is not qualified for water relief. Therefore, the NRC concluded, the UFSAR does not contain analyses that demonstrate the structures, systems, and components will meet the design criteria for Condition II faults as noted in the Braidwood and Byron UFSAR, Chapter 15.0.1.2, which states:

Condition II - Faults of Moderate Frequency:

These faults, at worst, result in the reactor trip with the plant being capable of returning to operation. By definition, these faults (or events) do not propagate to cause a more serious fault, i.e., Condition III or IV events. In addition, Condition II events are not expected to result in fuel rod failures or reactor coolant system or secondary system overpressurization.

The NRC further concluded that because UFSAR Chapters 15.5.1, 15.5.2, and 15.6.1 do not demonstrate compliance with GDCs 15, 21, and 29, the UFSAR does not comply with 10 CFR § 50.34(b), which requires, in part, a UFSAR to include:

a description and analysis of the structures, systems, and components of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which such requirements have been established, and the evaluations required to show that safety functions will be accomplished. The description shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations.

In its technical evaluation, the NRC staff discussed three areas of non-compliance: (1) the IOECCS analysis contains a non-conservative assumption, fails to address return to operation, depends on water relief through pressurizer safety valves that lack appropriate water qualification documentation, and does not analyze the event to an appropriate end state; (2) EGC had not provided an analysis for the chemical and volume control system malfunction that increases reactor coolant inventory that demonstrates the plants' ability to meet the requirements of a Condition II event, and; (3) EGC had not provided an analysis for the IOPORV extending long enough into the transient to demonstrate that the event would not transition from a Condition II to a Condition III event.

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<sup>1</sup> Letter from A. Boland (NRC) to Bryan Hanson, "Braidwood Station, Units 1 and 2, and Byron Station, Unit Nos. 1 and 2 – Backfit Imposition Regarding Compliance with 10 CFR § 50.34(b), GDC 15, GDC 21, GDC 29, and Licensing Basis (TAC NOS. MF3206, MF3207, MF3208, and MF3209)."

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The NRC recognizes that its current position on the acceptability of the IOECCS analysis that underlies the Braidwood and Byron licensing bases and its conclusion regarding compliance with the GDCs and regulatory requirements is a change in staff position. As described further below, the NRC on multiple previous occasions approved these analyses and concluded that Braidwood and Byron complied with all applicable GDCs and regulatory requirements.<sup>2</sup> The NRC now asserts that the prior acceptance "was based, among other things, on the use of water qualified [pressurizer safety valves] PSV's [sic] which upon further review, during the 2011 measurement uncertainty recapture uprate, was found to be unsubstantiated."<sup>3</sup>

**The Legal Standard for the Compliance Exception to Backfit**

The NRC defines a "backfit" 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...<sup>4</sup>

10 CFR § 50.109(a)(2) requires the NRC to prepare "a systematic and documented analysis...for backfits which it seeks to impose" unless a backfit exception applies. Under 10 CFR § 50.109(a)(3), the NRC may not impose a backfit unless that action would lead to a substantial increase in the overall protection of public health and safety or common defense and security, and even then, only if the backfit is cost-justified.

The compliance exception to the backfit rule, set forth in 10 CFR § 50.109(a)(4)(i), may be invoked when "necessary to bring a facility into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by the licensee." The Statement of Considerations for the backfit rule explains that the compliance exception:

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<sup>2</sup> "Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 119 to Facility Operating License No. NPF-37, Amendment No. 119 to Facility Operating License No. NPF-66, Amendment No. 113 to Facility Operating License No. NPF-72, Amendment No. 113 to Facility Operating License No. NPF-77, Exelon Generation Company, LLC, Byron Station, Unit Nos. 1 and 2, Braidwood Station, Unit Nos. 1 and 2, Docket Nos. STN 50-454, STN 50-455, STN 50-456, and STN 50-457," dated May 4, 2001 (2001 SE); "Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 138 to Facility Operating License No. NPF-37, Amendment No. 138 to Facility Operating License No. NPF-66, Amendment No. 131 to Facility Operating License No. NPF-72, Amendment No. 131 to Facility Operating License No. NPF-77, Exelon Generation Company, LLC, Byron Station, Unit Nos. 1 and 2, Braidwood Station, Unit Nos. 1 and 2, Docket Nos. STN 50-454, STN 50-455, STN 50-456, and STN 50-457," dated Aug. 26, 2004 (2004 SE).

<sup>3</sup> "Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Condition II Events that Could Generate More Serious Events at Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, Docket Nos.: STN 50-456 and STN 50-457 and STN 50-454 and STN 50-455," at 12 (2015 Backfit SE).

<sup>4</sup> 10 CFR § 50.109(a)(1) (emphasis added).

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is intended to address situations in which the licensee has failed to meet known and established standards of the Commission because of omission or mistake of fact. It should be noted that new or modified interpretations of what constitutes compliance would not fall within the exception and would require a backfit analysis and application of the standard.<sup>5</sup>

Thus, the compliance exception may not be invoked simply when the NRC adopts a position regarding compliance with the license or NRC requirements that differs from its previous position. Rather, where the NRC has explicitly approved a licensee's method of compliance with a license or NRC requirement, the compliance exception may later be invoked to avoid performing a backfit analysis only when that prior approval was the result of an omission or mistake of fact based on information available at the time of the approval. In other words, the NRC cannot approve a licensee's compliance method based on one interpretation of the requirement and the licensee's method of compliance, and then later use the compliance exception to require compliance with a new and different interpretation without performing a backfit analysis.

**The Compliance Exception Does Not Apply**

The NRC has not justified invoking the compliance exception to the backfit rule. Although the staff recognizes that it is now taking a different position with respect to compliance with GDCs 15, 21, and 29, nowhere does it explain how its prior positions were erroneous due to an omission or mistake of fact.

*Prior NRC Approvals*

Multiple times, the NRC has approved the same IOECCS analysis that it now claims to be inadequate.

*2001 Power Uprate*

In 2001, the NRC approved a stretch power uprate for Braidwood and Byron. During its review of the uprate request, the NRC issued Requests for Additional Information (RAIs) to Commonwealth Edison Company<sup>6</sup> (ComEd) regarding the IOECCS analysis to confirm that the pressurizer would not reach water solid conditions during an IOECCS event. The RAI stated:

The results of the analysis for an inadvertent operation of the emergency core cooling system (ECCS) during power operation indicate that the pressurizer will reach water solid during this event. The NRC staff has generally not accepted a solid pressurizer for this accident in order to avoid the potential for all three pressurizer safety valves to be stuck open (a SBLOCA) due to liquid relief through these safety valves. Please propose necessary plant modifications and

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<sup>5</sup> "Revision of Backfitting Process for Power Reactors," Final Rule, 50 Fed. Reg. 38,097, 38,103 (Sept. 20, 1985) (emphasis added).

<sup>6</sup> Commonwealth Edison Company (ComEd) was the Braidwood and Byron licensee prior to a corporate restructuring and indirect license transfer approved by the NRC in January 2001.

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provide the results of your reanalysis of this event to confirm that the pressurizer will not reach water solid conditions during this event.<sup>7</sup>

ComEd responded as follows:

ComEd has compared the temperatures from the EPRI subcooled water relief testing against the lowest temperature expected during a spurious SI event at Byron and Braidwood Stations, and has concluded that some valve chatter may occur; however, the resultant valve degradation will be less than the damage seen in the EPRI test. Since the EPRI tested valves were capable of closing in response to system depressurization, we have concluded that Byron and Braidwood Station valves would also be capable of closing in response to system depressurization. After use to relieve subcooled water, the safety valves may have some seat leakage through the closed valves due to the valve degradation; however, the leakage from three PSRVs would be less than the flow through one fully open PSRV. Thus, the spurious SI transient may result in a limited version of an inadvertent opening of a pressurizer safety or relief valve transient, which is also a Condition II event.

In the evaluation of an "Inadvertent Opening of a Pressurizer Safety or Relief Valve", an accidental depressurization of the RCS is postulated, potentially resulting in a release of RCS inventory into containment through a PSRV and a failed pressurizer surge tank rupture disc. No fuel damage is assumed to occur as a result of this event. As such, the radiological releases (i.e., offsite doses) resulting from this breach of the rupture disc were found to be "substantially less than that of a LOCA," but no quantifiable value is given for this dose in UFSAR Section 15.6.1. Since the leaking PSRV in the spurious SI event occurs well after the reactor has tripped, the consequences of the event are bounded by the present analysis in UFSAR Section 15.6.1.

...

Since all Condition II acceptance criteria are met, modifications and additional analyses are unnecessary.<sup>8</sup>

The NRC issued a second RAI regarding the EPRI tests applicable to the spurious safety injection (SI) event.<sup>9</sup> EGC responded with information regarding the EPRI tests, the temperature of water passed by the PSVs, and the length of time the PSVs are expected to pass water during an IOECCS event. In this response EGC again concluded that the spurious SI event would not progress to a Condition III event:

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<sup>7</sup> Letter from G.F. Dick (NRC) to O.D. Kingsley, "Byron and Braidwood – Request for Additional Information Regarding the Power Uprate Request," dated Oct. 19, 2000.

<sup>8</sup> Letter from R. M. Krich (ComEd) to NRC, "Response to Request for Additional Information Regarding the License Amendment Request to Permit Uprated Power Operations at Byron and Braidwood Stations," dated Nov. 27, 2000.

<sup>9</sup> Letter from G.F. Dick (NRC) to O.D. Kingsley, "Byron and Braidwood – Request for Additional Information Regarding the Power Uprate Request," dated Nov. 21, 2000.

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The lowest water temperature predicted for the expected duration (i.e., 20 minutes) of the Spurious SI transient at Byron Station and Braidwood Station is significantly higher (i.e., 590°F) than the lowest temperature (i.e., 530 °F) for the EPRI tests. Consequently, although stable valve operation cannot be assured, any valve damage would be expected to be less than the damage experienced during the EPRI testing. In any case, the safety valve will close upon system depressurization.

More importantly, it can be concluded that the Spurious SI event does not progress into a higher Condition transient (i.e., LOCA, Condition III). All three PSVs may lift in response to the event, but they will close and the resulting leakage from up to three PSVs is bounded by flow through one fully open PSV.<sup>10</sup>

Subsequently, the NRC approved the power uprate. In the accompanying Safety Evaluation, the NRC affirmed EGC's conclusions and stated that:

the EPRI tests adequately demonstrate the performance of the valves for the expected water temperature conditions and that there is reasonable assurance that the valves will adequately reseal following the spurious SI event....  
Therefore, the staff finds the licensee's crediting of the PSVs to discharge liquid water during the spurious SI event to be acceptable.<sup>11</sup>

Additionally, the NRC's approval of the 2001 power uprate included a review of the analyses supporting the CVCS Malfunction and IOPORV events. In the associated Safety Evaluation, the NRC concluded that these analyses are acceptable and both sites are adequately protected.

It is clear from the foregoing exchange and Safety Evaluation that the NRC staff specifically reviewed and approved the very analyses it now argues do not comply with GDCs 15, 21, and 29.

2004 PSV Setpoint Amendment

In 2003, EGC submitted a license amendment request for a PSV setpoint change. As part of its review, the NRC issued an RAI requesting that EGC perform a quantitative analysis regarding PSV water cycles and discharge water temperature:

The information discussed on pages 11 and 12 of Reference I for a qualitative evaluation indicated that the spurious SI event would have similar results from the LOAC with the RCP seal injection event in terms of the change in the number of PSV water cycles and PSV discharge water temperature. The information is not sufficient for the staff to determine the accuracy of the results of the qualitative evaluation. Perform a quantitative analysis using the approved

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<sup>10</sup> Letter from R. M. Krich (EGC) to the NRC, "Response to Request for Additional Information Regarding the License Amendment Request to Permit Uprated Power Operations at Byron and Braidwood Stations," dated Jan. 31, 2001.

<sup>11</sup> 2001 SE at 12.

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methods and provide the results to show the accuracy of the qualitative evaluation results.<sup>12</sup>

EGC performed a confirmatory calculation and concluded that the spurious SI event would not progress to a Condition III event:

Based on this confirmatory calculation, it is concluded that the results of the spurious SI at power event, considering the proposed PSV lift setting and increased tolerance, are similar to the results of the existing spurious SI evaluation relative to pressurizer water temperature, number of PSV steam and water relief cycles, and pressurizer fill time. Therefore, the spurious SI transient does not progress into a higher condition transient (i.e., a Condition III loss of coolant accident) consistent with the conclusion of the existing evaluation.<sup>13</sup>

The NRC subsequently approved the PSV setpoint change and once again concurred with EGC's IOECCS analysis. The staff's Safety Evaluation specifically affirmed EGC's conclusion that a spurious SI event would not progress to a Condition III event: "Therefore, the staff concludes that the reanalysis is acceptable to assure that the PSVs will remain operable following a spurious SI event."<sup>14</sup>

*The NRC's Current Position is Flawed*

Although there have been no changes to the IOECCS technical evaluation since the licensing actions described above, the NRC now asserts that its prior acceptance of the IOECCS analysis was based "on the use of water qualified PSV's [sic] which upon further review...was found to be unsubstantiated." This statement is not explained in the staff's backfit discussion. An NRC staff non-concurring opinion (NCO) related to the 2013 measurement uncertainty recapture power uprate for Byron and Braidwood (the genesis for this backfit issue) appears to form the basis of the NRC's backfit analysis.<sup>15</sup> The NCO states that the conclusion that PSVs are water qualified is "unsubstantiated by valve test results."<sup>16</sup> However, the NCO provides no factual support for this assertion. The NCO also states that the NRC staff erred in approving the Current Licensing Basis analysis as part of the 2001 power uprate, but, again, does not explain the factual basis for its assertion of an underlying error. Current NRC staff cannot rely on an unspecified "error" made by prior NRC staff to demonstrate that an omission or mistake of fact underlying the prior NRC approvals renders those approvals unacceptable now. In any event, the NRC has not attempted to identify any "omission" or "mistake of fact."

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<sup>12</sup> Email from M. Chawla (NRC) to J. Bauer, "Request for License Amendment to Revise the PSV Lift Settings – Byron/Braidwood Units 1 and 2," dated Oct. 2, 2003.

<sup>13</sup> Letter from K. A. Ainger (EGC) to NRC, "Request for Additional Information Regarding a License Amendment Request to Revise the Pressurizer Safety Valves Lift Settings," dated Jan. 29, 2004.

<sup>14</sup> 2004 SE at 5.

<sup>15</sup> Memorandum from C. Jackson to S. Miranda, "Making Non-Concurrence NCP-2013-014 Public," dated Feb. 28, 2014, at Encl. 1.

<sup>16</sup> *Id.*



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The NRC's backfit discussion asserts that its application and interpretation of the GDC, regulatory, and UFSAR requirements is consistent with prior applications and interpretations of compliance with those same requirements. The staff appears to assert that because its application and interpretation of the GDC, regulatory, and UFSAR requirements has not changed (but only its conclusion that Braidwood and Byron satisfy those requirements has changed), it satisfies the compliance exception to the backfit. The NRC cites Chapter 15 of the Standard Review Plan<sup>17</sup>, as well as Regulatory Guide 1.70<sup>18</sup> as the basis for its position that it has "made no substantive changes to the position that Condition II events must be prohibited from transiting [sic] to Condition III events."<sup>19</sup>

While the NRC's interpretation regarding a Condition II event transitioning to a Condition III event has been consistent, the NRC's application of GDCs 15, 21, and 29 to support this backfit appears to differ from its previous documented positions. Here, the NRC concludes that the Braidwood and Byron UFSAR analyses do not demonstrate compliance with GDCs 15, 21, and 29. But the NRC has not articulated the basis for this conclusion, which is a departure from its previous positions. In Sections 3.1, 3.2, and 3.3 of the 2015 Backfit SE, the NRC discusses the IOECCS, CVCS Malfunction, and the IOPORV events, respectively. But other than a GDC 21 single failure discussion in Section 3.1, there is no other discussion on the three GDCs or their compliance and application to these three events.

Section 3.0 of the Backfit SE discusses the acceptance criteria for anticipated operational occurrences (AOOs) by referencing SRP Chapter 15.0, noting that pressure in the Reactor Coolant System (RCS) should be maintained below 110 percent of the design value in accordance with the ASME Boiler and Pressure Vessel Code. Specific to the three AOOs discussed in the Backfit SE, the SRP chapters cited by the staff state that compliance with GDC 15 requires that the RCS be designed with sufficient margin to assure that the design conditions of the RCS pressure boundary not be exceeded. The UFSAR analysis for each of these three AOOs does not result in pressures that reach 110 percent of RCS design pressure. Therefore, the NRC has not explained how the current UFSAR discussions of these AOOs do not comply with its stated positions on GDC 15.

Additionally, the specific SRP chapters for IOECCS, CVCS Malfunction, and IOPORV AOOs are silent on the applicability of GDCs 21 and 29, and do not discuss these GDCs as part of the Acceptance Criteria or Technical Rationale applied to the review of these AOOs. Thus, applying GDCs 21 and 29 to these AOOs, as the staff does in the Backfit SE, expands the GDCs' intent and changes the details of the accident analysis, which the Backfit SE fails to address. The GDCs themselves do not specifically set forth the details and approaches for analyzing these AOOs, and the applicable guidance does not reference these GDCs; therefore, the compliance exception to backfit does not apply.

The NRC's backfit discussion also references Regulatory Issue Summary 2005-29, "Anticipated Transients That Could Develop into More Serious Events," to support its position. The NCO states that the IOECCS analysis "has been unacceptable *since* [RIS 2005-029] was

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<sup>17</sup> NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition" (SRP).

<sup>18</sup> "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, LWR Edition."

<sup>19</sup> 2015 Backfit SE at 12.

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issued (2005)" (emphasis added). But by this logic, the 2001 and 2004 NRC approvals (issued before RIS 2005-029), were sound and only *after* RIS 2005-029 was issued did those prior NRC approvals become unacceptable. This reasoning highlights the NRC's flawed approach to imposing a backfit. If the IOECCS analysis became unacceptable after the 2005 RIS, then that same analysis was acceptable when previously approved by the NRC in 2001 and 2004. If the IOECCS analysis was acceptable in 2001 and 2004, then there is no omission or mistake of fact that led the NRC to erroneously approve that analysis on those two occasions. Without pointing to an omission or mistake of fact underlying a previous approval, the NRC has no basis for invoking the compliance exception.

In summary, the NRC has failed to justify imposition of a backfit under the compliance exception. To rely on this exception, the NRC must identify the omission or mistake of fact underlying its prior conclusions in 2001 and 2004 that the analyses of the IOECCS, CVCS Malfunction, and IOPORV events are acceptable. Without identifying and proving an omission or mistake of fact in the prior NRC approvals (rather than simply relying on an unspecified "error"), EGC may rely on those approvals to demonstrate compliance until the NRC staff completes a backfit analysis demonstrating that the backfit is a cost-justified, substantial safety enhancement. Otherwise, the NRC is simply changing its position regarding compliance, which is not covered by the compliance exception.

### **Conclusion**

The NRC's Backfit SE does not justify imposition of a backfit. To invoke the compliance exception, the NRC must identify an omission or mistake of fact invalidating its prior approvals. Otherwise, the staff must perform a backfit analysis to determine whether the backfit is a cost-justified, substantial safety enhancement.<sup>20</sup> The NRC has done neither in this instance. For these reasons, EGC's appeal should be granted.

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<sup>20</sup> The NRC staff must also prepare a regulatory analysis in accordance with Management Directive 8.4, which has not been done.