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62FR24997
May 7, 1997
(7)

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1997 JUL -7 PM 12:40
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US NRC

July 7, 1997

Mr. David L. Meyer
Chief, Rules and Directives Branch
Division of Administrative Services
Office of Administration
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

SUBJECT: Industry Comments on NUREG-1606, "Proposed Regulatory Guidance Related to Implementation of 10 CFR 50.59 (Changes, Tests or Experiments)," (62 Fed. Reg. 24997 – May 7, 1997)

These comments are submitted by the Nuclear Energy Institute (NEI)[1] on behalf of the nuclear energy industry in response to the subject *Federal Register* notice. We appreciate the opportunity to comment on the proposed regulatory guidance. Enclosure 1 provides detailed comments on the regulatory positions discussed in NUREG-1606. Enclosure 2 provides examples of the effects that certain of these positions would have on licensee implementation of 10 CFR 50.59 evaluations.

The industry comments and examples were developed with extensive input and review from NEI's Regulatory Process Working Group, NEI's 10 CFR 50.59 Task Force, and from attendees at NEI's Industry Workshop on 10 CFR 50.59, conducted on June 17-18, 1997 in Washington, DC. This level of input and review reflects the great importance that the industry places on the implementation of 10 CFR 50.59, as well as the sensitivity that the industry has to potential disruptive changes in existing licensee programs.

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I&PII Guides/Manuals

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1 NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory aspects of generic operational and technical issues. NEI members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

In short, the industry is concerned with the direction, imposed burden, and overall impact associated with the proposed guidance discussed in NUREG-1606. These concerns are focused in three principal areas:

- The proposed guidance undermines a process that has proven effective;
- The proposed guidance would impose a significant burden on licensees and the NRC staff; and
- The proposed guidance would have an adverse impact on safety.

The NRC has acknowledged in SECY 97-035 that few concerns have been identified with implementation of 10 CFR 50.59, that the regulation has been and continues to be effective in preserving safety margins, and that the foundation of current industry practice, NSAC-125, *Guidelines for 10 CFR 50.59 Safety Evaluations,* produces effective evaluations that are highly likely to identify changes of significance. Given these conclusions, which are certainly shared by the industry, it is not apparent why NUREG-1606 proposes many new and changed NRC positions that contradict previously accepted licensee practice as well as previously issued NRC positions.

In its presentation to the Advisory Committee on Reactor Safeguards on April 3, 1997, the NRC staff discussed its review of the Millstone station's implementation of 10 CFR 50.59 evaluations. The staff found that the evaluations performed by the licensee were generally thorough and of high quality. The key finding, however, was that there were instances where the licensee made changes to the plant without performing a review under 10 CFR 50.59.

We believe the concern over what activities are subject to review under 10 CFR 50.59 is an area that merits further attention. Our revision to the industry guidance will address this concern. However, we believe that NUREG-1606 is clouding the issue by proposing new and changed positions and interpretations for various other aspects of 10 CFR 50.59 implementation. Furthermore, the NRC's proposed guidance is causing confusion on the part of both NRC inspection personnel and licensees, creating instability in the regulatory process, and as a result is undermining the effective current implementation of 10 CFR 50.59 evaluations.

Our second concern deals with the potential burden that the proposed guidance would have on both licensees and the NRC staff. NEI conducted an industry survey aimed at estimating the difference between current industry practice and implementation using NUREG-1606. The results indicate that licensees could be processing on the order of 100 additional license amendments per facility per

operating cycle due to unreviewed safety questions (USQs) identified using the proposed guidance. Thus, NRC could expect approximately 7,000 additional license amendments to process every 18 to 24 months. In terms of person-hours, licensees could spend on average an additional 15,000 to 20,000 hours on all aspects of 10 CFR 50.59 implementation (i.e., screening, full evaluations, and USQs). Given that the current 10 CFR 50.59 process has proven effective in preserving safety margins, this potential burden imposed on licensees and the NRC staff would contribute little or, more likely, nothing from a safety perspective.

The additional number of USQs is driven by the proposed NRC positions on several key aspects of 10 CFR 50.59, including NRC interpretations of "increase in probability," "increase in consequences," "malfunction of a different type," "margin of safety," and treatment of "nonconforming or degraded conditions." The examples provided in Enclosure 2 demonstrate how the proposed positions would result in USQ determinations, and how the revised industry guidance would result in a different conclusion. We are particularly concerned over the proposed position that would preclude plant startup if a nonconforming condition involves an USQ even if the condition has nothing to do with safety or operability. This position could unnecessarily extend plant shutdowns.

Obviously, the level of additional activity estimated by licensees in our survey would create an untenable situation for both licensees and the NRC. Again, given the acknowledged effectiveness of current industry practice, this imposition of burden would be unwarranted and indefensible.

Our third principal concern deals with the adverse impact that the proposed guidance would have on safety. There are a number of different ways that NUREG-1606 would have this impact. One apparent impact would be the diversion of licensee and NRC attention and resources to processing license amendments. This runs the risk of diluting attention that should be paid to potential safety issues by the need to administratively process many so-called USQs that have no impact on safety.

Another significant impact would be the need to seek prior NRC review and approval before taking actions that are clearly in the best interest of safety. The examples in Enclosure 2 demonstrate how simple actions like scheduled preventative maintenance on a standby, nonsafety-related pump and restoration of the alarm capability on a functioning level transmitter would result in an USQ determination using the NRC staff's proposed guidance. Thus, these actions would have to be delayed until the licensee receives NRC review and approval through the license amendment process. We believe there is a fundamental problem in NUREG-1606 when adherence to the guidance results in actions that are not in the interest of safety.

A third, and perhaps less apparent, impact of NUREG-1606 is the disincentive licensees would have to make improvements to their facilities. Licensees make changes to their facilities for a variety of reasons, the vast majority aimed at improving plant operations. The extreme interpretations put forth in the proposed guidance would result in many additional USQs and require the licensee to seek prior NRC review and approval and a license amendment before implementing the change. This added regulatory burden could have a chilling effect in discouraging licensees to proceed with the change if the burden outweighs the potential benefit. Again, we believe there is a fundamental problem when adherence to regulatory guidance would discourage plant improvements.

In summary, the industry has significant concerns with the proposed guidance in NUREG-1606 and believes it should not be further promulgated as a regulatory guide. The proposed guidance misses the mark in terms of focusing on the identified concern of what changes are subjected to review, would have a debilitating effect on licensee and NRC resources by potentially flooding the regulatory process with trivial license amendments, and may result in many unintended consequences that would have an adverse impact on safety.

Finally, we note that the Commission has directed the NRC staff to prepare a rulemaking plan for 10 CFR 50.59. The industry firmly believes that rulemaking is not necessary to address the two concerns regarding scope and increases in probability that have apparently kept the NRC from accepting the industry implementation guidance. Our revision to the industry guidance, NEI 96-07, as well as the supporting analysis of why the guidance meets the requirements of 10 CFR 50.59, will be forwarded under separate cover, and we look forward to discussing these documents with the NRC.

The industry would encourage the NRC to consider longer-term improvements to 10 CFR 50.59 through a more risk-informed, focused and efficient regulatory approach. If the Commission decides to proceed with such an effort, we believe the industry guidance could continue to serve in the interim in assuring that safety margins are effectively maintained.

We appreciate the opportunity to comment on the proposed guidance in NUREG-1606 and look forward to continued interaction with the NRC on this matter of great importance to all parties.

Sincerely,

Anthony R. Pietrangelo

Anthony R. Pietrangelo

ARP/

Enclosures

c: The Honorable Shirley Ann Jackson, Chairman, NRC
The Honorable Greta Joy Dicus, Commissioner, NRC
The Honorable Nils J. Diaz, Commissioner, NRC
The Honorable Edward McGaffigan, Jr., Commissioner, NRC
Mr. Leonard J. Callan, EDO/NRC
Ms. Eileen McKenna, NRC/NRR

ENCLOSURE 1

GENERAL AND DETAILED COMMENTS ON NUREG - 1606

NEI COMMENTS ON NUREG-1606

GENERAL COMMENTS:

1. **DEGRADED AND NONCONFORMING** - Sections III.A and III.O of NUREG - 1606 each discuss the concept of a "*de facto* change or modification." It appears the NRC's concern is that licensees may inappropriately use their prioritization and scheduling prerogatives to delay corrective actions and maintenance activities necessary to restore an identified condition of being outside of the licensee's licensing basis to a condition of being within the licensing basis. We believe that the NRC already has sufficient regulatory authority under 10 CFR 50 Appendix B to deal with what is essentially a timeliness of corrective action issue. There is no need to create a new category of change or modification to make 10 CFR 50.59 apply to the timeliness of corrective actions. Furthermore, we believe that the history of application of 10 CFR Appendix B Criterion XVI supports that the NRC has shown no reluctance in using this criteria. Nevertheless, we believe the guidance in NUREG - 1606, Sections III.A and III.O associated with the *de facto* changes, as augmented by our comments, provides useful input to the industry and the NRC as to what constitutes timeliness of corrective actions and maintenance activities.

2. **SAR REDUCTION** - Not all aspects of the FSAR should require a 10 CFR 50.59 evaluation just because the SAR changes. Many areas within the FSAR contain only descriptive information that will have no impact on the NRC's decision based on the questions asked by 10 CFR 50.59 (i.e. the review will always result in a negative USQ conclusion). Other cases may involve only clerical changes that will not impact the conclusion and should not invoke a complete 10 CFR 50.59 evaluation. In addition, FSARs typically contain P&IDs that include detail that is beyond a concern with the designed function and operation of the systems. The 10 CFR 50.59 evaluation process should be a limited review where the potential for safety analysis or a true USQ is potentially at risk. Deletion of existing information which is believed to be below the level of detail required to be included in the FSAR should be permitted. Such deletions should meet the following criteria:

    Information contained in the SAR:

    - Was not specifically required to be included by regulatory requirements/guidance (e./g., 10CFR50.71(e), Standard Review Plan, Regulatory guides, etc.,
    - Was not the basis for any commitment,
    - Was not documented to be the basis for NRC acceptance in any SER/SSER,
    - Provides safety or safe shutdown aspects of details (if any) are covered by an existing broader or more general commitment (e.g., commitment to a Reg Guide or industry standard,
    - Is contained in a more appropriate location than the SAR.

3. **APPLICATION OF 50.59 FOR USQ APPROVAL** - 10 CFR 50.59(c) requires licensees who desires to make a change to the technical specifications or request prior NRC approval of a proposed change that involves an unreviewed safety question, to submit an application for license amendment under 10 CFR 50.90. Requesting an amendment under 10 CFR 50.90 means that some portion of the license is being changed therefore, a change to the SAR that does not result in a change to the license does not require NRC approval. No part of the license deals with a change which is being made to the SAR.

   SAR changes need to be documented per 10 CFR 50.71(e). The more stringent actions of 10 CFR 50.90 would slow the approval process with no commensurate level of safety. Rulemaking should be performed to simplify the process if a USQ is identified which is desired.

4. **CONSEQUENCES** - To tie any increase in consequences solely to values in the SAR would be counterproductive to NRC's interest in SAR integrity. Plants that have provided accurate and detailed information in their SAR would be penalized under the draft guidance, as any use of the design margin between what is reported in the SAR and the SER/regulatory guidance acceptance limits would result in a USQ. However, plants who have maintained information in their SAR which, for example, merely repeated that dose consequences met the appropriate requirement (e.g., < 10CFR100, less than a small fraction of 10CFR100, less than GDC 19 limits) would be allowed to continue to use design margin between their actual calculated values and the values reported in the SAR without having to go through NRC review and without the burden of the additional processing required for changes involving USQs.

   NRC agreement with the fact that the SAR is not the baseline for determining if there is an increase in consequences is documented in the May 10, 1989, NRC letter from C.E.Rossi to Mr. T.E.Tipton of NUMARC. In this letter, the NRC states :

   > "If a proposed change, test, or experiment, would result in an increase in dose from an accident or equipment malfunction above that previously reviewed and approved by the staff as part of the licensing basis for the plant (i.e., the acceptance limit), then the proposed change, test or experiment involves an unreviewed safety question and would require prior NRC approval."

   The NRC also states in this letter:

   > "...if in licensing the plant the staff explicitly found that the plant's response to a particular event was acceptable because the dose was less than the SRP guidelines (without further qualification) then the staff implicitly accepted the SRP guideline as the licensing basis for the plant and the particular event, and the licensee may make changes that increase the consequences for the particular event, up to this value without NRC approval. However, if the staff cited some value other than the SRP guideline as its criteria for licensing the plant then that value is considered the licensing basis for the plant."

Thus, the NRC has clearly established that the acceptance basis in the SER, which is often that of the SRP, is the proper licensing basis for the plant. Thus, any value for the dose consequences which remains less than that acceptance basis is considered to have been reviewed by the NRC as within the plant licensing basis and is not a unreviewed safety question[1].

NRC should explicitly allow use of improved technology or improved data which is approved at one plant or used within NRC rulemaking to be used at other plants without it being a USQ. For example, use of ICRP30 dose conversion factors by a plant previously using older ICRP 2 factors, which have proven inaccurate and overly conservative, should be acceptable for all licensees since the NRC has inherently accepted ICRP 30 by using it as the basis for 10CFR20.

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[1] Note: an example exists where NRC has explicitly used the SRP alone as the basis for limits on a plants licensing basis. In 1992, a PWR submitted to the NRC, as a potential Unreviewed Safety Question, a case where the calculated percent of fuel rods experiencing DNB as the result of a transient analysis exceeded the value previously documented in its SAR and SER. The SER had repeated the results of the utility analysis and had concluded, without an explicit basis, that the results were acceptable. Since there was no clear acceptance basis discussed in the SER, the utility had submitted this case to the NRC as a potential USQ. The NRC responded to the utility and stated that

"However, even if all of the pins experiencing DNB were to fail, a coolable geometry would be maintained and the consequences remain a small part (less than 10 percent) of 10CFR Part 100 limits."

Note that the SRP acceptance limits for this event are that the dose consequences remain a small part (less than 10 percent) of 10 CFR 100 limits.

The staff also concluded that the 10 CFR 50.59 criteria had been met for this change and that the change satisfied 10 CFR 50.59 criteria.

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
III.A Definition of Change	5/35	It is not accurate that the NRC "does not have any published guidance that defines those actions that constitute a 'change'..." The NRC published guidance on what constitutes a 'change' in 1984 in Inspection Guidance; Part 9800, in NRC I.E. Circular 80-18, dated August 22, 1980, and in Inspection Manual ; Inspection Procedure 37001; "10 CFR 10 CFR 50.59 Safety Evaluation Program" dated December 29, 1992. In these three documents, the concept of implicit and explicit descriptions are discussed and examples given.
	5/39	We disagree with the interpretation that a "change" is a modification or replacement that is not identical to the original. We would agree that the replacement needs to be functionally identical. The current terminology of 'identical to the original' when describing a change is modified considerably by the NRC from earlier guidance. NRC I.E. Circular 80-18 and NRC Inspection Manual and Inspection Procedure 37001 both state that replacement items procured to the same (or equivalent) purchase specifications (i.e. design requirements) are maintenance activities.
	5/44	It is our position that for purposes of 10 CFR 50.59 a change requiring a 10 CFR 50.59 evaluation is any activity which may affect the design, function, or method of performing the function (including procedures) of a system, structure, or component described in the SAR. To determine whether a change alters the design, function, or method of performing the function of a system, structure, or component, it is our view that a thorough understanding of the design basis of the systems involved are essential. Therefore, if the proposed change can be evaluated and documented in the screening to ensure the design bases and credited functions described in the SAR are not affected, the change should not require further analysis under 10 CFR 50.59. Regarding an "activity already reviewed" we believe further discussion between industry and the NRC staff is necessary to clarify how one determines whether a prior submittal, reviewed and approved by the Commission, can be used to address a proposed change being undertaken by a licensee and not require a 10 CFR 50.59 evaluation. *See also General Comment #1 concerning items III.A and III.O.*
	5/49	

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
		Maintenance activities, per se, should not require a 10 CFR 50.59 review. The NUREG-1606 concerns are properly addressed through plant on-line maintenance programs, 10CFR50, Appendix B and the Maintenance Rule (10CFR50.65). The 1984 version of I & E Manual Part 9800 provides a good definition of Maintenance Activities. Maintenance activities return the plant to its original design requirements and state and do not change the plant configuration. *Comments relative to equipment left out of service for a long time are discussed in Section III.O of the comments.*
	6/5	We do not believe that removing a system, structure, or component from service for maintenance, even if it is not discussed in the Tech Specs, should , in itself, require a 10 CFR 50.59 evaluation. The overall system ability to support plant operations is reviewed by a senior reactor operator for impact on plant safety. Also, a licensee has the obligation to ensure that removing equipment from service does not invalidate the design bases. By mandating a 10 CFR 50.59 evaluation for systems removed from service that are not covered by an LCO, means that licensees will perform safety evaluations on Job/Work Orders. Allowance for routine maintenance is an inherent assumption in the design of any plant. In addition, the Maintenance Rule provides a mechanism to ensure that the impacts of removing equipment from service is evaluated. The draft guidance in NUREG-1606 would paradoxically make it less burdensome to take Tech Spec equipment out of service under an LCO than to take non-Tech Spec equipment, which have a lower inherent safety significance, out of service.

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
III.B Definition of Facility	7/7-9	The NUREG-1606 draft guidance uses the term "all" when referring to SSCs. We would like to clarify that only systems, structures, and components not described in the SAR that could impact systems, structures, and components described in the SAR through indirect or secondary effects require a 10 CFR 50.59 evaluation.
	7/44	As stated in the note, 10 CFR 50.2 defines design bases as that information which identifies the specific functions to be performed by a structure, system or component of a facility, and the specific range of values chosen for controlling parameters as reference bounds for design. These values may be (1) restraints derived from generally accepted "state of the art" practices for achieving functional goals, or (2) requirements derived from analysis (based on calculation and/or experiments) of the effects of a postulated accident for which a structure, system or component must meet its functional goals. As a matter of clarification, most U.S. plants were built using both design methodologies Again the information under 10 CFR 50.2 only includes design bases information to the extent it is described in the SAR. At the same time, all information contained within the FSAR does not constitute design basis information as defined under 10 CFR 50.2.

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
III.C Definition of Procedure	8/14	The industry is concerned with the implication that drawings in the SAR should reflect all plant operating modes and configurations. SAR drawings reflect the system design, not the procedural and operational instruction. For example, valve alignments (open vs. Closed) will differ depending on whether the plant is in MODE 1 or shutdown. Licensees generally control system operation through System Operating Procedures, which are under the control of licensee 10 CFR 50.59 processes. Operating a plant system differently than shown on SAR drawings (but within the bounds of plant licensing and design bases) does not reflect a change to the facility.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.D Definition of Test or Experiment	9/10	As a matter of clarification, NSAC/125 provides guidance on defining tests and experiments. For example, in Section 4.1.3 of NSAC/125 it states that "for preoperational tests, surveillance tests, functional tests and startup tests that are performed monthly, quarterly or on a refueling outage basis, safety evaluations are not required every time a test is performed". Four specific examples of tests that require safety evaluations are also provided.
	9/26	A "test or experiment" will typically involve a special procedure where plant systems are operated different from or in conflict with the description of system operations in the SAR. The context of this question should clearly recognize that the action is not within the scope of actions described in the SAR. The reference to a "special procedure for a particular purpose or an evolution performed to gather data" does not account for the fact that the need for a 10 CFR 50.59 safety evaluation is associated with how the equipment and/or plant is operated rather than the data which is being obtained during such operations.

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
III.E Definition of "as described"	10/42	The draft guidance broadly interprets the term "as described." Again, we do not believe all information in the SAR requires a 10 CFR 50.59 safety evaluation if it is changed. This interpretation may potentially result in excessive 10 CFR 50.59 evaluations on relatively trivial, non-significant changes which will not impact any conclusions reached in the SAR or Commission's conclusions. The 10 CFR 50.59 process should allow licensees to screen out FSAR editorial changes, clarifications, and changes which have no impact on system, structure, and components or plant safety, without having to perform a 10 CFR 50.59 evaluation. A specific example is a drawing change (i.e. change to a P&ID) which does not affect the design, function, or method of performing the function of a system, structure, and component. Section 7.d in Part 9800 of the 1984 version of Inspection and Enforcement Manual specifically provides for such cases where 10 CFR 50.59 evaluations are not required.
	10/47 - 11/3	Not all information that presents the "purpose, quality, kind, number..." is part of the design bases as defined in 10 CFR 50.2.

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
III.F Definition of FSAR	12/9	NUREG-1606 is unclear on whether references (i.e. topical reports) in the FSAR are considered part of the FSAR and subject to 10 CFR 50.59. It is our position that the SAR includes documents that are referenced as part of the description in the SAR but does not include documents merely listed as references. *See also General Comment #2.*

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.G Industry Use of Screening Process	Gen.	The screening process described in NSAC-125/NEI 96-07, is taken directly from NRC's 1984 Inspection Guidance; Part 9800. This guidance provides the basis for screening along with examples to make the point.
	13/28	The basis for screening is to determine whether a detailed 10 CFR 50.59 evaluation is required. It should be noted that the NUREG-1606 statement on this line is incorrect. The industry does not use a screening to determine whether a USQ is involved.
	14/19	If screenings are performed within the licensee's processes, then they should be retained consistent with the retention requirements of the document being screened.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.H Definition of Accident Previously Evaluated	15/12	For purposes of clarification, typically, only those accidents contained in Chapters 2 (as appropriate), 6 and 15 are considered accidents that would be addressed under the unreviewed safety question questions dealing with probability, consequences and accidents of a different kind. Other events are considered malfunctions of equipment that would be evaluated under that question in 10 CFR 50.59. Although the same conclusion will result , it is reached under a more accurate definition and a more appropriate application.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.I Malfunction Of Equipment Important To Safety Of A Different Type	16/34 17/28	The expanded definition of malfunction is not necessary. The concern addressed by the definition is prevented by good engineering practice. The industry believes an interpretation that results in evaluating the potential cause of a malfunction as a condition that could result in an unreviewed safety question leads to performing safety evaluations on actions that have no impact on plant safety. This could substantially expand the number of actions that will require prior NRC review, thus diverting the safety focus of the NRC and licensees In accordance with the draft guidance, an unreviewed safety question exists if the new component functions differently but results in the same probability or consequences.. The unreviewed safety question determination should focus on whether a different "type" of malfunction exists and whether a component's potential failure can propagate to other systems or components . In addition, postulated, non-mechanistic failures of non-safety and safety-related equipment are typically assumed in SAR analyses. Exact failure modes should not be evaluated unless specifically addressed in the SAR. This is consistent with 10 CFR 50.2 which <u>defines</u> a safety function as opposed to <u>how</u> the function is performed. Therefore, the industry disagrees with the approach to categorically treat different causes of failure as a failure of a different type than that evaluated in the SAR. Such an approach does not provide a reasonable regulatory basis for the definition. Equipment malfunctions should be treated based upon the effects of the malfunction, given that probability or consequences of the malfunction do not increase. The draft guidance appears to confuse the significance of component failure mechanism with that of failure mode. A new failure mechanism is not necessarily a "new type of malfunction" unless it results in a new failure mode of the equipment or system. The NRC staff provided their views on this topic in their comments on NSAC-125 in letter dated May 10, 1989, from Mr. Charles E. Rossi, Division of Operational Events, NRR, to Mr. Thomas E. Tipton, Operations, Management, and Support Services Division, NUMARC. The NRC did not take exception to the approach and words provided by the industry.

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
		The draft guidance is also counter to the increased focus on Performance Based Regulation. The overall results and performance of the equipment must be assessed; if a different failure mode results in no different failure impacts to the rest of the plant, then there is no change in the performance of the equipment in question, or upon any other system structure, and component influenced by the subject equipment.
	17/36	The example in the draft guidance is inappropriate What is of interest in the example is if the pressure transmitter can fail in a manner that propagates to other systems in a new or different way, rather than merely the mode of failure. However, if there are no different effects on other equipment, or the failure does not influence plant response and does not influence the response of any system, structure, or component important to safety, then it is improper to categorize this failure as a different type than that described in the SAR. The Commission typically performed their safety review on a system level. Many design changes involve adding new components or replacing existing components with improved designs or new materials. There may be new causes of failures associated with these components, that by the definition in the draft guidance, would be a unreviewed safety question. This level of detail appears to be beyond the intent of the 10 CFR 50.59 rule and certainly would limit changes which could be made without prior NRC approval.

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
III.J Modifications Associated with Tech Specs	18/30	We agree that any proposed modification resulting in a change to the Tech Specs will receive a license amendment. However, it should be clear that compensatory actions associated with finding a Tech Spec that is not conservative should be allowed while a Tech Specs amendment is being processed by the licensee and reviewed by the Commission as long as appropriate administrative controls are in place. *See also Item III.L*
	18/35	We agree with the statement that "...staff approval of the proposed modification (and Tech Specs) must occur before the ongoing modification is implemented." However, with an adequate 10 CFR 50.59 screening/evaluation and design requirements review, a modification should be allowed to be designed, planned, installed, and tested prior to Tech Specs approval by the Commission. When the Tech Spec is approved, the Commission then cannot hold Licensee in violation (compliance issue) of License/Tech Specs until the modification is placed in service/ declared operable, per the licensee's implementation schedule. The 10 CFR 50.59 for the change must address the basis for the controls established and verify that no potential unreviewed safety question exists for the interim condition.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.K 50.59 Evaluations for Generic Modifications		No comment

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / Line*	Comments
III.L Tech Specs Not Adequate for Design Bases	20/10	Compensatory actions associated with finding a Tech Spec that is not conservative (e.g., new analysis demonstrates a higher required flow than specified per Tech Specs) should be allowed while a Tech Spec amendment is being processed by the licensee and reviewed by the Commission as long as appropriate administrative controls are in place. If a degraded condition (e.g., compensatory action is required as a result of heat exchanger fouling) is identified, and a successful operability evaluation has been performed, and the timing is such that a unit is approaching an outage or other period where the condition will be corrected, there should not be a need to temporarily modify the Tech Spec to document the compensatory action. If it is determined that the technical specifications will require modification to resolve the nonconservatism., the licensee should pursue a "timely" Tech Spec change with the Commission. Our concern is that, unless there is an operability issue, there should be no urgency in addressing a nonconservative technical specification provided that administrative controls are in place. A licensee who is pursuing Improved Technical Specifications should also be allowed to correct the condition through this process in a timely manner. *See also Item III.O on Degraded and Nonconforming Conditions.*
	20/14	The Commission issued related guidance in Generic Letter 91-18 on evaluation for operability. The first action is to write a Condition Report (nonconformance report) which ensures that the condition is identified and will provide for a 10 CFR 50.72/.73 review. The industry agrees that the Tech Specs should be changed, however, there is no basis in safety that this would require an immediate action. The actions resulting from the condition report may involve additional design changes that will provide a different Tech Spec action and Bases. There is also the potential that other actions which may be a refueling cycle away that will return the condition to its required status. These do not require a Tech Spec change.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.M PRAs in 50.59 Evaluations	21/3	The discussion in the draft guidance does not acknowledge the general industry practice of maintaining PRA's for their plant. PRA for example is integral to the maintenance rule.
	21/12	The statements in this paragraph regarding the use of deterministic methods and postulated design basis events appears to reach a conclusion that is different than that contained in Section III.P. Section III.P seems to conclude that any change in probability including any minor movement within a broader accident category is a unreviewed safety question and no allowance can be taken from the broader deterministic conclusions contained in the SARs. *See further comments under Item III.P*
	21/19	PRAs may not be the appropriate tool for determining whether a unreviewed safety question exists, but it does provide a potential benefit for characterizing the potential change in probability if a unreviewed safety question is determined to exist. This should not be inferred that PRAs cannot be used, but only that they may not represent the best tool. PRA results and risk insights can play a significant role in evaluating a potential unreviewed safety question. Risk insights on the proposed change could also provide an additional dimension to the safety test of the 50.59 process relative to the purely deterministic perspective.

* This is a reference to the page and line from SECY 97-035

NEI COMMENTS ON NUREG-1606

NUREG Reference	Page / line*	Comments
III.N Deleting Information from FSAR	Gen	Disallowing removal of information from the SAR is overly conservative, not well justified and not technically based given the burdens placed on licensees resources that would otherwise be available to focus on areas of higher safety significance. It is reasonable to believe that the Commission did not rely on all information that is contained in the SARs to establish the basis for the operating license. In addition, later vintage plants generally contain more general information that does not effect safety. Allowing removal of non-relevant or nonsafety significant information from the SAR results in more effective 10 CFR 50.59 evaluations. For example, non-technical detail on a drawing may not be removed simply because the drawing is in the SAR. We believe the draft guidance represents a new requirement.
	23/20	There is validity to the concern that removal of information from SAR should be approached with caution. However, industry processes, including 10 CFR 50.59, are adequate to prevent removing information which would impact the reliability and accuracy of future unreviewed safety question determinations.
	23/38	Recognizing the reference to Generic Letter 80-110 for not deleting information from the SAR, it is inconsistent with a desire for SAR value and increases burden. If the SAR is to be a vital, living document, then maintaining information that is no longer applicable such as initial training programs and preoperational test programs seems unnecessary . The additional information can dilute the safety focus of the SAR and impose additional burden to update extraneous information. We believe that the action requested by the Commission in the May 20, 1997, Staff Requirements Memorandum to develop a process for removing overly detailed and inappropriate information from the SAR is a positive action to reduce licensee burden.

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NUREG Reference	Page / line*	Comments
III.O 50.59s on Degraded/ Nonconforming Conditions	26/28	**CIRCUMSTANCE (1):** Compensatory actions taken to address nonconforming conditions may not, in and of themselves, require evaluation under 10 CFR 50.59 on a stand-alone basis. If compensatory actions are not already fully addressed under existing 10 CFR 50.59 reviews, additional 10 CFR 50.59 reviews should be performed for the compensatory actions only to the extent that they would require a facility or procedure change. When a 10 CFR 50.59 evaluation is conducted it need only consider that portion of the activity that involves the compensatory action and not the full scope of the concern. Clearly conservative compensatory actions that place the plant in a safer condition can be implemented while the 10 CFR 50.59 for such compensatory actions is being prepared. We believe no other 10 CFR 50.59 reviews are needed.
	27/1	**CIRCUMSTANCE (3)**: *See General Comment #1 concerning Degraded and Nonconforming.*
	27 & 29 /48	The draft guidance prohibits a plant restart if it is determined that an "accept-as-is" disposition of a degraded condition involves a unreviewed safety question. This NRC staff position is not based in regulation. (The statement in line 35 that the position was previously forwarded in GL 91-18 is not relevant to whether or not the position is a regulatory requirement.) The existence of a unreviewed safety question does not mean that a safety issue exists. Technical specification requirements and operability determinations ensure that safety issues are adequately addressed.
	27/45	If the licensee determines that the technical specifications do not require a shutdown as a result of a unreviewed safety question, then the same technical specifications would preclude a start-up. The NRC position in the draft guidance and in Generic Letter 91-18, therefore, seems to imply that either the technical specifications re not adequate or there is no safety issue. The industry believes that the regulations and technical specifications ensure safety and the staff position prohibiting a restart with an unreviewed safety question will only result in numerous, unnecessary license amendments which would be requested on an emergency or exigent basis to allow restart. This demand on licensees and the NRC staff resources will have adverse impacts on safety. License amendment requests to resolve unreviewed safety questions should be submitted in a timely manner

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NUREG Reference	Page / line*	Comments
		commensurate with safety. Prompt notification of the Commission by the licensee of the existence of any unreviewed safety question would also be a prudent action. The suggestion in the draft guidance, however, that licensees submittals should be made "within days" is without basis.

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NUREG Reference	Page / line*	Comments
III.P Increase in Probability of Occurrence	28/45	The Commission position that "may cause" means "any" increase in probability is an unreviewed safety question is not consistent with how the rule has been historically applied by both the Commission and licensees. Note that measurement uncertainties are involved in any process. Hence, when the Commission originally promulgated 10 CFR 50.59, inherent in the rule was the fact than any increase in probability or consequences had to be a measurable one. Any increase which was not negligible which could not be measured was considered to not be an increase, as recognized by the NSAC-125 guidance. It remained the licensee's responsibility to ensure that combinations of negligible increases also remained negligible, i.e., no discernible or measurable change. This approach is inconsistent with the comments provided by the NRC in letter dated May 10, 1989, from Mr. Charles E. Rossi, Division of Operational Events, NRR, to Mr. Thomas E. Tipton, Operations, Management, and Support Services Division, NUMARC. The words currently used in the NSAC-125/NEI 96-07 are essentially those proposed by the NRC in this correspondence.
	29/16-40	Probability changes should only be a consideration if there is a definitive change in occurrence that would actually indicate a probability change. During the time frame when 10 CFR 50.59 was promulgated, probabilities were considered in the four categories of ANSI N18.2 (currently ANSI N 51.1). To consider any increase represents a new Commission position and requires backfitting consideration. This section seems to conflict with section III.M which provides the proper approach to determining a unreviewed safety question. III.M clearly indicates that deterministic approaches are appropriate which would conclude that potential minor perceived probability changes could not be reached if the measuring stick is good engineering judgment and not specific probabilities. The NRC Staff discussion on page 29, lines 16-36 is the proper interpretation.
	Gen.	The industry position is that the addition of components or piping within a system installed consistent with current codes, standards, analysis, etc. does not necessarily constitute an increase in probability of occurrence of accident or equipment malfunction.

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NUREG Reference	Page / line*	Comments
III.Q Probability Still within Design Basis	31/4	The approach proposed here is the same philosophy that should be applied to the definitions of "Consequences" and of "Margin of Safety."
	31/21	The examples (e.g. turbine missile) make it appear that the probability of an accident may increase from the existing level to a level that is still below the specified criteria, and not be considered an increase in probability. Again , this approach is appropriate, however, it appears to conflict with the guidance in Section III.P and is inconsistent with the approach to consequences as discussed in Section III. R. In example (a), reducing the capability to withstand an earthquake, but maintaining the capability above the design basis, need not be considered an increase in the probability of an accident. The capability of a system, structure, or component to withstand an earthquake does not affect the probability of the accident; the malfunction of equipment can be affected by the seismic design capability of a system, structure, or component , but not the initiation of the accident.

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NUREG Reference	Page / line*	Comments
III.R Increase in Consequences	32/42	Any increase in consequences must be with respect to Commission imposed acceptance limits, specifically those in the Standard Review Plan or in a plant SER. Past industry and regulatory practice and precedent has clearly established that the term does not refer to an increase in the values documented in the SAR. Specifically, focusing on consequences solely, the rule asks, for an accident or malfunction of equipment important to safety previously evaluated in the SAR, if there is an increase in consequences. The rule does not establish the SAR reported dose values as the baseline for such an increase. This is clearly demonstrated in the Commission SERs for numerous plants, which have stated the results submitted by licensees are acceptable because they are less than 10 CFR Part 100 limits, or less than some specific limit calculated by the Commission for the specific plant and event. The Commission promulgation of acceptance criteria in accident analyses different from the values submitted by licensees in the SAR is *de facto* acceptance that the SAR is not the baseline upon which to judge if changes to dose consequences are acceptable. This approach is also inconsistent with the comments provided by the NRC in letter dated May 10, 1989, from Mr. Charles E. Rossi, Division of Operational Events, NRR, to Mr. Thomas E. Tipton, Operations, Management, and Support Services Division, NUMARC. The words in NSAC-125/NEI 96-07 are essentially those proposed by the NRC in this correspondence. *See General Comment #4 regarding Consequences*
	32/46	The guidance in NUREG-1606 acknowledges that "the staff SER is generally based upon independent calculations performed by the staff, using data provided by the license applicant." Therefore, any staff generated calculations have the information contained in the SAR as their foundation. As a result, to conclude that the staff's practice is inconsistent with the rule language of "previously evaluated in the safety analysis report" is not logically supported.

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NUREG Reference	Page / line*	Comments
III.S Reduction in Margin of Safety	34/15 -23	Acceptance limits are not necessarily or in general the values for calculated performance which are documented in the SAR. These limits are the values which the Commission accepted per the regulations or in SERs. Under the proposed guidance, any value that has been established in the SAR that reflects an established limit will be considered a margin that would represent a unreviewed safety question . This would create a significant increase in unreviewed safety question that require Commission review. Also, to tie any margin of safety to values in the SAR is counterproductive to the Commission's interest in SAR integrity. Licensees who provided detailed information in their SAR would be penalized under the draft guidance, as any use of the design margin between what is reported in the SAR and the regulatory guidance/SER acceptance limits would result in a unreviewed safety question . The draft guidance should serve as a basis for acceptance limits, not values which are merely documented within the SAR or SER. The licensee should be able to use applicable regulatory guidance (e.g., Reg. Guides) to determine proper acceptance limits when evaluating changes to the facility. This approach is also inconsistent with the comments provided by the NRC in letter dated May 10, 1989, from Mr. Charles E. Rossi, Division of Operational Events, NRR, to Mr. Thomas E. Tipton, Operations, Management, and Support Services Division, NUMARC. The words currently used in the NSAC-125/NEI 96-07 are essentially those proposed by the NRC in this correspondence. Use of SAR values for determining the basis for margin of safety is a new requirement, not an interpretation of existing requirements. The containment pressure example used in Figure 3-2 of NEI 96-067 is a good example. The difference between the containment failure point and the analyzed maximum operating "acceptance limit" is the margin of safety (if it is discussed in the bases of the Tech Specs). Any value discussed below the acceptance limit value (such as a peak pressurization value) would establish only an operating margin, and would not be an unreviewed safety question . These comments also apply to NRC Inspection Manual Part 9900

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NUREG Reference	Page / line*	Comments
III.T Scope of Basis for Any Tech Spec	37/25	The industry applies a broader interpretation than the strict regulatory requirement to the term "basis." This position is an optional application approach that is conservative. Licensees can take the more conservative approach to include the SAR and other licensing basis documents. However, the application of information outside the Bases of the Tech Specs is not legally binding. Thus, NEI 96-07 represents a more conservative approach over 10 CFR 50.59 .
	38/5	The Commission's basis for expanding the scope of the margin of safety beyond that contained in the Bases of the Tech Specs is not founded in the original rulemaking. The clear original intent of the rule applies only to the Technical Specification Bases only.
	38/14	While Tech Spec Bases do not consistently define margins of safety, it must also be recognized that the Technical Specifications themselves do have an internal consistency in regulating reactor safety. The lack of consistency within the Bases has driven licensee efforts, such as that within the Combustion Engineering Owners Group, to reexamine Allowed Outage Times within Technical Specifications and to apply risk insights to improve Technical Specifications. Even though the level of information contained in the Bases of the Tech Specs have varied from licensee to licensee over time, the intent of the original regulations are specifically intended to be the Bases of the Tech Specs. However, with the application of the new revised standard Tech Specs, the content of the Bases are more focused on supporting what is considered important and what information would establish a margin of safety that would be consider within the scope of needing Commission review to change as a unreviewed safety question .
	38/23	The previous position taken in Inspection Manual Chapter 9900 is the proper regulatory position for the margin review scope and should remain.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.U Application of New Methods for Unreviewed Safety Question	39/36	In the period since most plants were licensed, there have been advances in technologies and methodologies which allow licensees to better analyze the design of systems, structures, and components and plant operation. If the new methodologies are standard to other industries and are generally accepted practices, their use should not be defined as an unreviewed safety question. Few methodologies require explicit Commission approval, for example, those used for compliance with 10 CFR 50.46. In cases where the SER specifically calls out use of approved methodology as one of the bases for Commission approval, use of alternate methodology would have to be evaluated against the SER. If the new methodology is consistent with these criteria (e.g., includes features required by the appropriate regulatory guidance), then the change should be permissible under 10 CFR 50.59. There should be a significant difference in the treatment of a methodology under 10 CFR 50.59 depending on the nature, complexity, and safety significance of the application of that methodology. While methodologies for Chapter 15 NSSS and core analyses require explicit Commission approval, and codes used for certain structural analyses are required to be documented within Chapter 3 of the SAR, the requirements for methodologies on other subjects (e.g., room heat up, radiological releases) are less stringent. In such cases, whatever methodology is used must be properly and thoroughly qualified and undergo verification and validation, but a change in methodology is not inherently in and of itself a potential unreviewed safety question. Changes in input assumptions or analysis assumptions must be addressed within the format of 10 CFR 50.59, but would not be unreviewed safety questions if they continue to meet the appropriate acceptance criteria of the SRP, SERs, Regulatory Guides, etc.
	40/8	The Commission does not review and approve methodologies for all analyses which are included within the SAR as implied in the last paragraph of III.U.4. This discussion needs to be modified or deleted. Appropriate software control programs ensure that software used to support licensee analyses is adequate for its purpose where explicit Commission approval is not required.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line*	Comments
III.V Use of Compensating Actions for Unreviewed Safety Question	41/ 31	Compensatory actions taken to address nonconforming or degraded conditions may not, in and of themselves, require evaluation under 10CFR50.59 on a stand-alone basis. *See Comments on III.O also.*
	41/ 43	Compensatory measures that are interdependent with a proposed change are considered elements of the proposed change.

* This is a reference to the page and line from SECY 97-035

NUREG Reference	Page / line	Comments/Basis
IV.A		The NRC concerns in NUREG-1606 over the control and management of NRC commitments that are not included in the FSAR are already being addressed through the industry commitment management practices. For many licensees, these practices are based on the NEI *Guideline for Managing NRC Commitments*. In accordance with the January 24, 1996 NRC endorsement of the NEI commitment management guideline, and consistent with the proposed NRC action item # 2 in SECY 97-036, the NRC staff is planning to conduct reviews of licensee commitment management processes to determine the effectiveness of these licensee commitment management programs. The imposition of additional regulatory controls to manage NRC commitments at this time, before NRC reviews of the licensee commitment management programs have commenced, is premature and unnecessary. The 10 CFR 50.71(e) issues described in the NUREG are not related to the scope of applicability of Section 50.59 as implemented through NSAC-125/NEI 96-07. As stated earlier, the industry guidance suggests that all changes be reviewed against the Section 50.59 requirements and that screening criteria be developed to assure that there are no indirect secondary effects from a change to a nonsafety-related SSC that is not described in the safety analysis report.

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NUREG Reference	Page / line	Comments/Basis
IV.B		Item B.1: An approach which would allow for implementation of non-risk significant unreviewed safety questions without prior NRC approval (but possibly with prompt NRC notification) could be in the best interest of licensees, the NRC, and, t emphasize more focus on nuclear safety. Item B.2: NEI 96-07 provides interpretations which are consistent with the requirements of 10CFR50.59. Item B.3, "<u>Increase in Consequences</u>": NEI disagrees with the interpretation that any increase in radiological consequences above the value calculated in the SAR is a unreviewed safety question . (see III.R discussion). We do not think that rulemaking is necessary to clarify that the purpose of 10CFR50.59 is to ensure that consequences remain within acceptance criteria, i.e., those spelled out in the safety evaluation reports or other regulatory guidance. Item B.3, "<u>Margin of Safety</u>": The thought process in the first paragraph should also be that applied to the definition of radiological consequences, i.e., the SER or other regulatory guidance provides the acceptance criteria, not the value documented in the SAR.

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ENCLOSURE 2

EXAMPLES OF NUREG-1606
POTENTIAL IMPACT

DEGRADED CONDITION/INCREASE IN PROBABILITY

Proposed Change

The level transmitter for one Reactor Coolant Pump oil reservoir failed while at power. The transmitter provides an alarm function, but not an automatic protective action function. The alarm is described in the UFSAR, but no Tech Spec applies. Loss of the transmitter does not result in the loss of OPERABILITY for any Tech Spec equipment. The transmitter fails in a direction resulting in a continuous alarm in the Control Room. Alarm circuitry provides one common alarm for the upper and lower reservoir circuits, so the failure causes loss of alarm indication for the remaining functional transmitter in addition to the failed transmitter.

The licensee plans to take two actions:

1) Find the cause of and fix the failed transmitter; and in the meantime…

2) Lift a lead from the failed transmitter to restore the alarm from the functional transmitter.

NEI 96-07 Approach

1. The licensee would fix the failed transmitter under its Appendix B Corrective Action Program.

2. Lifting of leads is a compensatory action involving a temporary modification which would require a 50.59 evaluation. The 50.59 evaluation would be on the action itself, not on the degraded condition, to determine its impact on other aspects of the facility described in the SAR. In this case, the lifted lead would not result in an USQ.

NUREG-1606 Approach

1) The licensee would fix the failed transmitter under its Appendix B Corrective Action Program.

2) Lifting of leads is a compensatory action involving a temporary modification which would require a 50.59 evaluation. The 50.59 evaluation would be against the FSAR-described condition, i.e., two level transmitters that share a common alarm (III.O.4).

3) The licensee's evaluation determines a small/negligible increase in the the probability of an accident previously analyzed (RCP rotor seizure) due to the failed transmitter's inability to alarm on low RCP oil level, which is an USQ under NUREG-1606 (III.P.4). Thus, lifting the lead and clearing the continuous alarm would require prior NRC approval. *(Under NEI 96-07, if a change in probability is so small such that it cannot be reasonably concluded that the probability has actually changed, the change would not be considered an USQ.)*

4) An unwarranted delay would occur in restoring the functional transmitter alarm capability because of the need for staff approval to lift the lead. Safety would be degraded by this delay.

MALFUNCTION OF EQUIPMENT OF DIFFERENT TYPE

Proposed Change

Similar to the case of the oil filled transmitter mentioned under III.I.4 of the NUREG-1606 guidance, a licensee proposes to change out a mechanical transmitter with an oil filled transmitter for a particular application. The oil filled (Rosemount) transmitter works on a change in capacitance vs. dP and uses capacitance to control frequency of an oscillator, followed by a frequency to voltage converter. The mechanical transmitter is assumed to use a diaphragm or Bourdon tube connected to a strain gage, which is connected to a resistance measuring bridge. The failure mechanism is now a frequency to voltage converter in the first case versus a failure in a bridge in another. The SAR simply states that the applicable circuit uses a differential pressure transmitter.

NEI 96-07 Approach

Separate from the 50.59 Review Program, the replacement of the transmitter would first be evaluated to ensure that the change met all of the applicable design standards for the application of the system and would not result in a failure to meet design or safety requirements.

The proposed change would then be reviewed for a potential USQ. Under the existing and previous guidance of NSAC-125/NEI 96-07 regarding a malfunction of a different type, it would normally be considered that either transmitter failure as a "failure of the electronics" with no change in the effect that the transmitter had on the circuit or system that it is supporting. Therefore, this change would not result in a USQ.

NUREG-1606 Approach

The guidance in section III.I.4 of the NUREG, the NRC states that the licensee in determining a malfunction of a different type needs to also evaluate the "cause" of the malfunction in addition to the effect of the malfunction. In this case, the cause of the malfunction is now a frequency to voltage converter versus a failure in a bridge in another. This would be considered to involve a USQ.

INCREASE IN PROBABILITY

Proposed Change

Periodic failure of normally energized solenoid actuation valves has prompted the need to modify the reactor trip circuitry to avoid spurious main steam isolation valve (MSIV) closure. The MSIV closure helps mitigate the consequences of the MSLB accident. In the event of a main steam line break the solenoid valves are designed to exhaust the air to allow MSIV closure. The existing system uses two normally energized pilot operated solenoid valves in series. The proposed configuration will modify the design to require energization of either solenoid valve for exhausting air allowing MSIV closure. The remainder of the configuration is unchanged. All of the design standards are met by the change. The SAR provides a general description of the MSIV and solenoid design and the solenoid arrangement is shown on SAR drawings.

NEI 96-07 Approach

First, the design change has been ensured to meet all single failure and design requirements.

The change is then evaluated to determine if an increase in probability has occurred. Based on engineering judgment, it could be concluded that a very small potential exists for failure of a MSIV to actuate based on the need to energize the circuit versus having the circuit deenergize to actuate. However, this change is not believed to involve an increase in probability due to the fact there is not believed to be a clear increase since all design requirements are still met and that the system still perform its function based on improved design and reliability.

NUREG-1606 Approach

A change from a normally energized to a normally deenergized MSIV solenoid actuation valve would be a USQ under NUREG-1606, III.P.4 since it could be considered to involve a minor increase in probability for its failure.

INCREASE IN CONSEQUENCES

Proposed Change

An engineer is going through a dose calculation for a non-bounding event. He finds that there was an incorrect assumption made in this calculation for X/Q's, i.e., atmospheric dispersion factors. This means the calculation is, for example, about 10% non-conservative. The limiting offsite dose reported in the SAR is 10 Rem thyroid for an event where the SRP acceptance limit is 30 Rem. Therefore, an increase to 11 Rem needs to be reflected in the SAR versus the previous 10 Rem. The NRC only indicated in their SER that the dose for this event is acceptable and that it is within the regulatory acceptance limit of 30 Rem.

NEI 96-07 Approach

The first expected action would be to write a Condition Report and review the condition for operability/ reportability.

The next action would be to evaluate the condition for a USQ under the NEI 96-07 Program. To determine whether an increase in Consequences is involved per NEI 96-07, the action would be to determine whether the NRC reported that 10 Rem was the acceptance limit, some value above the 10 Rem reported up to 30 Rem (SRP limit) was the acceptance limit or whether the NRC staff was silent. As long as the staff had not established the acceptance limit of the previously reported 10 Rem the licensee could go up to the SRP limit of 30 Rem without being a USQ. Therefore, no USQ existed.

NUREG-1606 Approach

The approach taken in section III.R.4 of NUREG-1606 indicates that any value above that reported in the SAR no matter whether the NRC accepted a higher value would be considered a USQ. Therefore, a change of 10 Rem to 11 Rem becomes a USQ because it is an increase in the dose reported in the SAR.

DECREASE IN MARGIN OF SAFETY

Proposed Change

It is determined that due to a change in current meteorological data (or is as a result of previously overly conservative analysis) requires that a plant's ultimate heat sink expected maximum temperature be increased from 90 degrees to 92 degrees. The technical specifications establish 95 degrees as the limit for ensuring adequate post accident cooling. The Bases of the TS indicate that the Tech Spec value is to ensure that the UHS water temperature does not exceed the analysis for the worst case post accident design conditions of the reactor building. The SAR reports a value of 90° F as the estimated expected maximum temperature of the UHS conditions based on worst case meteorology. The NRC's SER reiterates 90 degrees as the expected worst case temperature for the UHS and that the design maximum temperature is 95 degrees per the TS.

NEI 96-07 Approach

Upon conducting the new analysis to ensure that the tech spec design limit is not exceeded the 50.59 program is further applied to ensure that no margin of safety is being exceeded. The Tech Spec Bases do not specifically establish a design margin, since the Bases are only concerned with not exceeding the design value. The SAR and NRC SER are subsequently reviewed to determine if a margin has been established. The two values are considered to represent an operating margin since the 90 degree value is not being indicated as needed to protect the maximum TS temperature.

NUREG-1606 Approach

Section III.S.4 of NUREG-1606 indicates that acceptance limits are specified values that, conditions, or range of parameters within which the licensee proposes to operate. The 90 degree value is considered an operating value. Therefore, under the NUREG-1606 guidance this would likely be a USQ since the 90° F value would be considered a [operating] margin which could not be changed without NRC approval.

DEFINITION OF WHAT CONSTITUTES A CHANGE

Proposed Change

A plant has three non-Safety Related condensate pumps installed, with only two pumps required for full power operations. The third pump has a standby feature which allows it to automatically start in the event of failure of the installed pumps. The third pump and the standby feature are described in the UFSAR, which notes that "normally, two pumps are running with the third in standby." The plant's accident analysis does not, however, credit the response of the standby pump in evaluating any accident. The licensee desires to conduct preventive maintenance on the one pump while the reactor is on-line.

NEI 96-07 Approach

Because the pump is not subject to any Tech Spec action statements and does not affect the operability of any Tech Spec components, the licensee has considered routine maintenance, whether corrective or preventive, consistent with the design basis purpose of having a third pump. Therefore, the third pump's removal from service has not been considered a change, test, or experiment subject to 50.59. If its removal had been considered under 50.59, the potential for a plant trip should either of the other pumps fail is increased, although the increase in probability of an accident could reasonably be judged negligible. Maintenance performed on the pump, including system unavailability, would be subject to the Maintenance Rule.

NUREG-1606 Approach

By applying 50.59 to maintenance and corrective action configurations, the unavailability of the standby pump would reasonably be considered to increase the probability of a loss of feedwater event and a plant trip. This would require determination that it constitutes a USQ. The likely result would be that the licensee would seek explicit recognition of the maintenance configuration in the UFSAR via license amendment. This would be effectively the equivalent of seeking a Tech Spec Limiting Condition of Operation for this NSR component as a means of obtaining NRC concurrence with its maintenance intentions. Alternatively, the licensee could forego any repairs except when one pump was clearly non-functional and then seeking NRC approval for repair.

While the example cited is for a non-Tech Spec component with an automatic standby feature, similar design features are commonplace in many power plant systems. The same arguments could be applied for third spare (swing) pumps for Tech Spec cooling water systems with or without automatic start features. Because the extent of unavailability for maintenance is not described in the UFSAR, the duration of the maintenance would be unlikely to affect the determination of whether it constituted a USQ. Similarly, the determination would be unaffected by whether the maintenance was corrective or preventive. Setting such a restrictive standard is inconsistent with NRC's policy for when licensees can voluntarily enter Action Statements for maintenance on Tech Spec equipment, which only requires that a net positive safety benefit be shown. The standard for less essential equipment should reasonably be less restrictive.