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SUBJECT: Comment supporting draft rev 1 to draft NUREG-1022, "Event Reporting Sys 10CFR50.72 & 50.73, Clarification of NRC Sys & Guidelines for Reporting."

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PG&E Letter No. DCL-92-018



David L. Meyer, Chief
Regulatory Publications Branch
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Office of Administration
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
Comments on Draft NUREG-1022, Revision 1

Dear Mr. Meyer:

On October 7, 1991, the NRC issued for public comment a draft of NUREG-1022, Revision 1, "Event Reporting Systems 10 CFR 50.72 and 50.73, Clarification of NRC Systems and Guidelines For Reporting," September 1991 (56 FR 50598). The enclosure contains PG&E's comments on this draft. The attachment to the enclosure contains comments specific to reporting of conditions outside the design basis.

In general, PG&E believes that draft NUREG-1022 provides useful guidance for event reporting processes. Some clarification may be needed to preclude unnecessary reports.

Sincerely,

Gregory M. Rueger

cc: Jim Eaton, NUMARC
John B. Martin
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Enclosure

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ATTACHMENT

COMMENTS ON DRAFT NUREG-1022 REVISION 1 REGARDING DESIGN BASES

PG&E believes that it is the Commission's intention that only significant safety concerns be reported. The design basis is composed of higher tier system and lower tier component design bases. The important issue related to design bases is that the system be able to accomplish its higher tier plant design bases, even if a lower tier parameter or value is outside the component design bases. Reportability requirements should only apply when the higher tier plant design bases is not met.

I. Utility Interpretations of Design Basis

The purpose of design bases documents is to clearly establish the technical and licensing requirements which must be met to assure compliance with the license and to assure accomplishment of the system safety and non-safety functions. Design inputs or requirements are necessary to ensure consistent design policy, assure conservative design margins, and provide extensive information on system and component status and performance.

One of the major inputs used by utilities in the determination of an unanalyzed or degraded condition is the Design Bases Document (DBD). Many utilities have interpreted the definition of design bases broadly in the development of DBDs. Not only have many included in their design bases documents the specific value or range of values that were chosen for controlling parameters as its reference bounds for design, but they have also included other lower level parameters which usually are considered design inputs, such as calculations and analyses or other design requirements.

The FSAR contains many parameters and numbers or limits that are considered as limiting parameters for design. Not every parameter or figure in the FSAR has the same relative significance to safety. For example, safety injection pump flow is much more important than the heat transfer area of a heat exchanger that has considerable margin. Failure to meet the SI pump flow requirements may be reportable and the heat exchanger heat transfer area dropping below the design value may not be reportable. Both cases have to consider available margin for flow and heat transfer area.

Many of the parameters or values contained in a DBD may have substantial margin that could be used to show continued accomplishment of the safety function. The design bases are controlled by the design authority and, therefore, utilization of the margin in various parameters is also controlled by the same design authority. This control is required since there frequently exists a complex relationship between design bases values such that the use of margin for certain parameters may result in an adverse effect on other design criteria parameters. However, prior to changing these values, the calculations and analyses must be reviewed and revised, as necessary, to demonstrate continued compliance with the design bases requirements before relying on the new value.

Sect. Page Statement from Draft NUREG-1022 Revision 1 and PG&E Comments

- 3.1.1 25 "(2) Offsite Chlorine Gas Release...An LER is required under \$50.73(a)(2)(x)."

Comment: It would be helpful if each example cited in the NUREG stated not only the 50.73 reporting criteria, but also the basis for reportability under that portion of the rule. In the cited example, the NUREG could be revised as underlined: "An LER is required under 50.73(a)(2)(x)" because the event posed an actual threat to the safety of plant personnel.

- 3.2.2 37 "(1)...If the component had been made operable after the 30-day test and before the LCO expired, an LER would not be required."

Comment: This statement may cause some confusion. To be consistent with previous guidance from NUREG-1022 Revision 0 (p. 3, Items 1.1, 1.3, and 2.1), this statement should be revised as underlined: "If the component had been made operable after the post-maintenance test but before the LCO Action Statement expired, an LER would not be required."

- 3.2.2 36 "(7)...If an IST or ISI is not performed when required, or if ASME Section XI tests or inspections (examinations) show that components fail to meet requirements, the failures are reportable when they cause the associated systems required for safety to be declared inoperable."

- 3.2.2 39 "(5)...Not performing a required IST or ISI, or performing a deficient IST or ISI, is reportable when the associated systems required for safety must be declared inoperable because of the missed or deficient IST or ISI. This condition requires an LER."

Comment: Regarding pages 36 and 39, the guidance is not clear. Pages 36 and 39 state that the failure to meet an IST or ISI requirement is reportable immediately when equipment is declared inoperable. In the past, inoperable equipment must also have exceeded the LCO's associated Action Statement in order to be reportable. Not performing a required IST or ISI surveillance/test or performing an inadequate surveillance/test has been reportable under TS 4.0.5.

- 3.2.4 41-42 "Any trivial single failure or minor error in performing surveillance tests could produce a situation in which two or more, often unrelated, safety-related components are out of service. Although this may technically involve an unanalyzed condition, it is reportable only if the condition involves functionally related components, or if it significantly compromises plant safety."

Comment: Additional guidance is needed to define "functionally related components." A good example or two would be beneficial.

II. Safety Significance of Different Levels of Design Bases

The following discussion provides examples of how the higher tier and lower tier design bases are related based on the definition of design bases discussed above and how lower tier design bases may be exceeded while the safety function (higher tier bases) is met.

An example regarding safety significance would be the minor overstress of a single pipe support or a hanger. In this case, a support is discovered to be in a minor overstress condition. This would clearly be outside the design bases of the component since it did not meet the stress criteria. However, further analysis shows that the piping system or conduit as a whole functional system will still perform its safety function and the pipe or conduit will not fail or cause loss of function of the safety system. The safety significance of this condition is small and there would be no loss of operability of the system.

When designing a nuclear plant structure, system or component, the analysis and calculation inputs (design inputs) and outputs that are required to demonstrate compliance to a functional requirement should be considered as design bases. For example, consider the case where the heat transfer surface area of the tubes in a safety-related heat exchanger is reduced because leaking tubes are plugged. If the number of tubes plugged causes the heat transfer capability to be reduced below the component design basis value, sufficient margin may be available in the flow and inlet temperature assumptions such that the "system safety design bases function" is still met even though the component design bases (heat transfer area) is not.

III. Effect of NRC Proposal

There is a wide variation among utilities in the level of detail and depth of analyses and documentation to demonstrate qualification or the ability of a structure system or component to accomplish a safety function. The requirement to treat all deviations from the design bases in the same manner, without regard to safety significance, will penalize those utilities that have spent considerable resources developing and documenting lower level design bases that go beyond the requirements of the 10 CFR 50.2 definition. The recent industry wide voluntary effort to reconstitute the design bases may result in requirements to report conditions of relative insignificance to safety.

One issue that is not addressed in the examples in Section 3.2.4 of NUREG-1022 is the relative significance to safety of the various conditions that may occur and cause the plant to be outside the design bases or in an unanalyzed condition. This lack of relation of importance to safety will lead to the reporting of items that have little or no significance to safety. Given the interpretation of the design bases as being more global and including lower level design bases under the definition of design bases in 10 CFR 50.2, may mean that more items could potentially be considered as reportable even though these lower level design bases may have little safety significance. In this case, many of the lower level design bases, although not limiting from a system functionality standpoint (i.e., relative significance to safety

is low), could be found to be reportable because they are documented in the design bases documents.

When evaluating an issue for reportability, it is essential to consider the safety significance of the item and its relationship to the definition of design bases as defined in 10 CFR 50.2. Failure to consider the above and using the guidance of section 3.2.4 of NUREG-1022 will result in the required submittal of numerous unnecessary LERs and the commensurate inefficiency and wasted resources required to develop the LERs by the utility and review the LER by the NRC. The goal of the reporting requirements should be to provide value to the industry and contribute to plant safety, not submittal of LERs with little or no safety significance at the expense of considerable resources for both parties involved.

Sect. Page Statement from Draft NUREG-1022 Revision 1 and PG&E Comments

3.2.4 45 "(3)...If one of the following conditions exists, the plant is considered to be outside the bounds of its design basis:

- a structure, system, or component is unable to perform its intended safety function(s)
- a structure, system, or component is exceeding the specific value or range of values that were chosen for controlling parameters as its reference bounds for design
- entry into STS 3.0.3, or its equivalent"

Comment: These criteria, which define conditions when a plant is considered to be outside the bounds of its design basis, are patterned after the definition of design bases in 10 CFR 50.2. 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 values or ranges of values chosen for controlling parameters as reference bounds for design. Because the definition of design bases in 50.2 includes the component level, using the 50.2 definition in NUREG-1022 lowers the reporting threshold to the component level. This could significantly impact licensees' reporting processes. Therefore, page 45 of NUREG-1022 should be revised to clarify that the safety significance of the condition (down to the component level) must be properly addressed before a reportability determination is made. In general, as further discussed in the Attachment to this Enclosure, NUREG-1022 should be revised to discuss safety significance, the different levels of design bases, and how the different levels affect the determination of reportability.

In addition, because the reporting threshold is lowered to the component level, it could be construed that Technical Specification violations at the component level would also require a 10 CFR 50.72 one-hour phone call to report the condition as being outside the design basis.

3.2.4 46-50 Examples of plants being in a degraded condition, unanalyzed condition, and outside design basis.

Comment: In general, it would be helpful if each example in the NUREG could be revised to describe the safety significance of the condition that caused the plant to be in a degraded condition, outside its design basis, or in an unanalyzed condition. A component being outside its design basis may or may not affect the safety of the plant.

In some cases, procedural operability requirements are based on very conservative analysis and evaluations. If engineering determined that sufficient margin remained, even though the procedural requirements could not be met, the condition should not be reportable. However, if margin is inadequate, the system

Sect. Page Statement from Draft NUREG-1022 Revision 1 and PG&E Comments

should be declared inoperable and the applicable LCO action requirements met.

- 3.2.4 46 "(1) Plant Being Seriously Degraded. Reportable Events or Conditions...cracks and breaks in piping, the reactor vessel, or major components in the primary coolant circuit..."

Comment: Does "cracks and breaks in piping" apply to the post LOCA flow path also?

- 3.2.4 49 "(3)...Leakage is reportable...if the licensee is not in compliance with Generic Letter 90-05 (Guidance for Performing Temporary Non-Code Repair of ASME Class 1, 2, and 3 Piping, dated June 15, 1990)..."

Comment: The NUREG should provide guidance for determining reportability for existing plant conditions that are adverse to new NRC guidance issued in a Generic Letter.

- 3.3.3 90-91 "The phrase 'alone could have prevented' means the event or condition was, or would be, sufficient by itself to prevent the performance of the safety function(s) of a system or structure (i.e., no additional single failure is assumed or needed to prevent the function)....For example, both offsite electrical power (transmission lines) and onsite emergency power (usually diesel generators) are normally required to be available to support safety system functions. If either offsite power or onsite emergency power is unavailable to the plant (i.e., completely lost), it is reportable regardless of whether other systems were available that could perform the safety function."

Comment: Loss of all offsite electrical power is not a condition that alone could prevent the performance of a safety function, as the very existence of emergency onsite power is to ensure the performance of safety functions in the event of a loss of all offsite power. This section needs a better example.

- 3.4.7 126 "The H00 may also request continuous or periodic followup communication with a licensee...The licensee's communicator should be trained in the immediate reporting requirements of 10 CFR 50.72."

Comment: The NUREG should be revised as underlined: "The licensee's communicator for initial ENS reporting should be trained in the immediate reporting requirements of 10 CFR 50.72." For the purposes of providing continuous communication with the NRC, it should not be a requirement to have the licensee's communicator to be trained in 10 CFR 50.72 requirements. The initial licensee communicator at DCPD is the Shift Supervisor (SS), in charge of both DCPD units. Tying the SS up for long periods of time to provide a continuous communication with the NRC, however, may impact the SS's ability to oversee and maintain a broad overview of the event in

Sect. Page Statement from Draft NUREG-1022 Revision 1 and PG&E Comments

progress and/or mitigate its consequences. Freeing up the SS will allow him to better answer questions in a more timely manner by direct investigation of the event, and relaying them to the NRC by a licensee communicator who is not necessarily trained in the reporting requirements of 10 CFR 50.72.

- 4.3.1 137 "During Alerts or above the HOO will...immediately establish a conference call among the NRC EO, RDO, other NRC managers, as necessary, and the licensee to discuss the event"

Comment: The NUREG should be revised as underlined: "immediately after the Technical Support Center (TSC) is manned, establish a conference call among the NRC...and the licensee's site emergency coordinator in the TSC to discuss the event." As discussed above, it is improper to restrict the SS by placing him on the phone during a conference call immediately after the declaration of an alert (or above) status. The TSC is the proper emergency response organization to conduct a conference call to provide the NRC with more detailed information concerning the event. PG&E believes that answering every question at the time of initial ENS notification puts a strain on the SS. As noted on p. 129, the NRC agrees that "it is more important that the NRC be quickly made aware of the situation than it is for the licensee to answer every NRC question at the time of initial ENS notification."

- 5.1.1 153 "An LER is to be mailed within 30 days of the discovery date."

Comment: To be consistent with 10 CFR 50.73(d), this sentence should be revised as underlined: "An LER is to be submitted within 30 days of the discovery date." Use of the verb "mailed" would preclude future incorporation of electronic transfer of LERs by fax or modem.

- 5.2.1 161 "(2)...If an LER is not submitted within 30 days of the event date, explain the relationship between the event date, discovery date, and the report date in the narrative."

Comment: The guidance to explain the relationship between the event date and the report date is incorrect. On p. 153, the NRC explains that LERs are to be submitted within 30 days of the discovery date. Therefore, the statement on p. 161 should be revised as underlined: If an LER is not submitted within 30 days of the event date, explain the relationship between the event date and the discovery date in the narrative.

- 5.2.4 174 "(7)...Enter the facility name and unit number and docket number...of any other units at the site that were directly affected by the event..."

Comment: The description for identifying other affected facilities is incomplete. The more complete guidance of NUREG-1022 Supplement 2 (p. 34) should be added, as underlined:

Sect. Page Statement from Draft NUREG-1022 Revision 1 and PG&E Comments

"The intent of the requirement is to name the facility in which the primary event occurred, whether or not that facility is the lowest numbered of the facilities involved. The automatic use of the lowest number should only apply to cases where both units are affected approximately equally."

ENCLOSURE

PG&E Comments on Draft NUREG-1022, Revision 1 (September 1991)

"Event Reporting Systems 10 CFR 50.72 and 50.73,
Clarification of NRC Systems and Guidelines for Reporting"



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