DOCKET NUMBER
PROPOSED RULE PR 73
(65FR36649)

(4)

'00 MAR 25 P12:39

August 22, 2000

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Rulemakings and Adjudications Staff

RE: Request for comments on SECY-00-063

Dear Mr. Secretary:

Attached are Pacific Gas & Electric Company (PG&E) comments on SECY-00-063, *Re-evaluation of Power Reactor Physical Protection Regulations and Position on a Definition of Radiological Sabotage*, as published in Federal Register Vol. 65, No. 112 dated June 6, 2000.

PG&E supports the Commission's efforts to re-evaluate nuclear power plant security regulations, and the movement toward performance-based criteria. PG&E is also in favor of a clear definition of radiological sabotage, thus establishing a foundation on which such performance criteria can be established. However, it is felt that re-definition of radiological sabotage based on "critical safety functions" will not provide the definition clarity which the Commission seeks.

Detailed comments are provided in the attachment. Thank you for your consideration.

Sincerely,

Jim Tomkins
Manager, Nuclear Safety and Licensing

Template = SECY-067

SECY-02

Pacific Gas and Electric Company
Diablo Canyon Nuclear Power Plant
Comments on SECY-00-063
Re-evaluation of Power Reactor Physical Protection Regulations and Position on a Definition of Radiological Sabotage

The Commission requested public comment on SECY-00-063. The following are Pacific Gas and Electric Company (PG&E) views on issues identified in SECY-00-063.

Although the SECY is titled *Re-evaluation of Power Reactor Physical Protection Regulations and Position on a Definition of Radiological Sabotage*, its stated objective is only the development of a position paper on radiological sabotage at reactors. The following comments are therefore focused on the radiological sabotage issue.

PG&E agrees that a clear definition of radiological sabotage is essential in order to establish target sets and build an effective response program. Although the Commissioners, when commenting on SECY-99-241, have indicated that a clear understanding of the term is necessary, NRC staff has already issued, on various occasions, a specific definition of radiological sabotage. The most widely referenced definition is found in NUREG 1178: [1]

> "Successful radiological sabotage results in dose in excess of that defined in 10CFR100. The 10CFR100 criteria are intended to serve as a benchmark for the analysis of major events, that is, those events that pose a potential health hazard (a significant release of radioactivity as a result of a major accident or radiological sabotage)."

Analysis assumption #2 in NUREG 1178 further indicates significant core damage as a factor: [1]

> "Any transient or event that causes significant core damage will result in an attendant 10CFR100 release."

A similar definition is found in Information Notice 89-05: [2]

> "Radiological sabotage as defined in 10CFR73.2(p) means any 'deliberate act' directed against a plant or against a component of a plant, that 'could directly or indirectly endanger the public health and safety by exposure to radiation.' At nuclear power reactors, the principal focus of safeguards is to protect against deliberate acts that could result in substantial meltdown of the core."

[1] NUREG 1178, Vital Equipment/Area Guidelines Study, Pages 4-1, 6-2

[2] NRC Information Notice 89-05, Use of Deadly Force by Guards Protecting Nuclear Power Reactors Against Radiological Sabotage, Pages 2 & 3

Additionally, the Operational Safeguards Response Evaluation (OSRE) program has long used a 10CFR100 release due to substantial core damage as a radiological sabotage definition. PG&E therefore believes that the existing radiological sabotage definition is well defined and clearly delineates the performance criteria necessary to develop accurate, risk informed target sets and related protection strategies.

The proposal by NRC staff to use "critical safety functions, including appropriate margin of safety" as the performance criteria replacement for radiological sabotage is un-necessary and appears to be counter-productive. During equipment and procedure analysis as part of the target set development process, licensees have identified pieces of equipment labeled as "vital" that could be damaged or destroyed without the risk of a release. This allows the protection strategies to maximize resources and not expend energy protecting equipment technically identified as "vital" but in reality, not required to maintain a stable core due to multiple layers of back-up systems and the ability of operations personnel to mitigate equipment loss.

The proposed "critical safety function" definition appears to be all encompassing and would return the above "vital" equipment to the pool of items that must be protected. The resources necessary to protect all this equipment under the current design basis threat would be significant. If the proposed new design basis threat characteristics are applied, the resource requirements become even larger.

Putting "critical safety function" equipment in the target mix also unnecessarily complicates the protection strategy by requiring responders to rigidly defend equipment that could otherwise be loss mitigated without affecting core stability. It is not unrealistic to postulate that critical resources could be expended on protecting "critical safety function" equipment and be diverted away from actual core protection equipment. This seems to be contrary to the Commission's desire for implementation flexibility requested in the Staff Requirements Memorandum (SRM) of November 22, 1999.

When the "appropriate margin of safety" requirement is added, one is left to wonder where the parameters will end. It is unrealistic to attempt an assessment of the impact such an ambiguous term would have. There is no need to add such a requirement when a 10CFR100 release resulting from core damage is already considered a "conservative approach" as defined in NUREG-1178.[3]

Requiring the protection of all "critical safety function" equipment and the attendant "appropriate margin of safety," turns away from realistic, performance based criteria and returns to a more ambiguous, regulatory based criteria. Additionally, if no equipment can be lost, how can credit be given to operator actions that mitigate the loss of such equipment? This appears to be just the opposite the Commission's intentions, as stated in the Commission Voting Summary on SECY-99-241 and the SRM of November 22, 1999.

[3] NUREG 1178, Vital Equipment/Area Guidelines Study, Page 6-2

Commissioner Merrifield specifically states in his SECY-99-241 vote sheet comments, "...security requirements should be based on risk-based principals..."[4]. Commissioner Diaz notes, "...considering the effects of operational intervention to mitigate the effects of radiological sabotage will inject more realism into the NRC's regulatory process." [4] Commissioner McGaffigan states, "I strongly encourage the staff to consider as part of this rulemaking how to credit operator actions during an attempt at radiological sabotage..."[4]. What are the operator actions that will be credited if no equipment loss is allowed to occur?

PG&E believes that the current radiological sabotage performance criterion addresses the concerns of the Commission by:

- Providing risk-based principles on which a sound defensive strategy can be based.
- Enabling implementation flexibility by allowing operator mitigation of equipment loss.
- Enabling the response force to maximize resources and focus on the ultimate goal of protecting the public health and safety.

Additionally, PG&E supports the Nuclear Energy Institute's (NEI) position on these matters as identified in NEI's response to SECY-00-063.

[4] Commission Voting Record Comments on SECY-99-241, November 22, 1999