

December 26, 2007

MEMORANDUM TO: Chairman Klein
Commissioner Jaczko
Commissioner Lyons

FROM: Luis A. Reyes */RA George C. Pangburn Acting for/*
Executive Director for Operations

SUBJECT: STATUS OF STAFF ACTIVITIES ON PROPOSED RULE FOR RISK
INFORMED DECOUPLING OF ASSUMED LOSS-OF-OFFSITE
POWER FROM LOSS-OF-COOLANT ACCIDENT ANALYSES

The purpose of this memorandum is to request Commission approval to defer the schedule for the rulemaking to relax the current requirement for considering a loss-of-offsite power (LOOP) coincident with a large break loss-of-coolant accident (LOCA) to allow for further development of the technical basis for the rule. In a staff requirements memorandum (SRM), ML030910476, dated March 31, 2003, the Commission directed the staff to develop the technical basis and move forward with rulemaking to risk-inform the emergency core cooling system (ECCS) requirements in General Design Criterion (GDC) 35 by changing the current requirement for consideration of a LOOP coincident with a LOCA. In an SRM, ML041830412, dated July 1, 2004, the Commission approved the staff's recommendation to complete review of the Boiling Water Reactor Owners Group (BWROG) topical report, NEDO-33148, "Separation of Loss of Offsite Power from Large Break LOCA" before proceeding with the LOOP-LOCA rulemaking. The staff review of the BWROG topical report is ongoing, with an estimated completion date near the end of calendar year 2008.

Most of the underlying technical issues involved in risk-informed rulemaking to decouple LOOP from LOCA are similar to the technical issues involved in the pending final rule on risk-informed redefinition of large break LOCA ECCS analysis requirements (Title 10 of the *Code of Federal Regulations* (10 CFR) 50.46a, "Alternative Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors"). Common issues shared by these rules include: (1) break frequency of very large piping; (2) seismic contributions to pipe break frequency; (3) use of risk assessment to change fundamental U.S. Nuclear Regulatory Commission (NRC) regulations; and (4) requirements for maintaining adequate defense-in-depth. A proposed 10 CFR 50.46a rule was published on November 7, 2005. The final 10 CFR 50.46a rule is still being developed. Its detailed status and priority were discussed by the staff in SECY-07-0082, "Rulemaking to Make Risk-Informed Changes to Loss-of-Coolant Accident Technical Requirements;" 10 CFR 50.46a, "Alternative Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors" dated May 16, 2007.

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The staff also notes that the need for a LOOP-LOCA rule may be rendered moot for the following reasons. If the BWROG topical report is approved *and* the 10 CFR 50.46a final rule¹ is issued, pressurized water reactors (PWRs) could adopt the 10 CFR 50.46a rule and boiling water reactors (BWRs) could adopt the BWR topical report. Then both PWR and BWR licensees would be allowed to decouple LOOP from LOCAs larger than approximately 10-12 inches in diameter.² If either the BWROG topical report or the 10 CFR 50.46a final rule are not approved, it would be unlikely that a LOOP-LOCA rule would be worth pursuing.

The staff believes that the Rulemaking Coordinating Committee can effectively manage progress in developing this rule by the existing entry in the rulemaking common prioritization system. The staff will continue to address the related issues (the BWROG topical report and the risk-informed 10 CFR 50.46a final rule). The need for a LOOP-LOCA rule will be reassessed after decisions are made on the 10 CFR 50.46a final rule and on the BWROG topical report. The staff will then take appropriate action to either issue a proposed LOOP-LOCA rule or inform the Commission that the rulemaking will be discontinued.

Based on the discussion above, the staff intends to close the existing Commission action for the LOOP-LOCA rule.

SECY, please track.

cc: SECY
OGC
OCA
OPA
CFO

¹ The 10 CFR 50.46a rule affects LOCAs larger than about 11 inches in diameter for PWRs and about 21 inches in diameter for BWRs. The BWR topical report applies to LOCAs larger than approximately 10 inches in diameter.

² Under this scenario BWR and PWR licensees could decouple LOOP from LOCA without a LOOP-LOCA rule. The staff, however, might still choose to promulgate a rule. The staff decision would depend on the number of BWRs to which the topical report is applicable. If the topical report has widespread applicability, NRC might undertake rulemaking to codify the topical report to enhance regulatory predictability and reduce burden by eliminating the need for licensees to submit and the NRC to approve the large number of plant specific exemptions from GDC 35 and other regulations required under the topical report. If the topical report is applicable to just a few plants, rulemaking would not be pursued since the cost of rulemaking would not justify its potential benefits.