

UNITED STATES NUCLEAR REGULATORY COMMISSION ADVISORY COMMITTEE ON REACTOR SAFEGUARDS WASHINGTON, D. C. 20555

March 9, 1982

Honorable Nunzio J. Palladino Chairman U. S. Nuclear Regulatory Commission Washington, DC 20555

Dear Dr. Palladino:

Subject: REPORT ON SYSTEMS INTERACTIONS STUDY FOR INDIAN POINT NUCLEAR

GENERATING UNIT 3

During its 263rd meeting, March 4-6, 1982, the Advisory Committee on Reactor Safeguards reviewed the proposal of the Power Authority of the State of New York (PASNY) to perform a systems interactions study of the Indian Point Nuclear Generating Unit 3 (Indian Point 3). In its review the Committee had the benefit of a Subcommittee meeting held on February 26, 1982. The PASNY proposal was made in response to prior recommendations by the ACRS in letters dated July 13, 1978 and October 12, 1979 that a systems interactions study should be performed on Indian Point 3.

The ACRS believes that the PASNY proposal is generally responsive to the ACRS recommendations. The Committee agrees with PASNY that for this study it is reasonable to limit the portion that deals with the investigation of control system influences on safety systems to effects of interconnected systems. The ACRS also believes that, in view of prior efforts to review many aspects of possible adverse interactions between safety systems, it is reasonable in this study to place emphasis on the interactions between nonsafety systems and safety systems. However, the ACRS believes that where interactions between safety systems have not received prior study, they should not be ignored in this study.

The ACRS believes that it is time for the Indian Point 3 systems interactions study to begin and recommends that PASNY conduct the proposed "walkdown" phase during the upcoming plant shutdown for refueling.

A partial review of the NRC Staff's preliminary version of a generic approach to systems interactions studies also took place at the Subcommittee meeting. The Committee will complete its review of this matter after the Staff has finished preparation of its proposed plan. However, it is clear that it will be several years before the Staff completes the development of its approach to systems interactions studies for all reactors. In the interim, the ACRS recommends consideration of the potential merits of simplified walk-through systems interactions studies for all operating

light-water reactors in order to look for relatively obvious interactions. In addition, the ACRS recommends that a mechanism be developed for early dissemination and evaluation of any systems interactions observations arising from the ongoing studies and having potentially significant generic implications for a family of operating plants.

Sincerely,

P. Shewmon Chairman