

Santos, Cayetano

From: Hossein Nourbakhsh *HNS*
Sent: Thursday, April 17, 2008 12:15 PM
To: Cayetano Santos
Subject: SOARCA Letter
Attachments: 551-SOARCA-Response TO EDO-Compare.doc

Tanny

Attached is the revised SOARCA letter as compared to the version voted by the Committee for your review

Thanks,

Hossein

C/35

Luis A. Reyes, EDO
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: RESPONSE TO YOUR APRIL 7, 2008 LETTER; STATE-OF-
THE-ART REACTOR CONSEQUENCES ANALYSES (SOARCA)
PROJECT

Dear Mr. Reyes:

In a letter dated April 7, 2008 you responded to our letter of February 25,
2008 report to the Commission concerning on the SOARCA Pproject. The
staff did not agree with our recommendation that a ~~limited set of level-3~~
probabilistic risk assessments (PRAs) be performed for the pilot plants
before extending the analyses to other plants ~~to benchmark the SOARCA~~
~~approach developed by the staff.~~ In your letter, I the staff states that "with
the knowledge gained from research, including extensive knowledge and
experience with PRAs, ~~[they]~~ it believes that [they] it can reliably identify any

high consequence scenarios that should be included in SOARCA that have a probability of occurrence lower than the screening criteria."

This might be true that performing level-3 PRA may not substantially affect the conclusion of the study. ~~and acceptable if SOARCA were primarily for internal NRC use.~~ However, the SOARCA results are also expected to provide "the foundation for communicating that aspect of nuclear safety to Federal, State and Local authorities, licensees, and the general public."
[~~(reference~~ SECY-05-0233)]

We continue to believe that the credibility of the SOARCA Pproject cannot rely on confidence in the judgment of the staff and on a novel analysis procedure that differs substantially from previous state-of-the-art analyses of the consequences of severe ~~nuclear~~ reactor-accidents. Such studies include the NRC's WASH-1400 (1975) and NUREG-1150 (19904), as well as industry-sponsored PRAs such as those for Zion (1981?), Indian Point (19824?), Millstone 3 (1983), and Seabrook (1983?). Without including benchmark analyses similar in scope, it will be difficult to demonstrate convincingly that reductions in consequences that might be indicated by the

45 ~~result from the SOARCA~~ resultsanalyses reflect the effect of enhancements
46 in plant design and improvements in calculation methods for accident
47 progression and consequence analysis, rather than a change in the scope
48 of the calculation.

49 Dr. Dana Powers did not participate in the Committee's deliberations
50 regarding this matter.

51
52 Sincerely,

53
54 William J. Shack

55 Chairman
56
57

58 ~~Dr. Dana Powers did not participate in these deliberations.~~
59
60

61 REFERENCES:

62 Report dated February 25, 2008, from William J. Shack, Chairman, ACRS to William J. Shack,
63 Chairman, ACRS, to Dale E. Klein, Chairman, NRC, Subject: STATE-OF-THE-ART REACTOR
64 CONSEQUENCE ANALYSES PROJECT.

65 Letter dated April 7, 2008, from Luis A. Reyes, Executive Director for Operations, NRC, to
66 William J. Shack, Chairman, ACRS. Subject: STATE-OF-THE-ART REACTOR
67 CONSEQUENCE ANALYSES PROJECT.

68
69 Memorandum dated December 22, 2005, from Luis A. Reyes, Executive Director for
70 Operations, NRC, to the Commissioners. Subject: PLAN FOR DEVELOPING STATE-OF-THE-
71 ART REACTOR CONSEQUENCE ANALYSES, SECY-05-0233 (Official Use Only-Sensitive
72 Internal Information- Limited to NRC Unless the Commission Determines Otherwise).

73
74 U.S. Nuclear Regulatory Commission, "Reactor Safety Study – An Assessment of Accident
75 Risks in U.S. Commercial Nuclear Power Plants," WASH-1400 (NUREG/75/014), 1975.

76
77 U.S. Nuclear Regulatory Commission, "Severe Accident Risks: An Assessment of Five U.S.
78 Nuclear Power Plants," Final Summary Report, NUREG-1150, 1990.

79
80 "Zion Probabilistic Safety Study," Commonwealth Edison Company, 1981.

81
82 "Indian Point Probabilistic Safety Study," Power Authority of the State of New York and
83 Consolidated Edison Company of New York, Inc., 1982.

84
85 "Millstone Unit 3 Probabilistic Safety Study," Northeast Utilities, 1983.

86
87 "Seabrook Station Probabilistic Safety Assessment," Picard, Low and Garrick, Inc., 1983.
88
89