MEMORANDUM TO: Graham B. Wallis, Chairman
              Thermal-Hydraulics Phenomena Subcommittee

FROM: R. Caruso, Senior Staff Engineer

SUBJECT: ANALYSIS OF EDO RESPONSE TO ACRS LETTER CONCERNING
          GSI-191 - ASSESSMENT OF DEBRIS ACCUMULATION ON PWR
          SUMP PERFORMANCE

Attached for your information is a copy of the EDO’s September 6, 2006 response to the
ACRS’s letter of August 1, 2006, concerning the Committee’s review of staff progress in
resolving GSI-191. A copy of the Committee’s letter is also attached.

Committee Letter

In its letter, the Committee noted the progress that the staff is making to resolve GSI-191, and it
agreed that the efforts that are being taken by the industry in response to Generic
Letter 2004-02 to substantially increase screen size are appropriate. The Committee also
agreed that the industry’s integral experiments will help to support the safety case. The
Committee expressed concern, however, about the limitations of those tests, and it
recommended that a continued regulatory research program to address key areas of
uncertainty is a risk management strategy for reducing the likelihood of erroneous regulatory
conclusions. The Committee recommended that confirmatory research on GSI-191 be
continued.

EDO Response

The EDO responded that although the previously funded research has been concluded, the
staff has not ruled out additional confirmatory research. As part of the staff review of industry
efforts, it may pursue limited additional confirmatory research of chemical surrogate behavior,
although this research is not intended to develop predictive analytical tools, as was
recommended by the Committee.

The EDO goes on to say that “The staff does not believe that the most efficient and achievable
path forward is to undertake the level of research effort that ACRS seems to favor.” The staff
acknowledges the limitations of the integral tests, but it “expects that the licensees’
supplements to GL 2004-02 will demonstrate that debris effects ... have been bounded.”
Analysis

The EDO’s response is clear - the staff does not agree with the Committee’s position, and it does not intend to revise its program unless some compelling new information arises that forces the need for additional research. The response is polite, yet firm - they disagree, and are on a path forward with high expectations for success. Until someone points to an obvious flaw in the plan, they intend to stay the course.

I would note that this issue has been "resolved" several times over the past 35 years - the current efforts are much more comprehensive than the earlier ones, but it still remains quite a difficult subject. I believe that the staff is too optimistic in its projections. This is just my judgement, but it is based on the comments I have heard from industry people about resolution of the downstream and chemical effects aspects. They need this information in order to validate the screen designs, but it will not be available until after the new screens are installed. The industry is concerned that resolution of the chemical effects and downstream effects issues will require them to re-design the screens that are being installed.

cc: ACRS members