RS 917-4

PROPOSED RULE PR misc notice Reg Guide

OSU

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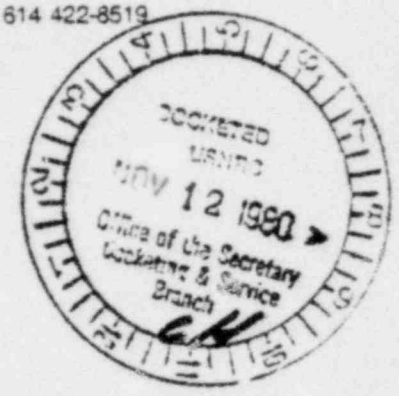
November 4, 1980



E.C. Wenzinger
Reactor Systems Standards Branch
Division of Engineering Standards
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Wenzinger:

Enclosed as you requested are our comments on Draft 3 of Revision 2 to Regulatory Guide 1.97. M.R. Savage is looking forward to discussing these topics with you at the November 5, 1980 meeting of ACRS.

Thank you for your consideration.

Sincerely,

Don W. Miller
Professor/Chairman

M.R. Savage
Research Associate

DWM:maa

Encl.

11/12/80

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GENERAL COMMENTS ON THE ENTIRE REGULATORY GUIDE

1. The overall clarity of the Guide has been improved. It appears that the majority of the concerns raised in Dr. Plesset's August 13, 1980 letter in behalf of the ACRS have been addressed.

2. A problem faced by the nuclear power industry is: How much information is sufficient to correctly follow an accident at a nuclear power plant? If some information is good, does it follow that more ifnoramtion is better? We believe that more inforamtion does not necessarily improve safety. The reactor operator at a modern commercial nuclear power plant may be overwhelmed by information. Instead of insufficient information, the operator is given too much information. Some method must be developed which presents only the key information. We believe that the computer is the key to the solution of the problem. Computers can be programmed to set priorities on the information that is generated by the instrumentation in the plant. With priorities established by the computer, the reactor operator can concentrate on the most vital problems first, then deal with lesser problems as time permits. The use of the computer to aid in the operation of a reactor is being studied by industry, the utilities and by major universitites. This work should be encouraged.

We recognize that Draft 3 of R61.97(2) does permit use of the computer for diagnostics. We commend this change in the Guide.

SPECIFIC COMMENTS ON INDIVIDUAL PORTIONS OF
PROPOSED REGULATORY GUIDE 1.97

Page 3, Lines 33-34 Page 9, Lines 17-19	These two statements seem to contradict each other in their emphasis. It is recommended that most instrumentation should operate following a seismic event but not necessarily during an event.
Page 5, Lines 26-27 Page 8, Lines 26-29	There appears to be a difference between the introductory statement and the regulatory position statement. Which is correct? The sources of energy that can lead to a breach in the containment should be defined. We recommend that the energy sources be limited to sources within the barrier. This should be clearly stated in the Regulatory Position.
Page 14, Lines 8-16 Page 15, Lines 15-16	Does Regulatory Guide 1.118 apply or does Paragraph 1.5.1 apply?
Page 15, Lines 7-8	Indirect measurement may be more hazardous than no measurement at all. We recommend indirect measurement be submitted only if analysis demonstrates no potential ambiguity.
Page 15, Lines 26-27	What does "other systems important to safety" mean? This is an ambiguous statement and should be clarified by reference.
Page 17, Lines 26-27 Page 18, Lines 1-6	The implementation date will be difficult to attain. Qualification of improved instrumentation will be a problem. We recommend further evaluation of the implementation date.
Pages 20 and 21, <u>BWR Core Thermocouples</u>	Two-phase flow exists in a BWR. What does a thermocouple measure in this type of environment? This may provide misleading information. This will be difficult to retrofit and provide, at best, questionnable information.
Page 22, <u>Radioactivity Concentration or Radiation Level in Circulating Primary Coolant</u>	We recommend a change related to the technical specifications. For example, 0.1 to 100 x the tech spec limit in R/hr.

Page 23, Environs Radioactivity Exposure Rate	The range appears to be too large. Is there analysis to justify this range?
Page 25, Main Steamline Isolation Valves' Leakage Control System Pressure	Why Category 1? We recommend a change to Category 2.
Page 25, Primary System Safety Relief Valve Positions	Why Category 1? We recommend a change to Category 2. We also recommend direct methods of measurement.
Page 28, (a) Primary Containment Area Radiation--High Range. (b) Drywell Purge, Standby Gas Treatment System Purge.	The ranges appear to be too broad. Is there analysis justifying this range?
Page 29, All Topics on this Page.	The ranges appear to be too broad. Does analysis exist to justify these ranges?
Page 30, Radiation Exposure Rate	The range appears to be too large. Analysis?
Page 37, Degree of Subcooling	This variable could cause problems. The reactor operator could become overly dependent upon this variable. Also, a problem exists as to how to measure subcooling. Both temperature and pressure are needed. If the pressurizer pressure is used, which temperature should be used? Inlet? Outlet? Average? Degree of subcooling is a point phenoma, hence, it varies from point to point. We recommend that the operator be trained to thoroughly understand thermodynamics and the use of steam tables in lieu of the "crutch" which a subcooling meter would represent. In this way the operator will be able to understand the thermodynamics in all parts of the plant rather than a single point measured by a subcooling meter. We recommend that the requirement for a subcooling meter be deleted.
Page 37, (a) Containment Sump Water Level--Wide Range Page 39, (b) Core Exist Temperature	Why Category Number 1? Is there analysis to justify this category?

Page 46, (a) Containment Area Radiation--High Range, (b) Noble Gases and Vent Flow Rate--Containment or Purge Effluent	The ranges appear to be too broad. Is there analysis justifying these ranges?
Page 47, (c) Noble Gases and Vent Flow Rate--Condensor Air Removal System Exhaust	The ranges appear to be too broad. Is there analysis justifying these ranges?
Page 48, (d) Radiation Exposure Rate	The ranges appear to be too broad. Is there analysis justifying these ranges?