

AUG 22 1977

Docket Nos.: 50-289
and 50-320

Metropolitan Edison Company
ATTN: Mr. J. G. Herbein
Vice President
P. O. Box 542
Reading, Pennsylvania 19603

Gentlemen:

RE: THREE MILE ISLAND NUCLEAR GENERATING STATION

The Standard Technical Specifications (STS) for each NCSS vendor type plant currently contain a bases section that provides background information and technical support for each specification. The information in the bases has proven to be useful in enabling plant operators, and others involved in the operation or licensing activities of a facility, to better understand the reasons for the various specifications. It has also been useful to both licensees and the NRC staff as a technical summary of the plant design bases and the interrelationship of many of the safety considerations associated with operation of a plant. Consequently, the bases have served not only as support for the STS, but as training material for licensee personnel and, to some extent, as a source of background material for the NRC staff in reviewing certain licensing actions. We believe a number of benefits could be gained if the STS bases were upgraded. Among the major benefits we foresee are:

1. Technical Specification change requests could be processed in less time and with reduced manpower since much of the detailed information affecting consideration of the pending change would be readily available in the bases. Since a large amount of effort is expended by each of our staffs in researching and reviewing all of the factors influencing a typical change request, we believe the potential savings in manpower effort resulting from this improvement would be significant for both licensees and the NRC.
2. The relationship and effect of each of the factors influencing the selection of technical specification limits and requirements would be more clearly understood by users of the documents thereby increasing the usefulness of the specifications as operator training material for your staff.

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3. Questions involving interpretation of the technical specifications, that occur from time to time, could be more easily resolved between licensees and the Office of Inspection and Enforcement.
4. The continuity of detailed technical information would be preserved in a systematic manner throughout the facility lifetime thereby minimizing the adverse impact of transfer or reassignment of individuals who may possess detailed knowledge related to the evolution of the facility specifications.

Accordingly, we are initiating a program to upgrade the bases section of each generic STS. The program includes upgrading the bases for Section 2, "Safety Limits and Limiting Safety System Settings", and Sections 3 and 4, "Limiting Condition for Operation" and "Surveillance Requirements". The objective of the program is to provide a more definitive and detailed rationale for each specification in these sections. This will require some reorganization of the information currently in the bases, as well as the development of additional information. A suggested format for and the type of information that we believe should be considered for inclusion in the upgraded STS bases is provided in Enclosure 1.

As part of our continuing policy of involving the industry in the further refinement and improvement of the STS's, we are inviting your participation in this effort as one of those facilities either already in operation or scheduled for operation with STS in the near future. Your NSSS vendor is also being invited to participate. Upon completion, we will incorporate the revised bases into the STS for all future operating licenses. STS facilities in operation may then elect, at their option, to upgrade their existing technical specification bases to reflect this improvement. This effort is not expected to have any effect on completion of Technical Specifications now in preparation for units scheduled for operation in the near future.

We would appreciate your letting us know if you are willing to participate so that we can schedule a meeting with you, your vendor, and the other participating utilities at some time in the near future. At this meeting, we could discuss the objectives of the program, and mutually develop plans for accomplishing the upgrading of the bases in a systematic manner.

In the event you feel it would be beneficial to form a generic users group, a list of those facilities being invited to participate in this program, and who utilize the same NSSS vendor, is provided for your information in enclosure 2.

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If you have any questions regarding this program, or care to discuss it further, please contact us. In any event, we would appreciate hearing from you within the next few weeks.

Sincerely,

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosures:

1. Information to be Provided for Upgraded STS Bases Program
2. List of Facilities Requested to Participate

cc w/enclosures:
See next page

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OFFICE →	ORB#4:DOR	C-LWR#4:DOR	LWR#4:DOR	STSG	C-ORB#4:DOR
SURNAME →	GZwetzig	SVarga	HSilver	JWetmore	RWReid
DATE →	8/15/77	8/16/77	8/19/77	8/17/77	8/17/77

Metropolitan Edison Company

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INFORMATION TO BE PROVIDED FOR
UPGRADED STS BASES PROGRAM^{1/}

Fundamentally, the information in the bases for each specification should (1) describe why the specification is needed (i.e., identify its purpose), (2) explain why the quantitative values used as limits in the specification were chosen, and (3) indicate the margins of safety provided by the limits. To present this information in a clear and orderly fashion, a standardized format for the bases for each specification should be used. In our view, the standardized format should contain three basic parts: (1) Purpose, (2) Supporting Information, and (3) Margin of Safety. The information presented in each part should be in the form of concise summary statements and/or tabulations of data that serve to support the specification. The type of information that should be provided is delineated below.

1. PURPOSE

The purpose of the specification should be stated in terms of the conditions the specification has been formulated to establish or maintain. Any multiple purposes should be identified.

2. SUPPORTING INFORMATION

Information to support the quantitative values of the limits established by the specification should be provided in this part. The limiting value(s) of the specification should be supported in terms of the most restrictive plant variables or conditions used to establish the limit. In addition, pertinent information associated with the specification that relates to plant features or operating considerations should be provided. The manner in which the surveillance requirements ensure that the limits are maintained should be stated for surveillance whose intent is not obvious.

The assumptions relating to the establishment of the limiting value or condition should be stated in terms of each of the factors applicable to the specification. These factors should, where possible, include:

^{1/}This program includes upgrading the bases for only Sections 2, 3, and 4 of the STS. Sections 5 and 6 are not included.

- a. Assumptions of initial operating conditions.
- b. Assumed allowances for instrument bias factors including error, drift and calibration considerations.
- c. Assumed uncertainties associated with measurement of physics related parameters such as void and moderator temperature coefficient, rod worth and boron concentration.
- d. Assumed allowances related to uncertainties in tank volumes including considerations of unusable fluid volumes resulting from tank physical characteristics (vortexing, suction pipe elevation). Assumed minimum pump flow and discharge pressure characteristics including allowance for expected degradation.

3. MARGIN OF SAFETY

The resultant margin of safety obtained from consideration of the above factors should be provided in a definitive manner such that the relationship between specification limiting values and any related safety analyses assumptions is clearly established. Methodology such as probabilistic or statistical analyses techniques or the use of cumulative addition of factors in a non-conservative manner should be stated. Conformance with applicable provisions of Regulatory Guides, General Design Criteria or the Code of Federal Regulations should also be stated where applicable.

Much of the information for part (1) and to a lesser extent, part (3) of the standardized bases format is currently provided for a number of specifications in the STS. A reorganization and expansion of this information is what is sought. On the other hand, the information relating to assumptions which is to be provided in Part (2) would be new for most of the specifications.

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ENCLOSURE NO. 2

LIST OF FACILITIES REQUESTED
TO PARTICIPATE IN UPGRADED STS BASES PROGRAM

NSSS VENDOR

BABCOCK & WILCOX

Arkansas Unit 1
Three Mile Island Unit 2
Midland Units 1 and 2
Washington Nuclear 1
Crystal River Unit 3
Davis-Besse Unit 1

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