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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

June 11, 1979

Docket No. 50-245

Mr. W. G. Council, Vice President  
Nuclear Engineering and Operations  
Northeast Nuclear Energy Company  
P. O. Box 270  
Hartford, Connecticut 06101

Dear Mr. Council:

RE: IMPLEMENTATION OF CATEGORY 2 AND 3 REGULATORY GUIDES IN THE  
SYSTEMATIC EVALUATION PROGRAM - MILLSTONE NUCLEAR POWER STATION  
UNIT NO. 1

In the Systematic Evaluation Program for your facility we plan to address Regulatory Guides and other staff positions that have been classified as Category 2 or 3 for implementation by our Regulatory Requirements Review Committee.

Category 2 and Category 3 are defined as follows:

Category 2: Further staff consideration of the need for backfitting appears to be required for certain identified items of the regulatory position - these individual issues are such that existing plants need to be evaluated to determine their status with regard to these safety issues to determine the need for backfitting.

Category 3: Clearly backfit. Existing plants should be evaluated to determine whether identified items of the regulatory position are resolved in accordance with the guide or by some equivalent alternative.

For your information, a list of the Category 2 and 3 positions that we currently plan to address is provided in Enclosure 1. The SEP topics under which these issues will be considered is also shown.

A copy of one Category 3 position, Regulatory Guide 1.114, Revision 1, "Guidance on Being Operator at the Controls of a Nuclear Power Plant", is provided in Enclosure 2. To complete our evaluation of this specific guide you are requested to provide a commitment to meet the recommendations of the guide.

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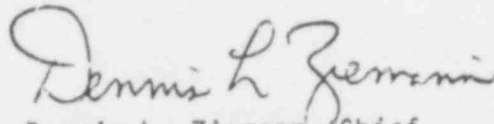
Mr. W. G. Council

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Please contact the assigned Project Manager for your facility if you have any questions or comments about these matters.

Sincerely,



Dennis L. Ziemann, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors

Enclosures:

1. List of Category 2 and 3 Positions
2. Regulatory Guide 1.114

cc w/enclosures:  
See next page

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cc w/enclosures:  
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Nuclear Regulatory Commission, Region I  
Office of Inspection and Enforcement  
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King of Prussia, Pennsylvania 19406

Waterford Public Library  
Rope Ferry Road, Route 156  
Waterford, Connecticut 06385

K M C, Inc.  
ATTN: Richard E. Schaffstall  
1747 Pennsylvania Avenue, N. W.  
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Washington, D. C. 20006

## ENCLOSURE 1

## CATEGORY 2 AND 3 MATTERS TO BE ADDRESSED IN THE SEP

CATEGORY 2 MATTERS

Document Number	Revision	Date	Title	Topic
RG 1.27	2	1/76	Ultimate Heat Sink for Nuclear Power Plants	II-3.C
RG 1.52	1	7/76	Design, Testing, and Maintenance Criteria for Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light Water Cooled Nuclear Power Plants (Revision 2 has been published but the changes from Revision 1 to Revision 2 may, but need not, be considered.	VI-8
RG 1.59	2	8/77	Design Basis Floods for Nuclear Power Plants	II-3.B
RG 1.63	2	7/78	Electric Penetration Assemblies in Containment Structures for Light Water Cooled Nuclear Power Plants	III-12
RG 1.91	1	2/78	Evaluation of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Plant Sites	II-1.C
RG 1.102	1	9/76	Flood Protection for Nuclear Power Plants	II-3.B
RG 1.108	1	8/77	Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants	VIII-2
RG 1.115	1	7/77	Protection Against Low-Trajectory Turbine Missiles	III-4.B
RG 1.117	1	4/78	Tornado Design Classification	III-4.A
RG 1.124	1	1/78	Service Limits and Loading Combinations for Class 1 Linear Type Component Supports	III-9 III-11
RG 1.130	0	7/77	Design Limits and Loading Combinations for Class 1 Plate- and Shell-Type Component Supports	III-9 III-11

(Continued)

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CATEGORY 2 MATTERS (CONT'D)

Continued

Document Number	Revision	Date	Title	Topic
RG 1.137	0	1/78	Fuel Oil System for Standby Diesel Generators (Paragraph C.2)	VIII-2
BTP ASB 9.5-1	1		Guidelines for Fire Protection for Nuclear Power Plants (See Implementation Section, Section D)	IX-6
BTP MTEB 5-7		4/77	Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping	V-4
RG 1.141	0	4/78	Containment Isolation Provisions for Fluid Systems	VI-4

CATEGORY 3 MATTERS

<u>Document Number</u>	<u>Revision</u>	<u>Date</u>	<u>Title</u>	<u>Topic</u>
RG 1.99	1	4/77	Effects of Residual Elements on Predicted Radiation Damage to Reactor Vessel Materials (Paragraphs C.1 and C.2.	V-6
RG 1.101	1	3/77	Emergency Planning for Nuclear Power Plants	XIII-1
RG 1.114	1	11/76	Guidance on Being Operator at the Controls of a Nuclear Power Plant	ORB #2
RG 1.121	0	8/76	Bases for Plugging Degraded PWR Steam Generator Tubes	V-8
RG 1.127	1	3/78	Inspection of Water-Control Structures Associated with Nuclear Power Plants	III-3.C
RSB 5-1	1	1/78	Branch Technical Position: Design Requirements of the Residual Heat Removal System	VII-3 V-II.B
RSB 5-2	0	3/78	Branch Technical Position: Reactor Coolant System Overpressurization Protection	V-6
RG 1.97	1	8/77	Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident (Paragraph C.3 - with additional guidance on paragraph C.3.d to be provided later)	VII-5
RG 1.56	1	7/78	Maintenance of Water Purity in Boiling Water Reactors	V-12.A

MATTERS THAT ARE NOT TO BE ADDRESSED

1. Regulatory Guide 1.105 "Instrument Setpoints" - This matter was included in the SEP Topic VII-1.B and was resolved on the basis of the NUREG-0138 discussion of the topic. However, DOR generic action on specific instrumentation such as LPRM drift in BWRs is continuing (such action was noted in the NUREG) and these generic reviews may be expanded if the need to do so is identified.
2. Regulatory Guide 8.8 "Information Relevant to Ensuring That Occupational Radiation Exposure at Nuclear Power Stations Will Be As Low As is Reasonably Achievable (Nuclear Power Reactors)" - This matter is presently being proposed for resolution by DOR/EEB on a generic basis. Since ALARA issues were not included in the initial SEP scope it would be inappropriate to include this one unique issue now.
3. Regulatory Guide 1.68.2 "Initial Startup Test Program to Demonstrate Remote Shutdown Capability for Water-Cooled Nuclear Power Plants" -- This matter was determined, by Regulatory Requirements Review Committee, to be applicable to plants in the OL stage of licensing.

U.S. NUCLEAR REGULATORY COMMISSION

**REGULATORY GUIDE**

OFFICE OF STANDARDS DEVELOPMENT

## REGULATORY GUIDE 1.154

GUIDANCE ON BEING OPERATOR AT THE CONTROLS OF A  
NUCLEAR POWER PLANT

## A. INTRODUCTION

Paragraph (k) of §50.54, "Conditions of Licenses," of 10 CFR Part 50, "Licensing of Production and Utilization Facilities," requires that an operator or senior operator licensed pursuant to 10 CFR Part 55, "Operators' Licenses," be present at the controls at all times during the operation of a facility. General Design Criterion 19, "Control Room," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 requires, in part, that a control room be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain the nuclear power plant in a safe condition under accident conditions. As defined in 10 CFR §50.2(t), the term "controls," when used with respect to nuclear reactors, means apparatus and mechanisms, the manipulation of which directly affects the reactivity or power level of the reactor. This guide describes a method acceptable to the NRC staff for complying with the Commission's regulations that require an operator to be present at the controls of a nuclear power plant. The Advisory Committee on Reactor Safeguards has been consulted concerning this guide and has concurred in the regulatory position.

## B. DISCUSSION

Operating experience has shown that there is a need for guidance with regard to acceptable methods of complying with the Commission's requirement for the presence of an operator at the controls of a facility. The operator at the controls of a nuclear power plant has many responsibilities, which include but are not limited to (1) adhering to the plant's technical specifications, plant operating procedures,

\* Line indicates substantive change from previous issue.

† Current Standard Technical Specifications require a licensed operator to be present in the control room at all times while fuel is in the reactor.

and NRC regulations; (2) reviewing operating data, including data logging and review, in order to ensure safe operation of the plant; and (3) being able to manually initiate engineered safety features during various transient and accident conditions.

In order for the operator at the controls of a nuclear power plant to be able to carry out these and other responsibilities in a timely fashion, he must give his attention to the condition of the plant at all times. He must be alert in order to ensure that the plant is operating safely and must be capable of taking action to prevent any progress toward a condition that might be unsafe. This is facilitated by control room design and layout in which all controls, instrumentation displays, and alarms required for the safe operation, shutdown, and cooldown of the unit are readily available to the operator in the control room.

## C. REGULATORY POSITION

1. The operator at the controls of a nuclear power plant should have an unobstructed view of and access to the operational control panels,<sup>1</sup> including instrumentation displays and alarms, in order to be able to initiate prompt corrective action, when necessary, on receipt of any indication (instrument movement or alarm) of a changing condition.

2. The operator at the controls should not normally leave the area where continuous attention (including visual surveillance of safety-related annunciators and instrumentation) can be given to reactor operating conditions and where he has access to the reactor controls. For example, the operator should not routinely enter areas behind control panels where

<sup>1</sup> Operational control panels are control panels that enable the operator at the controls to perform required manual safety functions and equipment surveillance and to monitor plant conditions under normal and accident conditions. Operational control panels include instrumentation for the reactor, reactor coolant system, containment, and safety-related process systems.

## USNRC REGULATORY GUIDES

Regulatory Guides are issued to describe and make available to the public methods acceptable to the NRC staff of implementing specific parts of the Commission's regulations, to delineate techniques used by the staff in evaluating specific problems or postulated accidents, or to provide guidance to applicants. Regulatory Guides are not substitutes for regulations, and compliance with them is not required. Methods and solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission.

Comments and suggestions for improvements in these guides are encouraged at all times and guides will be revised, as appropriate, to accommodate comments and to reflect new information or experience. This guide was revised as a result of substantive comments received from the public and additional staff review.

Comments should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Section.

The guides are issued in the following ten broad divisions:

- |                                   |                        |
|-----------------------------------|------------------------|
| 1. Power Reactors                 | 6. Products            |
| 2. Research and Test Reactors     | 7. Transportation      |
| 3. Fuels and Materials Facilities | 8. Occupational Health |
| 4. Environmental and Siting       | 9. Antitrust Review    |
| 5. Materials and Plant Protection | 10. General            |

Copies of published guides may be obtained by written request indicating the divisions desired to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Office of Standards Development.

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plant performance cannot be monitored. The operator at the controls should not under any circumstances leave the surveillance area defined by regulatory position 3 for any nonemergency reason (e.g., to confer with others or for personal reasons) without obtaining a qualified relief operator at the controls. In the event of an emergency affecting the safety of operations, the operator at the controls may momentarily be absent from the defined surveillance area in order to verify the receipt of an annunciator alarm or initiate corrective action, provided he remains within the confines of the control room.

3. Administrative procedures should be established to define and outline (preferably with sketches) specific areas within the control room where the operator at the controls should remain. The procedures should define the surveillance area and the areas that may be entered, in the event of an emergency affecting the safety of operations, by the operator at the controls to verify receipt of an annunciator alarm or initiate corrective action.

4. Prior to assuming responsibility for being operator at the controls, the relief operator should be properly briefed on the plant status. In order to en-

sure that proper relief occurs, administrative procedures should be written to describe what is required. The administrative procedure should include, as a minimum, a definition of proper relief (e.g., what information is required to be passed on and acknowledged between the two operators).

5. A single operator should not assume the operator-at-the-controls responsibility for two or more nuclear power units at the same time.

#### D. IMPLEMENTATION

The purpose of this section is to provide information to license applicants and licensees regarding the NRC staff's plans for using this regulatory guide.

This guide reflects current NRC staff practice. Therefore, except in those cases in which the applicant or licensee proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the method described herein is being and will continue to be used in the evaluation of submittals for operating license or construction permit applications and the performance of licensees until this guide is revised as a result of suggestions from the public or additional staff review.



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