

**NORTHEAST UTILITIES**



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270  
HARTFORD, CONNECTICUT 06141-0270  
(203) 665-5000

December 11, 1992  
MP-92-1299

RE: NUREG 1021, ES-601

Dr. Lee Bettenhausen  
Chief, Operations Branch  
U. S. Nuclear Regulatory Commission, Region 1  
475 Allendale Road  
King of Prussia, PA 19406

REFERENCE: Facility Operating License No. NPF-49  
Docket No. 50-423  
NRC Regualification Examination Summary

Dear Dr. Bettenhausen:

During the week of November 16, 1992, Licensed Operator Regualification Examinations were administered to four Millstone Unit 3 Licensed Operators and Senior Licensed Operators. These examinations were conducted in accordance with NUREG 1021, Operator Licensing Examiner Standards, Section ES-601. Accordingly, the examinations were prepared, administered, and evaluated by both NRC and facility examiners.

Preliminary results of the facility evaluations for all portions of the examination were provided to P. H. Bissett, NRC Chief Examiner, on November 19, 1992. Attached is a summary of our grades.

An evaluation of the examination results was performed to identify strengths and weaknesses, both individual and crew, and to identify necessary remediation and enhancements to the MP3 Licensed Operator Regualification Program content. The following is a summary, by examination environment, of the evaluation:

**SIMULATOR EXAMINATIONS**

STRENGTHS:

- Use of Procedures - in all observed instances where any type of procedure applied, operators knew where to obtain them and consistently referred to them in a timely manner.

WEAKNESSES (Individual):

Operator C -

During the simulator portion of the exam, this operator's verbal communications were not consistently conforming to MP3 Operations Manager's expectations. This appeared to be limited to the first of two scenarios and was particularly noticeable in situations of rapidly reporting multiple points of information.

During one JPM, Response to ATWS conditions, it was not evident that this operator completely performed the initial (redundant) verification of reactor status, as listed in EOP 35-FR S.1. Although this had no impact upon the JPM itself, the underlying cause was investigated and determined to be attributable to the JPM's initiating cue.

Operator D -

During the simulator exam, this operator omitted one piece of equipment among a lengthy list of pumps/fans to be manually inhibited from automatically starting upon electrical power restoration. After a short duration, this operator discovered his own mistake and properly reported and corrected it. The mistake appeared to be caused by transposition error with similar equipment and function on the same control panel.

During one JPM, Response to ATWS conditions, it was not evident that this operator completely performed the initial (redundant) verification of reactor status, as listed in EOP 35-FR S.1. Although this had no impact upon the JPM itself, the underlying cause was investigated and determined to be attributable to the JPM's initiating cue.

WALKTHROUGH EXAMINATIONS

There were no JPM's performed unsatisfactorily. However, the facility graded one JPM performed by one operator as a "miss", because a non-critical step was performed out of order.

## WRITTEN EXAMINATION

Examinee performance on the written examination was satisfactory, showing an understanding of the learning objectives examined.

## EXAM ADMINISTRATION

### Written Preparation -

During the NU/NRC exam team's preparation, two questions that were proposed were deemed to not be at the appropriate level for the purpose of NRC examination. The Chief NRC examiner decided that these questions were measuring simple memory-recall information and needed replacement or modification to be acceptable. These questions were replaced by questions of the appropriate level that measured similar areas of plant operations.

Additionally, one question unique to the SRO exam appeared to be measuring concepts too similar to another question on the exam. This question was replaced within the bounds of the sampling plan.

There were several questions that were (to some degree) altered to enhance them. Input from all members of the exam team provided valuable improvements, particularly in the quality of multiple choice distractors.

### Written Administration -

Immediately preceding the written examination, it was discovered that two questions on the SRO exam (previously identified for replacement) were not replaced, as they were on the RO exam. This was corrected prior to giving the exam.

One (1) other question had been subject to normal review/modification of the exam bank by the training staff during the interim period between preparation week and exam week. The replacement was acceptable.

On the static exam, the operators' turnover form contained a minor error in a procedure number. This error was missed in the facility review of the form, and required correction by briefing the examinees.

The above difficulties were caused primarily by the unusually detailed, direct involvement of the training supervisor. In the future, as has occurred on past exams, this involvement will be left to those individuals who perform these functions as their normal job duties.

#### JPM ADMINISTRATION

One operator spent too much time waiting between simulator and in-plant JPM's. This is because the facility did not fully assess the impact of having NRC examiners remain with the candidates, rather than remaining on-station for all candidates. This will be better assessed in future exams.

#### SIMULATOR ADMINISTRATION

The simulator exam was administered as planned with two exceptions:

Because of a simulator model problem, the turbine-driven aux. feed pump did not deliver flow when required. Operators performed all required actions, and the simulator instructors took action to restore flow.

At the very end of a small LOC scenario, the requirements for exiting the procedure in use were not met and thus did not transition as predicted. This was due to the crew having taken more time to reach that point than predicted, yet had no impact upon the exam.

#### SIMULATOR FIDELITY

Three simulator fidelity problems were noted.

The Aux Building Filter Fans (A and B) and damper indicating lamps had inconsistent states upon loss of power. This was corrected prior to the exam.

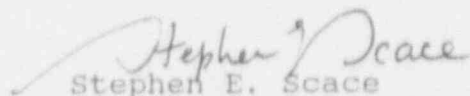
The necessary instruments for determining "adverse containment" had no simulated power on a station blackout, even though the EOP requires the determination. Further investigation revealed a simulator problem, rather than plant. This was corrected prior to the exam.

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The dynamics of the Turbine-Driven Aux Feed Pump were not properly modelled. Under a unique set of coincidences, this problem becomes apparent, and indeed occurred again on this exam. The model has since been revised to produce desired results.

Yours truly,

NORTHEAST NUCLEAR ENERGY COMPANY



Stephen E. Scace  
Station Vice President  
Millstone Nuclear Power Station

Attachment

SES/RGS/kae

c: Document Control Desks, U.S. NRC  
B. W. Ruth, Manager, Operator Training, NU  
R. M. Kacich, Nuclear Licensing, NU  
P. H. Bissett, U.S. NRC

ATTACHMENT

LORT EXAMINATION SUMMARY

WEEK OF NOVEMBER 16, 1992

MILLSTONE UNIT 3

Name	Simulator P/F	Static	Category B	Written Total	JPM's No. Sat
OPERATOR A	P	10/12	23/23	94.3	5
OPERATOR B	P	10/12	21/23	88.6	4
OPERATOR C	P	10/12	21/23	88.6	5
OPERATOR D	P	12/12	20/23	91.4	5

## ATTACHMENT 2

### SIMULATION FACILITY REPORT

Facility Licensee: MP-3

Facility Docket No.: 50-423

Requalification Examinations Administered from: November 16 - 19, 1992

This form is used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed.

<u>ITEM</u>	<u>DESCRIPTION</u>
Aux. Bldg. Fans	Upon a loss of power, the A & B auxiliary building filter fans and damper indicating lamps had inconsistent status indications. This discrepancy was corrected prior to the examination.
Instrumentation	During a loss of all power scenario, it was identified that instrumentation used to determine adverse containment conditions had no backup power supplies. Therefore, it was impossible to determine if adverse containment conditions existed. Containment temperature and/or containment rad monitor readings are used per EOP direction to determine if adverse conditions exist. This discrepancy was corrected prior to the examination.
Aux. Feed Pump	Under certain initiating power level conditions, i.e., 80% or less, followed by accident conditions that called for an automatic start of the turbine driven auxiliary feed pump, the auxiliary feed pump failed to start. Modeling was such that exhaust pressure was greater than steam inlet pressure; hence, the AFW pump would not start. This discrepancy was not corrected prior to the exam; however, the NRC has since been informed that this modeling problem has been corrected.