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DUKE POWER

February 16, 1990

Commissioner Kenneth M. Carr
Office of the Commissioner
U. S. Nuclear Regulatory Commission
Mail Stop 16G15
Building 11555, Rockville Pike
Rockville, Maryland 20852

Subject: NRC Administered Regualification Exams

In your presentation at the INPO CEO Workshop last November you requested that we advise you of any concern we may have about NRC performance in any given area. You asked that we provide specific information and not generalities. In response to your invitation, I want to advise you of my concern about the current regualification examination process for Reactor Operator and Senior Reactor Operator licenses.

Duke Power has completed the NRC administered regualification exam process at our Catawba and McGuire Nuclear Stations. This provided the opportunity to observe the impact on the stations, particularly the people involved, by the way the exam was administered.

The NRC accepted suggestions from our industry and developed a much improved examination relative to content and clearly related to the knowledge needed to safely operate a nuclear station. Based on our recent experience, I suggest improvements are warranted in the area of exam administration.

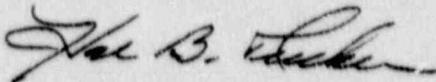
My concern is clearly expressed in the attached letter I received from one of our best engineers at McGuire Nuclear Station. It's evident the stress he experienced throughout the process is abnormal and undesirable. His manager described his behavior during the exam as abnormal and would have created concern for his fitness for duty had it been an actual operating experience.

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I have discussed my concern with Jack Roe, Director of Division of License, and we will provide information based on our experience at the National Meeting on Operator Regualification to be held in Dallas, Texas February 22 & 23, 1990. The meeting is expressly for providing feedback to the NRC Staff on the regualification examination. It is through this type of exchange that we can identify potential improvement.

Your support in pursuing an improved process of administering the examination is requested.

Sincerely,



Hal B. Tucker

HBT/yj

Enclosure

cc: James M. Taylor
Acting Executive Director
of Operations

S. D. Edneter
Regional Administrator, RII

Jack W. Roe
Director of Division of License

Byron Lee, Jr.
President & Chief Executive Officer
NUMARC



DUKE POWER

February 9, 1990

MEMORANDUM

To: H. B. Tucker

Subject: NRC Administered Requalification Exams

During the week of January 22, 1990, I participated in the NRC Administered Requalification Exams given at McGuire. The Licensed Operators at McGuire are aware of the past efforts you and other members of Senior Management have taken to improve this process. We also recognize the limitations Duke has in effecting changes in the process, but I wanted to give some first hand impressions of the test experience that may aid in future discussions regarding Licensed Operator functions.

The test content was closer to real world licensed functions than any we have seen in the past. Previous written tests were much too theoretical and walk-thru examinations did not attempt to evaluate the hands on plant knowledge required to safely operate the plant. Simulator scenarios frequently evolved into situations that could not occur and removed all equipment and systems required for recovery to as if to prove that candidates would not break under obscure conditions. Our recent requalification test scenarios involved situations we can more easily imagine occurring in the plant. The current process of a joint NRC/Duke designed exam has resulted in a substantial improvement in the quality of the exam.

Exam administration is still the problem. The level of stress produced in the examinees has been severely underestimated by all of us. Any NRC Exam has tremendous stress involved but this exam was different. Many of the test requirements added to the level of stress and hopefully can be corrected between Duke and the NRC. These are a few examples:

- (A) In order to minimize the chance of exam compromise, we were quarantined by Groups and not allowed to even see many of our fellow examinees. This results in a feeling of isolation as if we were in this situation alone.

- (B) We were escorted to the restroom, water fountain, etc. This reduces the ability to relax and prepare for the rest of the test.
- (C) Between simulator scenarios, the members of the same team are not allowed to discuss any aspect of the preceding simulator session. It is very demanding to be locked in a room with three colleagues with only one thing on your mind and not be allowed to talk about it.
- (D) We experienced delays of over two hours between simulator scenarios. This long delay makes it very difficult to get mentally up for the next session.
- (E) One Group was required to report at noon and did not begin their testing until after 8:00 P.M. This long delay locked in a room is very distressing. Plant management took them out to supper which was a tremendous relief. The Group finished their testing at 10:30 P.M. The next day, we reported at our assigned time of 07:30 and were told the NRC would be in 30 minutes later. I feel the NRC and facility should recognize the need for more closely following the schedule.

Items (D) and (E) were revised by Duke and NRC prior to the second exam to address these concerns. This reduced the schedule's impact on the stress level.

- (F) The Staff SROs are required to take four simulator scenarios as opposed to the two that Shift Operators take. This gives twice as many opportunities for failure. It also indicates that individuals are being tested as opposed to Duke's training program being tested.
- (G) Any Operators who fail are faced with an NRC re-examination within six months. This will result in further stress than exists during the current examination.

Every job has a level of stress that we do not like. However, the re-qualification exam produces stress that is not felt through any other situation. During an initial license examination, the pressure is higher than any employee should face, but the consequences only involve severe disappointment in not gaining the license. Failure of a requalification exam can result in a loss of job position, money, promotion opportunities, and a significant amount of personal time and effort to obtain and maintain the license.

The job requirements and qualifications for licensed personnel are unique. We have the Non-licensed Operator (NLO) level and require those employees to be 100% qualified in that level. The Licensed Reactor Operator (RO) is required to be 100% qualified in the RO Level

and at the NLO Level. The Senior Reactor Operator (SRO) is required to be fully qualified at that level and the RO and NLO Level. Licensed Staff Personnel are required to be 100% qualified at their job and the SRO/Shift Supervisor, RO, and NLO Levels. These qualifications include being tested at each job classification and proving proficiency at all levels.

The stress I felt during my exam was the worst I have ever experienced. I have worked during numerous unit trips, safety injections, severe equipment failures, significant generator hydrogen leaks, lube oil leaks with a high potential for destructive fires, Hurricane Hugo, etc., and if the stress and fear of the ten worst events in the plant could be combined into one, it would not have matched that week of testing. I could not sleep, eat or relax during the week and still had severe headaches and earaches a full week later. I had the sensation of all the blood in my body being squeezed into my head and that it would burst. I felt like a prisoner of war being tortured to test my mental limits and that I was waiting for days to determine if a family member was among the dead during a disaster. I estimate it will take three to four weeks to wind down enough to sleep through one night. Our families also suffer through this experience and the stress is transferred to them. The workforce reduction was stressful and traumatic for all Duke employees but the exam is two to three times more stressful.

All test examinees have expressed this same feeling. **Sonny Lipe** (Shift Supervisor) feels his exam was worse than his previous RO, SRO, Unit 1-Unit 2 differences exams, and the Unit 1 Tube Rupture. **Joe Iddings** (Assistant Shift Supervisor) was the Control Room SRO during the Tube Rupture Event and led the shift in the impressive termination of that severe event. Joe has indicated that the requal test was significantly more stressful than the tube rupture. Reactor Operator **Dusty Miller's** wife got up with one of their children during the night and when she returned to bed, Dusty awoke abruptly and asked her if she "had notified the NRC." Our feelings were best described by Shift Supervisor, **Larry Abernathy**, "the one week of requal exams were worse than the year I spent in Vietnam."

Since stress is an impossible quantity to measure or convey, I recommend that we consider quick physical checks of examinees during the exam. A pulse and blood pressure check should reveal surprising indications of the health effects of the process. I personally felt that if Duke and the NRC knew what was happening to us, the exam would have been changed.

The personnel suffering brought about by the exam is the beginning of the corporate damage that will occur. Many excellent Licensed Personnel are rethinking their career plans and we will lose some talented people from the Operations' ranks where they are needed most. This will be both a short and long term deficit for the company in the area that we can least afford such a loss. In the period of time immediately

prior to and just after the exam, the attention of Operational personnel is consumed with the thoughts and fear of the exam, placing another mental burden on the folks who must maintain clear, cool heads to operate the plant. I believe our people will function properly when called upon, but our new Fitness for Duty Program would cause us to raise questions concerning this large a distraction if it occurred outside the workplace.

I do not have any major recommendations I can make since it appears the NRC will not back down on the requalification exam issue. However, these thoughts are conveyed to you in the hope that they may provide a first hand look at the exam and what occurs to our Licensed personnel. I would be happy to discuss this further with you if you desire.

Sincerely,

R. Kent Davis

R. Kent Davis
Nuclear Production Engineer
McGuire Nuclear Station

RKD/rss

cc: T. L. McConnell
R. B. Travis
J. W. Silver