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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

JAN 6 1972

Paul F. Collins, Chief, OLB/DRL
THRU: R.J. Bursey, PWR Group Leader, OLB/DRL

INDIAN POINT UNITS #2 & #3 COMPARISON

Based on a review of the FSAR's for the two units (separate books for each), Indian Point #3 should be considered identical to Indian Point #2 for operator licensing purposes. Both are four-loop Westinghouse plants and they are essentially independent units. They share far fewer systems than reactors at other multi-unit sites.

The following is a summary of the comparison of the plants:

1. REACTOR - Unit #3 is rated for 10% greater power due to core improvements such as dished pellets, Zirconium rod guides and pre-pressurized fuel rods. This gives unit #3 slightly greater rod worths.

2. REACTOR COOLANT SYSTEM - Same as #2.

3. CONTAINMENT - Same type and size as #2, also using Penetration Seal and Weld Channel seal systems.

4. ECCS - Same basic systems and piping arrangement. The Boron Injection Tank is on one discharge leg of the HH SIS for Unit #3 as opposed to the pump suction on Unit #2. (This removes the requirement for valve operation on this tank during safety injection).

5. INSTRUMENTATION AND CONTROL - Same as Unit #2.

6. ELECTRICAL SYSTEMS - Same as Unit #2. Shares same incoming 230KV lines with Unit #2. Unit #3 has 3 diesel generators of its own, tied to its emergency busses in the same manner as Unit #2.

7. AUXILIARY SYSTEMS - Same as Unit #2.

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8. STEAM AND POWER CONVERSION - Same as Unit #2.

9. WASTE DISPOSAL - Same as Unit #2.

It is obvious that Unit #2 and Unit #3 were built to be identical and independent of each other. Even the control room layout for Unit #3 will be the same as for Unit #2.

David R. Roth
PWR Group
Operator Licensing Branch
Division of Reactor Licensing

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P. F. Collins, Chief, L/OLB
THRU: R. J. Campbell, BWR Group Leader, L/OLB

EVALUATION OF QUAD-CITIES OPERATING TEST AT THE G. E. SIMULATOR

On September 12, 1972 the operating portion of oral examinations for Quad-Cities reactor operators was conducted at the GE Simulator located at Morris, Illinois. A total of 5 exams were given, two were conducted by G. Beck and the other three by the writer.

The applicants complained about the differences between the simulator operation and the operation of their own plant. In particular these complaints centered around:

1. The lack of automatic control on the feedwater bypass valve for reactor level control.

2. The response time of instruments.

3. The response time of mechanical equipment, i.e. rod drive and pumps.

The latter two of these complaints are difficult to evaluate since they are something only a person use to operating a particular piece of equipment might be aware of. I would compare it to driving some other person's car and having to adjust your driving habits to a different response of brakes, steering and acceleration. I believe, since these operators normally rotate between Units 1 & 2 at Quad-Cities that, the same complaint could apply there. From the standpoint of the exam, it did not appear to interfere or cause them any great difficulty.

The first complaint does have some substance except that it is possible that each of these operators at some time in his career may have to startup the Quad-Cities reactor without automatic level control. From

the examiner's point of view this problem was one of "how many operators in the control room under these conditions"? In my case I decided to let the applicant decide if he needed help. Only one man asked for the extra operator and I did not down grade him because of the request. The other two applicants handled the situation, although with some added pressure. GE is planning to replace the controller for this valve at the simulator thus resolving this problem.

Conducting the exams at Morris and Quad-Cities is a little inconvenient to the examiner since he has little choice but to drive from one place to the other and this takes ~2 1/2 to 3 hours. I do not think I would appreciate this drive if I had to do it after 6 or 8 hours of oral exams.

Based on the above observations and considerations, I believe that the simulator can be used for Quad-Cities exams and that there are no major problems associated with the "split" oral examination.

Joseph I. McMillen
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Directorate of Licensing

OCT 1 3 1972

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