

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Docket No: 50-354

License Nos: NPF-57

Report No. 50-354/98-03 (OL) - SUPPLEMENT

Licensee: Public Service Electric and Gas Company

Facility: Hope Creek Generating Station

Location: P.O. Box 236  
Hancocks Bridge, New Jersey 08038

Examination Period: February 23, 1998 - March 4, 1998 (onsite)

Inspection Period: March 4 - March 12, 1998 (in-office)  
May 19 through 21, 1998 (onsite),  
May 22 through 28 (in-office)

Chief Examiner: D. Florek, Senior Operations Engineer

Examiners: J. Caruso, Operations Engineer  
T. Fish, Operations Engineer

Inspector: S. Barr, Operations Engineer

Approved by: R. Conte, Chief, Operator Licensing  
and Human Performance Branch  
Division of Reactor Safety

## EXECUTIVE SUMMARY

### Examination Report 50-354/98-03(OL) - Supplement

Initial exams were administered to six senior reactor operator (SRO) instant applicants (one of which was a retake on the written portion of the examination) and five reactor operator (RO) applicants during the period of February 23 - March 2, 1998, at the Hope Creek Generating Station. A preliminary report was issued on April 28, 1998. This report supplements that report but details of the previous report were not duplicated within. However this executive summary is comprehensive and reflects both reports.

### OPERATIONS

PSE&G staff submitted initially an inadequate examination to administer to applicants for an operator's license. A majority of the test items of each portion of the examination required replacement or significant modifications. Significant interactions between the NRC and PSE&G occurred and an exam postponement for two weeks was required in order for PSE&G to develop an exam that was consistent with the NRC Examiner Standards. (Revised from previously issued report.)

The controls, criteria, and data for significant control manipulations were insufficient to provide evidence, in part, that the manipulations were done acceptably in accordance with 10 CFR 55.31(a)(5). As a result, some of the applicants needed to re-perform the significant control manipulations on the plant to achieve the required five. Program inadequacies were evident along with weak or inadequate corrective action from past events at Salem and related industry operating experience. This area is unresolved item pending further review by NRC staff (50-354/98-03-01). (Revised from previously issued report.)

PSE&G submitted an incomplete re-application for an applicant who failed the September 29, 1997 written exam. A subsequent submittal provided the information required in 10 CFR 55.41(a). (In previously issued report, no change)

Four of five reactor operator applicants and three of five senior reactor applicants passed the exams. Also, a senior reactor operator applicant failed a retake on the written portion of the examination. One reactor operator applicant failed the written exam. One senior reactor operator applicant failed the written exam, and one failed both the written and operating exam. These results indicate individual poor preparedness for the examination and a potential programmatic problem in readying applicants for an NRC examination.

The adequacy of program requirements for time spent on shift is unresolved pending further review by NRC staff with respect to meeting 10 CFR 55.31(a)(4). (URI 50-354/98-03-02)

## Report Details

### **O5 Operator Training and Qualifications**

O5.1 Operator Initial Exams - See previous report of April 28, 1998

O5.2 Significant Control Manipulations - See previous report of April 28, 1998

O5.3 Incomplete Application - See previous report of April 28, 1998

O5.4 Examination Results - Supplemental

The results of the initial exams among new applicants are summarized below:

	SRO Pass/Fail	RO Pass/Fail	Total Pass/Fail
Written	4/1	4/1	8/2
Operating	3/2	5/0	8/2
Overall	3/2	4/1	7/3

Also, another SRO applicant failed on a retake of the written portion of the examination.

These results reflect poor preparations on the part of certain applicants and a potential program problem in readying applicants to take the NRC examination.

O5.5 Time on Shift - Supplemental

As a result of the program problem on significant control manipulations, the inspector reviewed another aspect of licensed operator applicants meeting program requirements of time spent on shift. The related qualification cards had two requirements; one deals with logging time spent meeting 520 hours on shift as an extra person under the direct supervision of licensed personnel; the other deals with a subset of this 520 hours, specifically, a minimum of 40 hours actually standing the watch position for which the individual was in training. Interviews of selected operators focused on how the applicants satisfied procedural requirements to be under the direct supervision of licensed personnel.

In order to meet the 40 hours of watch standing, the applicants stood the watch position and performed the same activities as if the licensed operator applicant was standing the watch. The on-duty licensed operator was in the line of sight and provided oversight on the applicant. These duties included such activities as monitoring indications, operating the controls, taking logs, communications, handling work and other requests and actions needed for plant operations. These activities were not unusual for the training situation.

In order to meet the 520 hours of under direct supervision time, the applicants would report for duty with the rest of the on-coming crew, participate in turnover



activities and perform as an extra person on shift under the supervision of the shift supervisor. Other activities included: self study of procedures and prints in the crew ready room, complete qualification card practical factors and other requirements in the plant and in the control room, and otherwise learned routine shift activities. These activities were not unusual for the training situation.

However, the inspector noted that, while the program requirement did not clearly define what "direct supervision" was, the applicants were not always "in the presence of the shift supervisor." Further, Regulatory Guide 1.8 Revision 2, April 1987, in reference to ANSI/ANS 3.1, 1981, indicates that the applicants should spend 3 months [or 13 weeks] for the on shift time (13 weeks times 40 hrs/week = 520 hours). It would be possible for an applicant to meet 520 hours in shorter than a 3 month period. With respect to these clarity problems, this area is unresolved pending further NRC staff review to assure the initial licensee operator program requirements (that are based on the above referenced regulatory guide) are met in accordance with 10 CFR 55.31(a)(4). (URI 50-340/98-03-02).

E.8 Review of UFSAR Commitments - See previous report of April 28, 1998.

## V. Management Meetings

### **X1 Exit Meeting Summary**

On March 4, 1998, the examiners discussed their observations of the exam process with members of PSE&G management. The examiners noted that no simulator fidelity concerns had been observed or identified. PSE&G management acknowledged the examiner observations.

On May 28, 1998, Mr. R. Conte, Region I announced the results of the examination to Mr. J. Nichol, PSE&G. Also discussed were initial licensing program inadequacies and weaknesses noted in this and the previous examination report. It was agreed that a management meeting would be beneficial to further discuss these problems including root causes and corrective actions.

### LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

NUMBER	TYPE	DESCRIPTION
50-354/98-03-01	URI	Significant control manipulations is unresolved item pending further enforcement review by NRC staff with respect to meeting 10 CFR 55.31(a)(5) - see previous report of April 28, 1998.
50-354/98-03-02	URI	The adequacy of the LOIT program requirements for time on shift is unresolved pending further review by NRC staff with respect to meeting 10 CFR 55.31(a)(4).