

October 30, 1998

Mr. Oliver D. Kingsley
President, Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: BYRON OPERATOR LICENSING EXAMINATION REPORT 50-454/98301(OL);
50-455/98301(OL)

Dear Mr. Kingsley:

On September 18, 1998, the NRC completed initial operator license examinations at your Byron Nuclear Generating Station. The operating examination was administered from September 15 through September 18, 1998, and the written examination was administered on September 14, 1998. During the license examination, control room operations were observed and several administrative and operating procedures were reviewed. The enclosed report presents the results of the examination and the concurrent operations inspection. At the conclusion of the examination process, preliminary findings were discussed with those members of your staff identified in the enclosed report during an Exit meeting on September 22, 1998. The license applicants' performance evaluations were finalized and members of your staff were informed of the examination results on October 20, 1998. Furthermore, a management meeting was held on October 21, 1998, to hear and discuss your root cause evaluation and corrective actions concerning the high rate of examination failures and training weaknesses.

Examinations were administered to two Reactor Operator applicants and three Senior Reactor Operator applicants. Both Reactor Operator applicants and two Senior Reactor Operator applicants failed portions of their examination and were denied operator licenses. One Senior Reactor Operator applicant passed all sections of his examination and was issued a Senior Reactor Operator license to operate your Byron Station.

During the examination and preparation weeks, the examiners observed actual control room operations, as part of continuing assessment of licensed operator performance. The observation included a shift turnover and a Heightened Level of Awareness (HLA) briefing. Operators in the control room were noted to be attentive and knowledgeable of plant status when questioned by the examiners. Operators were also observed to be satisfactorily referencing procedures and responding to annunciators. During the shift turnover and HLA briefing, the operators were observed to be actively involved in the discussions and overall communications were good. In addition, the operators who performed examination validation were knowledgeable and provided good insight and information during the simulator scenario verification.

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This was the Byron Training Department Staff's second opportunity to develop an operator license examination developed under the guidelines contained in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," Interim Revision 8. The examiners identified that the training department staff's attention to detail, knowledge of examination development guidelines, and ability to develop technically accurate examination material according to the guidelines were satisfactory. However, the submitted examination material required NRC attention to correct some deficiencies to better conform with NUREG 1021 guidance. Examples of these deficiencies are as follows: (1) approximately 40% of the written examination questions required some NRC effort that included correcting editorial problems (grammar correction, typographical errors), clarify or enhance question stems and distractors, and the rewriting or replacement of five questions; (2) two of the simulator scenarios required some minor improvements and corrections; and (3) the Job Performance Measures (JPM) walkthrough required the enhancement of five JPMs, replacement of two JPMs, and the modification of eight out of 20 JPM questions. Overall, the examiners concluded that the examination as a whole was average to above average in difficulty and satisfactorily discriminated between competent and less than competent operators.

Several of the license applicants demonstrated weaknesses during the administration of the operator license examination. A number of applicants demonstrated knowledge deficiencies during the written examination and similarly during the systems JPM questions. During the operating portion of the examination, applicants also displayed some weakness in event diagnosis, system response interpretation, and use and understanding of operating procedures. The four examination failures were directly attributable to deficiencies noted during the written test, with two of the applicants also failing one of three areas of the operating test. The high failure rate and low grades suggest that the training program did not ensure that the applicants were adequately prepared for the examination nor ready to perform the activities of a licensed operator.

Furthermore, based on your staff's presentation during the October 21, 1998, management meeting held at the Region III office, it is our understanding that there were precursors to this training problem, but timely and adequate corrective actions were not taken. In general, your root cause assessment indicated the need to increase the training objectives to a higher cognitive knowledge level, that Byron staff failed to keep up with industry's standards, and that Byron staff failed to perform an overall comprehensive evaluation of the candidates. We understand your root cause assessment and proposed corrective actions. No further response is required on your part pertaining to this examination report. We acknowledge your initiative and the timeliness in performing your root cause evaluation.

Overall, we are concerned about your Byron managers' lack of involvement and your staff's apparent complacency in taking timely corrective actions when precursor indications of inadequate license applicant performance were apparent prior to administration of the NRC examination. We will review and assess your progress concerning your root cause findings and proposed corrective actions during future inspections.

In addition, it is our expectation that the Byron training department instructors will use the applicant weaknesses outlined in the accompanying report as feedback to improve the operator license training program in accordance with your Systematic Approach to Training (SAT) program.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosures to this letter will be placed in the NRC Public Document Room.

Sincerely,

Original Signed by John A. Grobe

John A. Grobe, Director
Division of Reactor Safety

Docket Nos.: 50-454; 50-455
License Nos.: NPF-37; NPF-66

- Enclosures:
1. Operator Licensing Examination Reports 50-454/98301(OL); 50-455/98301(OL)
 2. Facility Post Written Examination Comments and NRC Resolution
 3. Simulation Facility Report
 4. Licensee's Management Meeting Handout (Byron Nuclear Station Initial License Training Examination Meeting)
 5. Examinations and Answer Keys (SRO/RO)

cc w/encls 1, 2, 3 & 4:

- D. Helwig, Senior Vice President
- H. Stanley, PWR Vice President
- C. Crane, BWR Vice President
- R. Krich, Regulatory Services Manager
- D. Greene, Licensing Director
DCD - Licensing
- K. Graesser, Site Vice President
- W. Levis, Station Manager
- B. Adams, Regulatory Assurance Manager
- R. Hubbard, MHB Technical Associates
- M. Aguilar, Assistant Attorney General
State Liaison Officer
State Liaison Officer, Wisconsin
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cc w/encls 1, 2, 3, 4 & 5: T. Schmidt, Manager, Nuclear Training

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