

SHIFT ADVISOR
TRAINING PROGRAM

A. STATEMENT OF APPLICABILITY:

The purpose of this procedure is to outline how the Byron Station Shift Advisor Training Program is to be conducted.

B. REFERENCES:

1. Licensed Operator Training Lesson Plans.
2. Shift Advisor Certification Guide, BTP 100-T107.
3. Shift Advisor Oral Exam Document, BTP 100-T108.

C. MAIN BODY:

1. The Byron Station Shift Advisor Training Program shall be conducted by the Byron Station Training Department.
2. Personnel to receive Shift Advisor training shall be identified by the Byron Station Operating Department.
3. The Shift Advisor Training Program will consist of three phases and will be concluded with the certification of the trainee as a certified Shift Advisor.
4. Phase I of the Shift Advisor Training Program under the direction of the Byron Station Training Department shall consist of:

a. Classroom instruction covering:

- 1). Reactor Coolant System
- 2). Reactor Coolant Pumps
- 3). Pressurizer System
- 4). Nuclear Fuel
- 5). Excore Nuclear Instrumentation System
- 6). Reactor Rod Control System
- 7). Digital Rod Position Indication
- 8). Reactor Make-up Control System
- 9). Chemical Volume and Control System
- 10). Boron Thermal Regeneration System
- 11). AC/DC Electrical Distribution
- 12). Main Generator
- 13). Emergency Diesel Generators
- 14). Emergency Core Cooling System
- 15). Containment Spray System
- 16). Component Cooling Water System
- 17). Essential Service Water System
- 18). Non-Essential Service Water System
- 19). Circulating Water System
- 20). Main Steam System

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- 21). Steam Dump System
- 22). Condensate/Feedwater Systems
- 23). Auxiliary Feedwater System
- 24). Turbine Controls and Auxiliary System
- 25). MSR Control
- 26). Reactor Protection System
- 27). Engineered Safety Features Actuation System
- 28). Radiation Monitoring Systems
- 29). Fuel Handling
- 30). Gaseous Radwaste System
- 31). Liquid Radwaste System
- 32). Byron General Operating Procedures (BGP's)
- 33). Byron Abnormal Operating Procedures (BOA's)
- 34). Generating Station Emergency Plan (GSEP)
- 35). Radiation Standards
- 36). Reactor Trip Root Cause Determination
- 37). Byron Emergency Procedures (BEP's)
- 38). Byron Administrative Procedures (BAP's)
- 39). BOS LCOAR
- 40). Byron Technical Specification

- b. Phase I is to be conducted in two segments, the first being 20 days with a written quiz being conducted following each 5 days, as a maximum, of classroom instruction. The second segment of Phase I shall be 5 days in length and is comprised of a comprehensive written final exam and an oral exam.
- 1). The oral exam review board shall be comprised of two training department personnel, one operating department person, and one trainee. The oral exam requires all examiners to agree on the trainee passing the SHIFT ADVISOR ORAL EXAM.
 - 2). The Shift Advisor Oral Exam Document, BTP 100-T108, shall be used to document the trainee's oral exam. BTP 100-T108 is comprised of three sections.
 - a). Section I - is used to document the topics covered during the oral exam. Each topic must be identified as being discussed satisfactorily/unsatisfactorily in the S/U column provided.
 - b). Section II - is the "Comments" section for the examiners to note any strengths/weaknesses of the trainee.
 - c). Section III - will be used to indicate the results of the oral exam and also provide a location for the signatures of the examiners. The Training Supervisor's signature is required for final approval.

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5. Phase II of the Shift Advisor Training Program shall be under the direction of Byron Station Operating Department. Phase II shall be 10 days in length with the trainee being assigned to a shift or shifts as appropriate to complete the Shift Advisor Certification Guide BTP 100-T107.
6. Phase III shall be conducted by either Byron Training Department or Production Training Department.
7. Phase III shall be five days of simulator training at Production Training Center. The intent is to familiarize the Shift Advisors with the Byron controls and plant responses.
8. The simulator training program shall cover the following areas:
 - SYSTEMS KNOWLEDGE
 - RX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
 - GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
 - NORMAL OPERATING PROCEDURES
 - ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
 - TECHNICAL SPECIFICATIONS
 - ABILITY TO OPERATE THE CONTROL BOARD
 - ABILITY TO SUPERVISE NORMAL PLANT OPERATION
 - ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
 - OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SFTY 3] CO-WRKRS 4] TRNG
 - LEADERSHIP
9. Upon successful completion of the three phases, the trainee shall be recognized by the facility as a certified Shift Advisor.
 - a. Successful completion of Phase I is determined by the trainee having:
 - 1). Achieved an overall examination score average of 80% or higher with no one examination score less than 70%.
 - 2). Passed Oral Exam.
 - b. Successful completion of Phase II is to be determined by both the completion of the Shift Advisor Certification Guide BTP 100-T107 and the submission of this guide to the Byron Training Department.
 - c. Successful completion of Phase III shall be determined by a satisfactory evaluation completed by the Shift Advisor's respective Simulator Instructor.
10. The Shift Advisor shall participate in the Shift Advisor Requalification Training Program. This program will be conducted during the first week of the Shift Advisors respective shift's requalification training program, and will include:

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- a.
 - 1.) LER's
 - 2.) INPO SOER's
 - 3.) Current Industry Information
 - 4.) Procedure Revision
 - 5.) Plant System Modification
 - b. Annual participation on the Byron/Braidwood simulator.
11. Upon successful completion of the course, a certificate shall be issued to each trainee.
 12. The course shall be documented using course code Y-STAP, file number 1.6.1001 and Keyworded Shift Advisor XX-X*.

* XX-X - represents the last two digits of the calendar year followed by the sequential number of the class in that year.

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Appendix E
Revised Shift Advisor Exam Results

SHIFT ADVISOR 84-2 CLASS

	WK 1	WK2	WK3	WK4	FINAL
Bob Femal	88.2	94.8	89.2	93.1 (AVE-91.3)	
Bob Glaze	81.5	88.8	85.7	86.3 (AVE-85.6)	
Brian Hughes	69.9 → 82.6 95.3	89.2	86.4	81.0 (AVE-84.8)	
Ermal Morris	60.1 → 78.3 96.4	85.1	88.4	84.4 (AVE-84.1)	
R.Tefertiller	95.4	94.8	94.4	96.2 (AVE-95.2)	
AVERAGE	85.2	90.5	88.8	88.2	

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Rodger Anderson CLASS NO. 84-1 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL RO
 SRO
 SCRE
 STA

Ref #	5	4	3	2*	1*	N/O	EVALUATED AREAS
1	X						SYSTEMS KNOWLEDGE
2	X						RX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3	X						GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4		X					NORMAL OPERATING PROCEDURES
5		X					ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
6	X						TECHNICAL SPECIFICATIONS
7	X						ABILITY TO OPERATE THE CONTROL BOARD
8	X						ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKRS 4] TRNG
11	X						LEADERSHIP

5-Excellent 4-Above Average 3-Average 2-Below Average 1-Poor N/O-Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-1 class simulator program consisted of 5 days, 4 hours of class and 4 hours of simulator operation. Rodger Anderson's knowledge of Byron Station's Systems was impressive. His leadership ability was excellent during abnormal and emergency conditions.

Additional Pages of Comments

Terrance D. ...
INSTRUCTOR

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Bill Minerich CLASS NO. 84-1 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL RO
 SRO
 SCRE
 STA

Ref #	5	4	3	2*	1*	N/O	EVALUATED AREAS
1		X					SYSTEMS KNOWLEDGE
2	X						RX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3	X						GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4	X						NORMAL OPERATING PROCEDURES
5	X						ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
6		X					TECHNICAL SPECIFICATIONS
7		X					ABILITY TO OPERATE THE CONTROL BOARD
8	X						ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKRS 4] TRNG
11	X						LEADERSHIP

5=Excellent 4=Above Average 3=Average 2=Below Average 1=Poor N/O=Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-1 class simulator program consisted of 5 days, 4 hours of class and 4 hours of simulator operator. Bill Minerich displays definite experience at the Senior Reactor Operator Level by his ability to direct and control plant operations during abnormal and emergency conditions.

Additional Pages of Comments

Terrance D. [Signature]
INSTRUCTOR

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Jim Hassinger CLASS NO. 84-1 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL

- NO
 SRO
 SCRE
 STA

Ref #	5	4	3	2*	1*	N/O	EVALUATED AREAS
1		X					SYSTEMS KNOWLEDGE
2		X					RX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3	X						GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4	X						NORMAL OPERATING PROCEDURES
5	X						ABNORMAL (OPF-NORMAL) AND EMERGENCY PROCEDURES
6	X						TECHNICAL SPECIFICATIONS
7		X					ABILITY TO OPERATE THE CONTROL BOARD
8	X						ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKRS 4] TRNG
11	X						LEADERSHIP

5-Excellent 4-Above Average 3-Average 2-Below Average 1-Poor N/O-Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-1 class simulator program consisted of 5 days, 4 hours of class and 4 hours of simulator operation. Jim Hassinger's confidence and excellent operating ability was observed during normal, abnormal, and emergency operations.

Additional Pages of Comments

Terrence DeSantis
INSTRUCTOR

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Brian Hughes CLASS NO. 84-2 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL RO
 SRO
 SCRE
 STA

Ref #	5	4	3	2	1	N/O	EVALUATED AREAS
1			X				SYSTEMS KNOWLEDGE
2		X					RX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3		X					GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4		X					NORMAL OPERATING PROCEDURES
5		X					ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
6			X				TECHNICAL SPECIFICATIONS
7		X					ABILITY TO OPERATE THE CONTROL BOARD
8		X					ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKRS 4] TRNG
11		X					LEADERSHIP

5=Excellent 4=Above Average 3=Average 2=Below Average 1=Poor N/O=Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-2 Class simulator program consisted of 5 days, 8 hours per day of simulator operation. Brian Hughes displayed an excellent ability to direct operations during abnormal and emergency operations.

Additional Pages of Comments

William M. Snow
INSTRUCTOR

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Ermal Morris CLASS NO. 84-2 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL

- RO
 SRO
 SCRE
 STA

Ref #	5	4	3	2*	1*	N/O	EVALUATED AREAS
1			X				SYSTEMS KNOWLEDGE
2		X					RX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3		X					GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4		X					NORMAL OPERATING PROCEDURES
5	X						ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
6			X				TECHNICAL SPECIFICATIONS
7		X					ABILITY TO OPERATE THE CONTROL BOARD
8		X					ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKERS 4] TRNG
11		X					LEADERSHIP

5-Excellent 4-Above Average 3-Average 2-Below Average 1-Poor N/O-Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-2 class simulator program consisted of 5 days, 8 hours per day of simulator operation. Ermal Morris showed a good working knowledge of the Byron Procedures and his excellent ability to direct his co-workers during abnormal and emergency conditions.

Additional Pages of Comments

William M. Suer
INSTRUCTOR

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Bob Glaze CLASS NO. 84-2 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL

- RO
 SRO
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 STA

Ref #	5	4	3	2*	1*	N/O	EVALUATED AREAS
1			X				SYSTEMS KNOWLEDGE
2		X					RX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3		X					GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4		X					NORMAL OPERATING PROCEDURES
5	X						ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
6			X				TECHNICAL SPECIFICATIONS
7		X					ABILITY TO OPERATE THE CONTROL BOARD
8	X						ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKRS 4] TRNG
11	X						LEADERSHIP

5=Excellent 4=Above Average 3=Average 2=Below Average 1=Poor N/O=Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-2 Class simulator program consisted of 5 days, 8 hours per day of simulator operations. Bob Glaze's ability to direct plant operations during abnormal and emergency conditions was impressive. He always demonstrated complete control from identification through recovery during these conditions.

Additional Pages of Comments

William M. Jones
INSTRUCTOR

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Rich Tefertiller CLASS NO. 84-2 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL

- RO
 SRO
 SCRE
 STA

Ref #	5	4	3	2*	1*	N/O	EVALUATED AREAS
1	X						SYSTEMS KNOWLEDGE
2	X						RE THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3	X						GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4		X					NORMAL OPERATING PROCEDURES
5		X					ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
6		X					TECHNICAL SPECIFICATIONS
7		X					ABILITY TO OPERATE THE CONTROL BOARD
8	X						ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKRS 4] TRNG
11	X						LEADERSHIP

5=Excellent 4=Above Average 3=Average 2=Below Average 1=Poor N/O=Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-2 Class simulator program consisted of 5 days, 8 hours per day of simulator operation. Rich Tefertiller's performance on the simulator was impressive. His past experience indicates expertise in good operating practices, and leadership qualities.

Additional Pages of Comments

William M. Sner
INSTRUCTOR

COMMONWEALTH EDISON COMPANY
PRODUCTION TRAINING

STUDENT SIMULATOR TRAINING EVALUATION CHECKLIST

NAME Bob Femal CLASS NO. 84-2 DATE 8-17-84

COURSE NAME Shift Advisor EVALUATION LEVEL RO
 SRO
 SCRE
 STA

Ref #	5	4	3	2	1	N/O	EVALUATED AREAS
1		X					SYSTEMS KNOWLEDGE
2		X					AX THEORY, NUCLEAR POWER DIST, PWR CONTROL & THERMAL SCIENCES
3		X					GOOD OPERATING PRACTICES (COMM., LOGS, PLANT AWARENESS, ETC.)
4		X					NORMAL OPERATING PROCEDURES
5		X					ABNORMAL (OFF-NORMAL) AND EMERGENCY PROCEDURES
6			X				TECHNICAL SPECIFICATIONS
7		X					ABILITY TO OPERATE THE CONTROL BOARD
8	X						ABILITY TO SUPERVISE NORMAL PLANT OPERATION
9	X						ABILITY TO SUPERVISE OPS UNDER STRESS OR IN EMER. SITUATIONS
10	X						OBSERVED ATTITUDE TOWARDS: 1] OPS 2] SPTY 3] CO-WRKRS 4] TRNG
11	X						LEADERSHIP

5-Excellent 4-Above Average 3-Average 2-Below Average 1-Poor N/O-Not Observed

COMMENTS: (Strengths, Weaknesses, Areas Needing Improvements, etc.) *Written Comments Required

The 84-2 Class Simulator program consisted of 5 days, 8 hours per day of simulator operations. Bob Femal performed well and displayed excellent leadership qualities.

Additional Pages of Comments

William H. Du
INSTRUCTOR