



Consumers  
Power  
Company

Russell B. DeWitt  
Vice President  
Nuclear Operations

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March 23, 1984

Harold R Denton, Director  
Office of Nuclear Reactor Regulation  
US Nuclear Regulatory Commission  
Washington, DC 20555

DOCKETS 50-329, 50-330 - MIDLAND ENERGY CENTER -  
REVISION TO NRC FACILITY STAFFING SURVEY  
FILE: 0505-2, SERIAL 27162

REFERENCES: (1) LETTER FROM R J ERHARDT TO H R DENTON DATED 12/9/83, SERIAL 27136  
(2) LETTER FROM M A MILLER (NRC) TO CONSUMERS POWER COMPANY DATED  
12/30/83  
(3) LETTER FROM J HANNON (NRC) TO ALL APPLICANTS FOR OPERATING  
LICENSES DATED MARCH 1, 1984

In Reference (1), Consumers Power Company provided the NRC with a response to the "Facility Staffing Survey", a questionnaire telecopied by the NRC on December 5, 1983. It describes our current Midland Staff that is expected to be in place upon receipt of our Operating License. In light of the requested response time and as noted in Reference (2), the letter was submitted as a best effort response.

On January 26, 1984, an NRC Staff meeting (summarized by Reference 3) was held to discuss operating shift experience levels for Near Term Operating Licenses (NTOL). Revised forms, "Staffing Questionnaire" and "Staff Experience By Individual," were provided during the meeting by the NRC to the attending representatives from the various utilities. As a result of that meeting 33 representatives from 21 utilities met at the Institute of Nuclear Power Operation in Atlanta to form a working group to establish an industry position on the level and type of operating shift experience required for the initial start-up of the NTOLs. The results of the industry evaluation were presented to the NRC Commissioners on February 24, 1984. A follow-up NRC staff presentation to the Commissioners on February 28, 1984 supported the industry position for NTOLs that will start-up within a 1 to 2 year period. However, NRC concern with the industry position was expressed in two areas: 1) the use of contracted shift advisors should eventually be eliminated and 2) hot participation experience of 1 year should be a goal rather than the 6 month on-shift with 6 week at greater than 20% power as proposed by the industry.

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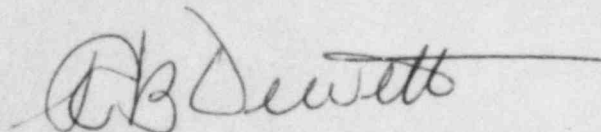
Harold R Denton, Director  
Midland Energy Center  
NRC Facility Staffing Survey  
March 23, 1984

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This letter forwards a revision to our December 9, 1983 submittal. The format of the staff experience forms distributed by the NRC during the January 26, 1984 meeting are included as revised by the working group. The attached information incorporates specific shift operating experience data reflecting the industry position presented during the February 24, 1984 meeting. The revision also contains additional information not immediately available at the time of the first submittal. The following attachments are enclosed: Attachment 1 - Staffing Questionnaire; Attachment 2 - Corporate Nuclear Experience (Off-Site Management); Attachment 3 - On-Site Management; Attachment 4 - Operating Shift Experience.

Attachment 4, Operating Shift Experience specifies both current and projected (at receipt of our operating license) experience for the Shift Engineer (SRO), Shift Supervisor (SRO), Control Operator (RO) and Auxiliary Operator (RO) positions. Current experience indicates a considerable amount of hot license experience has been gained at the Shift Supervisor level from the Navy Nuclear Program. The projected experience is based upon utilization of our Palisades Plant for purposes of obtaining the industry recommended hot participation experience. Eight Midland assigned individuals are currently involved in the Palisades training program which provides for obtaining an SRO license and participating on shift for six months following receipt of the license. It is planned that another eight individuals will be commencing the program in the fall, 1984. In order to obtain Midland specific training and license prior to start-up necessitates that these individuals return to Midland after obtaining 6 months shift operating experience at the Palisades Plant. This program is consistent with the industry proposal. Pending NRC acceptance of the industry proposal we, therefore, do not plan to use contracted shift advisors.

Our proposed six shift rotation will require a minimum of twelve SRO's and twelve RO's. It is presently planned to license forty-two personnel (RO's and SRO's) to provide staffing flexibility and operating reserves. The additional personnel included in the attachments should provide adequate reserve to accommodate the normal losses from attrition and promotion prior to receipt of the operating license.



R B DeWitt  
Vice President, Nuclear Operations

CC JGKeppler, Regional Administrator  
TMNovak, USNRC, Assistant Director for Licensing  
DSHood, USNRC, Licensing Branch No 4  
RJCook, Midland Resident Inspector  
HThompson, USNRC, Director, Division of Human Factor Safety  
DFSchnell, Union Electric Company

Attachments

oc0384-0357a142


CONSUMERS POWER COMPANY  
Midland Energy Center  
Dockets 50-329, 50-330

Letter Serial 27162 Dated March 23, 1984


At the request of the Commission and pursuant to the Atomic Energy Act of 1954, and the Energy Reorganization Act of 1974, as amended, and the Commission's Rules and Regulations thereunder, Consumers Power Company submits a revision to the Midland Energy Center response to the NRC Facility Staffing Survey.

CONSUMERS POWER COMPANY

By

  
R B DeWitt, Vice President  
Nuclear Operations

Sworn and subscribed to before me this 23th day of March, 1984.

  
Sherry L Durfee, Notary Public  
Jackson County, Michigan  
My commission expires November 5, 1986.

SHERRY LYNN DURFEY  
Notary Public, Jackson County, Mich.  
My Commission Expires Nov. 5, 1986

ATTACHMENTS

Consumers Power Company  
Midland Energy Center  
Dockets 50-329, 50-330

Attachment 1  
STAFFING QUESTIONNAIRE

Attachment 2  
CORPORATE NUCLEAR EXPERIENCE

Attachment 3  
ON-SITE MANAGEMENT

and

Attachment 4  
OPERATING SHIFT EXPERIENCE

March 23, 1984

22 pages



## STAFFING QUESTIONNAIRE

Plant Name: Midland Unit 2

Total number of Shift Supervisors (the person in charge of operating shift) presently on operating shift work N/A

Proposed total number of Shift Supervisors on operating shift work at time of fuel load 6

Total number of Shift Supervisors on plant staff other than normal operating shift (e.g., substitutes) N/A

Proposed total number of Shift Supervisors on plant staff other than normal operating shift at time of fuel load 2

Total number of licensed SROs presently on operating shift work (do not include those listed above as SS) N/A

Proposed total number of SROs on operating shift work at time of fuel load (do not include those listed above as SS) 6

Total number of licensed SROs presently on plant staff other than normal operating shift work (e.g., training instructors, engineers, substitutes) N/A

Proposed total number of licensed SROs on plant staff other than normal operating shift work 6

Total number of licensed ROs presently on operating shift work N/A

Proposed total number of ROs on operating shift work at time of fuel load 12

Total number of Shift Technical Advisors (or others who perform STA function) on operating shift work N/A

Type of shift rotation schedule for STA (24 hour, 8 hours, etc.) 8 hours/shift; 6 shift rotation

Total number of STAs not on operating shift work (e.g., substitutes) 2

Our STA will be the Shift Engineer and will be in charge of the operating shift. There will be six Shift Engineers. This number is included in the Shift Supervisor on shift category.

CORPORATE NUCLEAR EXPERIENCE  
 (ie, "OFF-SITE" MANAGEMENT)

<u>Position</u>	<u>Name</u>	<u>Nuclear Navy (years)</u>	<u>Operator Lic (if ever held) RO/SRO/None</u>	(Indicate Whether BWR or PWR)		<u>Degrees Level (A/B/K/D)</u>
				(On-Site) <u>Years at Operating Nuclear Stations</u>	(Off-Site) <u>Years at Other Nuc. Support/ Management Position</u>	
Executive Vice President	JWReynolds	-	-	-	3	BSPS BSIE
Vice President Nuclear Operations (FSAR p13A.1-1)	RBDeWitt		RO/SRO (BRP)	10 (PWR & BWR)	13	BSME
Director of Nuclear Plant Support (FSAR p13A.1-23)	DRHughes	-	SRO (BRP & PAL)	9 (PWR & BWR)	9	BSEE
Director of Reactor Engineering (FSAR p13A.1-19)	WJBeckius		-	5 (PWR & BWR)	13	BS/MS
Exec Director of Nuclear Activities (FSAR p13A.1-7)	GBSlade	-	-	5 (PWR)	7 (PWR)	BSME/MSNE
Exec Director Planning & Administration (FSAR p13A.1-3)	TWElward	-	SRO (PAL)	5 (PWR & BWR)	6	BSChem/MSNE
Director Radiological Services (FSAR p13A.1-11)	RWSinderman	-	-	3 (1 PWR 2 BWR)	15	BSSE/MSEHS/ MPHHP

CORPORATE NUCLEAR EXPERIENCE  
(ie, "OFF-SITE" MANAGEMENT)

<u>Position</u>	<u>Name</u>	<u>Nuclear Navy (years)</u>	<u>Operator Lic (if ever held) RO/SRO/None</u>	(Indicate Whether BWR or PWR)		<u>Degrees Level (A/B/K/D)</u>
				<u>(On-Site) Years at Operating Nuclear Stations</u>	<u>(Off-Site) Years at Other Nuc. Support/ Management Position</u>	
Executive Engr Nuclear Activities Plant Department	DABixel	-	SRO	7 (PWR & BWR)	16	BS
Director Nuclear Licensing	DJVandewalle	-	-	-	10	BSNE/ MSNE
Director Quality Assurance Nuclear Operations (FSAR p13A.1-40)	HMEsch	-	-	-	16	BSEE/ MBA
Director Plant Projects (FSAR p13A.1-8)	JGLewis	-	RO/SRO	5-BWR 12-PWR	4	BSEE
Director Nuclear Operations Training Department	WLBeckman	5	-	1-PWR	7-PWR	BSChem
Director Nuclear Planning	DWJoos	-	-	2 (BWR & PWR)	5	BS/MS

## ON-SITE MANAGEMENT

Attachment 3

Fill in Table (Use Appropriate Titles)

	Operations Supt. (Operations Supervisor)	Plant Supt. (Assistant Plant Mgr)	Plant Manager	Technical Supt.	Maintenance Supt. (Maintenance Manager)	QA Supt. (QA/QC Manager)
To have license at time of OL	Yes	Yes**	No	No	No	No
Previously Licensed						
RO/SRO	SRO	RO	No	No	No	No
Type Plant	PWR-CE	Test Reactor	-	-	-	-
Number Years	2	3	-	-	-	-
Number Years "Hot" Exp	0	3	-	-	-	-
Degreed	Yes*	Yes	Yes*	Yes	Yes*	Yes
Type (Discipline(s))	MECH ENG TECH ELEC ENG TECH	CHEMISTRY	ELEC ENG, BUSINESS	ELEC ENG, BUSINESS	MECH ENG	METALURGICAL ENG
Level (A/B/M/D)	BSMET/ MSEET	BSChem	BSEE/ MBA	BSEE/ MBA	BSEME/ MSEME	BSMM

\* Registered Professional Engineer - State of Michigan

\*\* SRO desired but not required



ON-SITE MANAGEMENT

Fill in Table (Use Appropriate Titles)

	Shift Engineer (STA)	Shift Engineer (STA)	Shift Engineer (STA)	Shift Engineer (STA)	Shift Engineer (STA)	Shift Engineer (STA)
To have license at time of OL	Yes	Yes	Yes	Yes	(Vacant)	(Vacant)
Previously Licensed						
RO/SRO	No	No	No	No		
Type Plant	-	-	-	-		
Number Years	-	-	-	-		
Number Years "Hot" Exp	-	-	-	-		
Degreed	Yes	Yes	Yes	Yes		
Type (Discipline(s))	NUCLEAR ENGINEER	NUCLEAR ENGINEER	MECHANICAL ENGINEER	METALLURIGAL ENGINEER		
Level (A/B/M/D)	BSNE	BSNE	BSME	BSMET		

STA - Staff Technical Advisor

## List of Abbreviations

BS - Bachelor of Science  
BSChem - Bachelor of Science in Chemistry  
BSEE - Bachelor of Science in Electrical Engineering  
BSEME - Bachelor of Science in Engineering, Mechanical Engineering  
BSIE - Bachelor of Science in Industrial Engineering  
BSME - Bachelor of Science in Mechanical Engineering  
BSMET - Bachelor of Science in Metallurgical Engineering  
BSNE - Bachelor of Science in Nuclear Engineering  
BSSE - Bachelor of Science in Science Engineering  
MBA - Master of Business Administration  
MPHHP - Master of Public Health in Health Physics  
MS - Master of Science  
MSEHS - Master of Science in Environmental Health Sciences  
MSEME - Master of Science in Engineering, Mechanical Engineering  
MSNE - Master of Science in Nuclear Engineering  
BRP - Big Rock Point (CPCo BWR Nuclear Plant)  
PAL - Palisades (CPCo PWR Nuclear Plant)

DATE March 21, 1984  
 PLANT NAME Midland Energy Center  
 UTILITY Consumers Power Company  
 O L DATE 1986

## OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Shift Engineers (SRO) Current  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	1	2	3	4	5	6	7	8
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear		36 Months								
(RO, EWS, EOW, PPWS)	.50		33	30	21	0	0	0	0	0
(Other)	.25		0	0	0	0	0	0	0	15
6. Simulator		12 Months								
(Reference Plant)	5.00	(12 Months)	0	0	0	5	0	0	0	0
(Similar)	3.00	(9 Months)	3	3	3	0	3	1.12	3	3
7. Nuclear Plant Experience on Shift (Own Plant)		24 Months								
(Less Than 1½ Years Prior to FL)	.75	(12 Months)	0	0	0	0	0	0	0	0
(More Than 1½ Years Prior to FL)	.50	(12 Months)	0	12	0	0	6	6	6	0
8. Licensed Classroom Training and Exam.(Own Plant)	.50	9 Months	4.56	5.25	3.9	3.95	4.64	4.28	4.63	4.28
9. Participation at Operating Plant	.75	12 Months	0	4.5	4.5	0	0	12	12	0
10. Other Nuclear Plant Experience	.25	12 Months	0	0	9	0	12	6	12	12
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months								
(Bachelors Degree)		(12 Months)	12	12	12	12	12	12	12	12
(Associates Degree)		(6 Months)	0	0	0	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			52.56	66.75	53.4	20.95	37.64	41.4	49.63	46.28

DATE March 21, 1984  
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 O L DATE 1986

OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Shift Engineers (SRO) Projected  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	1	2	3	4	5	6	7	8
1. Same Type Commercial SRO	1.00	No Limit	6	6	6	6	6	6	6	6
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear		36 Months								
(RO, EUS, EOW, PPWS)	.50		33	30	21	0	0	0	0	0
(Other)	.25		0	0	0	0	0	0	0	15
6. Simulator		12 Months								
(Reference Plant)	5.00	(12 Months)	0	0	0	5	0	0	0	0
(Similar)	3.00	(9 Months)	3	3	3	0	3	1.12	3	3
7. Nuclear Plant Experience on Shift (Own Plant)		24 Months								
(Less Than 1½ Years Prior to FL)	.75	(12 Months)	12	12	12	12	12	12	12	12
(More Than 1½ Years Prior to FL)	.50	(12 Months)	0	12	0	0	6	6	6	0
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	8.96	9	8.3	8.35	9.04	8.68	9.03	8.68
9. Participation at Operating Plant	.75	12 Months	10	12	12	10	10	12	12	10
10. Other Nuclear Plant Experience	.25	12 Months	0	0	9	0	12	6	12	12
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months								
(Bachelors Degree)		(12 Months)	12	12	12	12	12	12	12	12
(Associates Degree)		(6 Months)	0	0	0	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			84.96	96	83.3	53.35	70.04	63.8	72.03	78.68

NOT PARTICIPATION EXPERIENCE

Time > 20% PWR/BWR (WKS)	24	24	24	24	24	24	24	24	24
Startup & Shutdown (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months on Shift	10	10	10	10	10	10	10	10	10

Note 1: See "Instructions for use of Nuclear Power Plant Experience Factors for Operating Shift Positions (OL Applicants)"

Note 2: Include all Shift Supervisors (SS), Shift SROs, Reactor Operators (RO) and Shift Technical Advisors (STA).

- ☐ a. Shift advisors must be used to satisfy the "hot participation experience" requirements of the utility plan.
- ☐ b. Shift advisors will probably be required at least for some shifts.
- ☒ c. Do not plan to use shift advisors unless some unforeseen circumstance arises.



DATE March 21, 1984  
 PLANT NAME Midland Energy Center  
 UTILITY Consumers Power Company  
 O L DATE 1986

OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)  
 JOB TITLE (NOTE 2) Shift Supervisor (SRO) Current  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	1 2 3 4 5 6 7 8 9 10 11 12 13 14											
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	10	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear (RO, EWS, EOW, PWS)	.50	36 Months	0	4.5	6	2.5	32	6	18	8	28.5	36	36	7.5
(Other)	.25		12	3	12	12	4	9	0	9	7.5	0	0	12.5
6. Simulator (Reference Plant) (Similar)	5.00	12 Months	0	5	0	0	0	0	0	5	0	0	5	0
7. Nuclear Plant Experience on Shift (Own Plant) (Less Than 1 1/2 Years Prior to FL) (More Than 1 1/2 Years Prior to FL)	3.00	24 Months	3	0	3	3	3	3	3	0	3	3	3	3
8. Licensed Classroom Training and Exam (Own Plant)	.75	(12 Months)	0	0	0	0	0	0	0	0	0	0	0	0
9. Participation at Operating Plant	.50	(12 Months)	12	4	4.5	5	12	3.5	12	4.5	4	12	3	3.5
10. Other Nuclear Plant Experience	.50	9 Months	4.84	3.95	4.2	4.35	4.45	4.35	4.55	4.15	4.8	4.89	4.96	3.95
11. Conducting License Training	.75	12 Months	0	0	0	0	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent) (Bachelors Degree) (Associates Degree)	.25	12 Months	0	1	0	0	0	0	6	5.5	3	12	4.25	0
TOTAL NUCLEAR PLANT EXPERIENCE	.75	9 Months	0	0	0	0	0	0	0	0	0	0	0	0
			33.84	22.45	29.7	26.85	55.45	26.85	53.55	37.15	50.8	67.89	54.21	37.45
													38.46	52.95

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OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Shift Supervisor (SRO) Current  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	15	16	17	18	19	20	21	22	23	24
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	13	0	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear		36 Months										
(RO, EWS, EOOW, PPWS)	.50		0	30	24	18	30	20	36	24	36	27
(Other)	.25		8.75	0	0	24	6	16	0	0	0	0
6. Simulator		12 Months										
(Reference Plant)	5.00	(12 Months)	0	0	0	0	0	0	0	0	0	0
(Similar)	3.00	(9 Months)	3	3	4.14	3	3	3	3	4.14	3	3
7. Nuclear Plant Experience on Shift (Own Plant)		24 Months										
(Less Than 1½ Years Prior to PL)	.75	(12 Months)	0	0	0	0	0	0	0	0	0	0
(More Than 1½ Years Prior to PL)	.50	(12 Months)	12	12	12	12	7	12	12	12	12	6
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	4.98	4.49	5.41	4.74	4.74	4.46	4.84	5.16	4.46	4.15
9. Participation at Operating Plant	.75	12 Months	22.5	0	0	0	1.5	0	0	5.25	0	0
10. Other Nuclear Plant Experience	.25	12 Months	15	0	0	0	0	3	0	0	0	0
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months										
(Bachelors Degree)		(12 Months)	0	0	2	0	0	0	0	0	0	0
(Associates Degree)		(6 Months)	0	0	0	0	0	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			79.23	49.49	47.55	61.74	52.74	58.46	55.84	50.55	55.46	40.15

DATE March 21, 1984  
 PLANT NAME Midland Energy Center  
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OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Shift Supervisor (SRO) Projected  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0	10	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear		36 Months														
(RO, EWS, EOW, PFWS)	.50		0	4.5	6	2.5	32	6	18	8	28.5	36	36	7.5	18	36
(Other)	.25		12	3	12	12	4	9	0	9	7.5	0	0	12.5	0	0
6. Simulator		12 Months														
(Reference Plant)	5.00	(12 Months)	0	5	0	0	0	0	0	5	0	0	0	5	0	0
(Similar)	3.00	(9 Months)	3	0	3	3	3	3	3	0	3	3	3	0	3	3
7. Nuclear Plant Experience on Shift (Own Plant)		24 Months														
(Less Than 1 1/2 Years Prior to FL)	.75	(12 Months)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
(More Than 1 1/2 Years Prior to FL)-	.50	(12 Months)	12	4	4.5	5	12	3.5	12	4.5	4	12	3	3.5	12	3.5
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	9	8.35	8.6	8.75	8.85	8.75	8.95	8.55	9	9	9	8.35	9	8.85
9. Participation at Operating Plant	.75	12 Months	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10. Other Nuclear Plant Experience	.25	12 Months	0	1	0	0	0	0	6	5.5	3	12	4.25	0	0	0
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months														
(Bachelors Degree)		(12 Months)	2	1	0	0	0	1	0	1	0	0	3	0	0	0
(Associates Degree)		(6 Months)	0	0	0	0	0	0	0	0	0	0	0	0	0	6
TOTAL NUCLEAR PLANT EXPERIENCE			50	38.85	46.1	43.25	71.85	43.25	69.95	53.55	67	84	70.25	48.85	54	69.35

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## OPERATING SHIFT EXPERIENCE

JOB TITLE (NOTE 2) Shift Supervisor (SRO) Projected  
ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTORNUCLEAR POWER PLANT EXPERIENCE  
FOR OPERATING SHIFT POSITIONS (NOTE 1)

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	15	16	17	18	19	20	21	22	23	24
			15	16	17	18	19	20	21	22	23	24
1. Same Type Commercial SRO	1.00	No Limit	6	6	6	6	6	6	6	6	6	6
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	13	0	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear (RO, EWS, EOW, PPWS) (Other)	.50 .25	36 Months	0 8.75	30 0	24 0	18 24	30 6	20 16	36 0	24 0	16 0	27 0
6. Simulator (Reference Plant) (Similar)	5.00 5.00	12 Months (12 Months)	0 3	0 3	0 4.14	0 3	0 3	0 3	0 3	0 4.14	0 3	0 3
7. Nuclear Plant Experience on Shift (Own Plant) (Less Than 1 1/2 Years Prior to FL) (More Than 1 1/2 Years Prior to FL)	.75 .50	24 Months (12 Months)	12 12	12 12	12 12	12 12	12 7	12 12	12 12	12 12	12 12	12 6
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	9	3.89	9	9	9	8.86	9	9	8.86	8.55
9. Participation at Operating Plant	.75	12 Months	12	10	10	10	11.5	10	10	12	10	10
10. Other Nuclear Plant Experience	.25	12 Months	15	0	0	0	0	3	0	0	0	0
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent) (Bachelors Degree) (Associates Degree)		12 Months (12 Months) (6 Months)	0 0	0 0	2 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
TOTAL NUCLEAR PLANT EXPERIENCE			90.75	81.89	79.14	94	84.5	90.86	88	79.14	87.86	72.55

## NOT PARTICIPATION EXPERIENCE

Time > 20% PWR/BWR (WKS)  
Startup & Shutdown (Yes/No)  
Months on Shift

24	24	24	24	24	24	24	24	24	24	24	24	24
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	10	10	10	10	10	10	10	10	10	10	10	10



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OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Control Operator (RO) Current  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear		36 Months														
(RO, EWS, EOOW, PPWS)	.50		0	0	0	0	0	0	0	15	0	0	0	0	0	24
(Other)	.25		12	0	12	10	0	0	12	5.25	9	12	0	12	0	6
6. Simulator		12 Months														
(Reference Plant)	5.00	(12 Months)	0	0	0	0	0	0	0	0	0	0	0	0	5	0
(Similar)	3.00	(9 Months)	3	3	3	3	3	3	3	3	3	3	3	3	0	3
7. Nuclear Plant Experience on Shift (Own Plant)		24 Months														
(Less Than 1 1/2 Years Prior to FL)	.75	(12 Months)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(More Than 1 1/2 Years Prior to FL)	.50	(12 Months)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	5.08	5.03	4.47	4.4	5.15	4.55	4.69	5.55	4.86	4.56	4.93	5.18	3.65	4.94
9. Participation at Operating Plant	.75	12 Months	9.75	0	0	0	0	0	0	0	12	0	0	0	0	0
10. Other Nuclear Plant Experience	.25	12 Months	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months														
(Bachelors Degree)		(12 Months)	0	0	0	0	0	0	0	0	0	0	1	0	0	0
(Associates Degree)		(6 Months)	6	0	0	0	0	0	0	6	0	0	0	0	0	0
<b>TOTAL NUCLEAR PLANT EXPERIENCE</b>			<b>47.83</b>	<b>20.03</b>	<b>31.47</b>	<b>29.4</b>	<b>20.15</b>	<b>19.55</b>	<b>31.69</b>	<b>46.8</b>	<b>40.86</b>	<b>31.56</b>	<b>20.93</b>	<b>32.18</b>	<b>20.65</b>	<b>49.94</b>

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OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Control Operator (RO) Current  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	15	16	17	18	19	20
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0
5. Navy (Military) Nuclear		36 Months						
(RO, EWS, EOOW, PPWS)	.50		0	19	0	18	18	24
(Other)	.25		4.5	0	9	0	0	0
6. Simulator		12 Months						
(Reference Plant)	5.00	(12 Months)	0	0	0	0	0	0
(Similar)	3.00	(9 Months)	3	3	3	3	3	4.14
7. Nuclear Plant Experience on Shift (Own Plant)		24 Months						
(Less Than 1 1/2 Years Prior to FL)	.75	(12 Months)	0	0	0	0	0	0
(More Than 1 1/2 Years Prior to FL)	.50	(12 Months)	12	12	12	12	12	12
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	4.79	4.79	4.56	4.56	5.41	5
9. Participation at Operating Plant	.75	12 Months	0	0	0	0	0	9
10. Other Nuclear Plant Experience	.25	12 Months	0	0	0	0	0	0
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months						
(Bachelors Degree)		(12 Months)	0	0	2	0	0	0
(Associates Degree)		(6 Months)	0	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			24.29	38.79	30.56	37.56	38.41	54.14

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OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Control Operator (RO) Projected  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	OPERATING SHIFT EXPERIENCE													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear (RO, ENS, EOW, PPS)		36 Months	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Simulator (Reference Plant) (Similar)	.50 .25	12 Months (12 Months)	0	0	0	0	0	0	0	15	0	0	0	0	0	24
7. Nuclear Plant Experience on Shift (Own Plant) (Less Than 1 1/2 Years Prior to FL) (More Than 1 1/2 Years Prior to FL)	5.00 3.00	12 Months (12 Months)	12	0	12	10	0	0	12	5.25	9	12	0	12	0	6
8. Licensed Classroom Training and Exam (Own Plant)	.75	24 Months	3	3	3	3	3	3	3	3	3	3	3	3	0	3
9. Participation at Operating Plant	.50	(12 Months)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
10. Other Nuclear Plant Experience	.75	(12 Months)	12	12	12	12	12	12	12	12	12	12	12	12	12	12
11. Conducting License Training	.25	9 Months	9	9	8.87	8.8	9	8.95	9	9	9	9	9	9	8.05	9
12. Degree (Engineering, Applied Science or Equivalent) (Bachelors Degree) (Associates Degree)	.25	12 Months (12 Months) (6 Months)	9.75	0	0	0	0	0	0	0	12	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0
			6	0	0	0	0	0	0	0	0	0	0	0	0	0
			63.75	36	47.87	45.8	36	35.95	48	62.25	57	48	37	48	37.05	66

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OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)

JOB TITLE (NOTE 2) Control Operator (RO) Projected  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	15	16	17	18	19	20
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0
5. Navy (Military) Nuclear		36 Months						
(RO, EWS, EOOW, PPWS)	.50		0	19	0	18	18	24
(Other)	.25		4.5	0	9	0	0	0
6. Simulator		12 Months						
(Reference Plant)	5.00	(12 Months)	0	0	0	0	0	0
(Similar)	3.00	(9 Months)	3	3	3	3	3	4.14
7. Nuclear Plant Experience on Shift (Own Plant)		24 Months						
(Less Than 1 1/2 Years Prior to FL)	.75	(12 Months)	12	12	12	12	12	12
(More Than 1 1/2 Years Prior to FL)	.50	(12 Months)	12	12	12	12	12	12
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	9	9	9	9	9	9
9. Participation at Operating Plant	.75	12 Months	0	0	0	0	0	9
10. Other Nuclear Plant Experience	.25	12 Months	0	0	0	0	0	0
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months						
(Bachelors Degree)		(12 Months)	0	0	2	0	0	0
(Associates Degree)		(6 Months)	0	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			40.5	55	47	54	54	70.14



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## OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
FOR OPERATING SHIFT POSITIONS (NOTE 1)JOB TITLE (NOTE 2) Auxiliary Operator (RO) Current  
ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	1 2 3 4 5 6 7 8 9 10							
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0
5. Navy (Military) Nuclear (RO, ENS, EON, PWS)	.50	36 Months	0	0	0	0	0	0	0	0
(Other)	.25		0	0	0	0	0	0.5	0	0
6. Simulator (Reference Plant)	5.00	12 Months	15	0	9	10	6	9	3.25	3
(Similar)	3.00		0	5	0	0	0	0	0	5
7. Nuclear Plant Experience on Shift (Own Plant)			3	0	3	3	3	3	3	0
(Less Than 1 1/2 Years Prior to PL)	.75	24 Months	0	0	0	0	0	0	0	0
(More Than 1 1/2 Years Prior to PL)	.50	(12 Months)	12	12	12	12	12	12	12	12
8. Licensed Classroom Training and Exam (Own Plant)	.50	9 Months	4.56	3.86	4.59	4.86	4.66	4.76	4.79	3.55
9. Participation at Operating Plant	.75	12 Months	18	0	0	22.5	0	0	0	0
10. Other Nuclear Plant Experience	.25	12 Months	0	0	0	1.5	0	0	0	0
11. Conducting License Training	.25	9 Months	0	0	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent)		12 Months	0	0	1	0	0	0	0	0
(Bachelors Degree)		(12 Months)	0	0	0	0	0	0	0	0
(Associates Degree)		(6 Months)	0	0	0	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			52.56	20.86	29.59	53.86	25.66	28.76	23.54	22.79
									32.55	36.5

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OPERATING SHIFT EXPERIENCE

NUCLEAR POWER PLANT EXPERIENCE  
 FOR OPERATING SHIFT POSITIONS (NOTE 1)  
 JOB TITLE (NOTE 2) Auxiliary Operator (RO) Projected  
 ENTER DATA: MONTHS/MONTHS X WEIGHTING FACTOR

TYPE OF EXPERIENCE	WEIGHTING FACTOR	MAXIMUM CREDIT	1	2	3	4	5	6	7	8	9	10
1. Same Type Commercial SRO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0
2. Other Commercial SRO	.75	No Limit	0	0	0	0	0	0	0	0	0	0
3. Same Type Commercial RO	1.00	No Limit	0	0	0	0	0	0	0	0	0	0
4. Other Commercial RO	.75	No Limit	0	0	0	0	0	0	0	0	0	0
5. Non (Military) Nuclear (RO, EWS, EOW, PPWS) (Other)	.25	36 Months	0	0	0	0	0	0	0.5	0	0	0
6. Simulator (Reference Plant) (Similar)	5.00	12 Months	15	0	9	10	6	9	3.25	3	12	15
7. Nuclear Plant Experience on Shift (Own Plant) (Less Than 14 Years Prior to FL) (More Than 14 Years Prior to FL)	3.00	24 Months	0	5	0	0	0	0	0	0	5	5
8. Licensed Classroom Training and Exam (Own Plant)	.75	(12 Months)	3	0	3	3	3	3	3	3	0	0
9. Participation at Operating Plant	.50	(12 Months)	12	12	12	12	12	12	12	12	12	12
10. Other Nuclear Plant Experience	.50	9 Months	8.96	8.26	8.99	9	9	9	9	9	7.95	8.9
11. Conducting License Training	.75	12 Months	18	0	0	22.5	0	0	0	0	0	0
12. Degree (Engineering, Applied Science or Equivalent) (Bachelors Degree) (Associates Degree)	.25	9 Months	0	0	0	1.5	0	0	0	0	0	0
TOTAL NUCLEAR PLANT EXPERIENCE			68.96	37.26	45.99	70	42	45	39.75	39	48.95	52.9

INSTRUCTIONS FOR THE USE OF THE NUCLEAR POWER PLANT EXPERIENCE FACTORS FOR  
OPERATING SHIFT POSITIONS (OL APPLICANTS).

1. Commercial Plant SRO/RO - Same Type Plant

This experience factor is applicable when the individual was assigned to licensed operator duties at a commercial nuclear power plant of the same type as the one for which the operating license is sought.

2. Commercial Plant SRO/RO - Not From the Same Type Plant

This experience factor is applicable when the individual was assigned to licensed operator duties at a commercial nuclear power plant which is not of the same type as the one for which the operating license is sought.

3. Military Nuclear Operating Experience

This experience factor is applicable when the individual was assigned in the positions as listed at a military nuclear power plant.

<u>Position</u>	<u>Weighting Factor</u>
RO, EWS, EOCW, PPWS	0.5
Other	0.25

The maximum combined credit given to any individual for this experience is 36 months.

4. Full Scope Nuclear Power Plant Simulator

This experience factor is applicable for the actual time spent in the simulator control room in a structured training program. When a plant reference simulator is used in the training program, the 5.0 weighting factor is used with a maximum credit of 12 months. When a similar simulator is used in the training program, the 3.0 weighting factor is used with a maximum credit of 9 months. If both a plant reference simulator and a similar simulator are used in the training program, the weighting factors are applied as indicated above but the combined total maximum credit may not exceed 12 months.

5. Nuclear Power Plant Experience on Shift at Own Plant

This experience factor is applicable when the individual is actually assigned on-shift operating duties at his own plant. The weighting factors are applied as indicated for the periods in question and the combined maximum credit for both may not exceed 24 months.

6. License Classroom Training and Examination at Own Plant

This experience factor is applicable when an individual successfully participates in a license training program including an examination for the position for which the license is being sought. This experience is applicable to the classroom portions for the license training program as the simulator and on-the-job training is addressed in one of the other experience factors. The weighting factor and maximum credit is applied as indicated.



7. Participation in Operational Duties at an Operating Commercial Nuclear Power Plant

This experience factor is applicable when an individual has participated in operational duties. In determining participation for this experience factor, either direct hands-on operation or as direct participation in review and discussions leading to decisions relative to operating a nuclear power plant can be used. Personnel assigned as equipment or auxiliary operators would realize experience under this category and could be assigned a maximum of 12 months experience credit.

8. Other Nuclear Power Plant Experience

This experience factor is applicable when the individual has performed his job duties related to design, construction, operation, startup testing, maintenance or preoperational testing of any nuclear power plant. The weighting factor and maximum credit should be applied as indicated.

9. Conducting License Training

This experience factor is applicable for those individuals who provide training in license training programs. This experience is applicable for individuals who provide this training on-site or at any other facility. The weighting factor and maximum credit should be applied as indicated.

10. Degree (Engineering or Applied Science)

This experience factor is applicable for completion of degree requirements and credit for equivalent college work. For Bachelors and Associate degrees, credit may be assigned as indicated. Experience credit for college work toward a degree may be assigned at the rate of one (1) month experience credit for each ten (10) semester hours college credit earned. This experience credit may only be assigned for the technical subjects in the engineering or applied science degree programs. The maximum credit that may be assigned to this experience factor is 12 months.