Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

December 29, 1981

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Responses to FSAR Questions
NRC Docket Nos. 50-454, 50-455,
50-456 and 50-457

Dear Mr. Denton:

This is to provide copies of information requested by the Licensee Qualification Branch. Most of this information will be included in the Byron/Braidwood FSAR in the next amendment. Attachment A to this letter lists the enclosures which contain new or revised FSAR information.

One (1) signed original and fifty-nine (59) copies of this letter and the attachment are provided. Fifteen (15) copies of the enclosures are included for your review and approval.

Please address further questions to this office.

Very truly yours,

T. R. Tramm

T. R. Tramm
Nuclear Licensing Administrator

Enclosures

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Attachment A

Information Request By Licensee Qualification Branch

1. A Byron Station Organization chart (4 pages) is enclosed which updates and expands the station Organization chart contained in Figure 6.1-2 of the proposed Technical Specifications.

2. Byron Administrative Procedure 200 is being revised to specify the shutdown authority of the Shift Engineer, the Shift Foremen, and the Shift Control Room Engineer. This revision will be complete and available for inspection January 31, 1982.

3. Table 13.1-2 has been revised to delineate the ANSI N18.1 equivalent job titles for all technical and maintenance positions. A copy is enclosed and will be incorporated in the FSAR in the next amendment.

4. Administrative controls for the handling of heavy loads were described in a letter dated December 24, 1981 from T. R. Tramm to H. R. Denton. This information will be added to Section 13.5.1 of the FSAR in the next amendment.

5. Byron Administrative Procedure 300 is being revised to specify the 6-shift basis for assignment of shift personnel to duty stations. This revision will be complete and available for inspection by January 31, 1982.

6. Sections E.3 and E.13 of FSAR Appendix E regarding I.A.1.3 (shift manning) and I.C.6 (verification of Operating Activities) are revised to include commitments to implementing the shift manning requirements and verification activities prior to fuel load. These revisions will be included in the next FSAR amendment.

7. The previous operating experience of the initial Byron staff is documented in a letter dated December 29, 1981 from T. R. Tramm to H. R. Denton.

8. FSAR Section 13.2.1 describing the training program has been revised. A copy is enclosed. This information will be incorporated into the FSAR in the next amendment.

9. The Byron/Braidwood simulator training facility will be located adjacent to Braidwood Station and is expected to be fully operational by June, 1983. The associated classroom space is to be available by January, 1983.

10. Section E.22 of FSAR Appendix E regarding II.B.4 (training for mitigating core damage) is being revised to include commitments to implementing the required procedures and completion of

personnel training prior to 100% power operation of Unit 1. This revision will be included in the next FSAR amendment.

11. FSAR Sections 13.1.1, 13.4.1, 13.5.2.2.8, and Attachment 13A has been revised to reflect the current organizational structure and resumes of personnel occupying key positions. A copy is enclosed. This information will be included in the next FSAR amendment.

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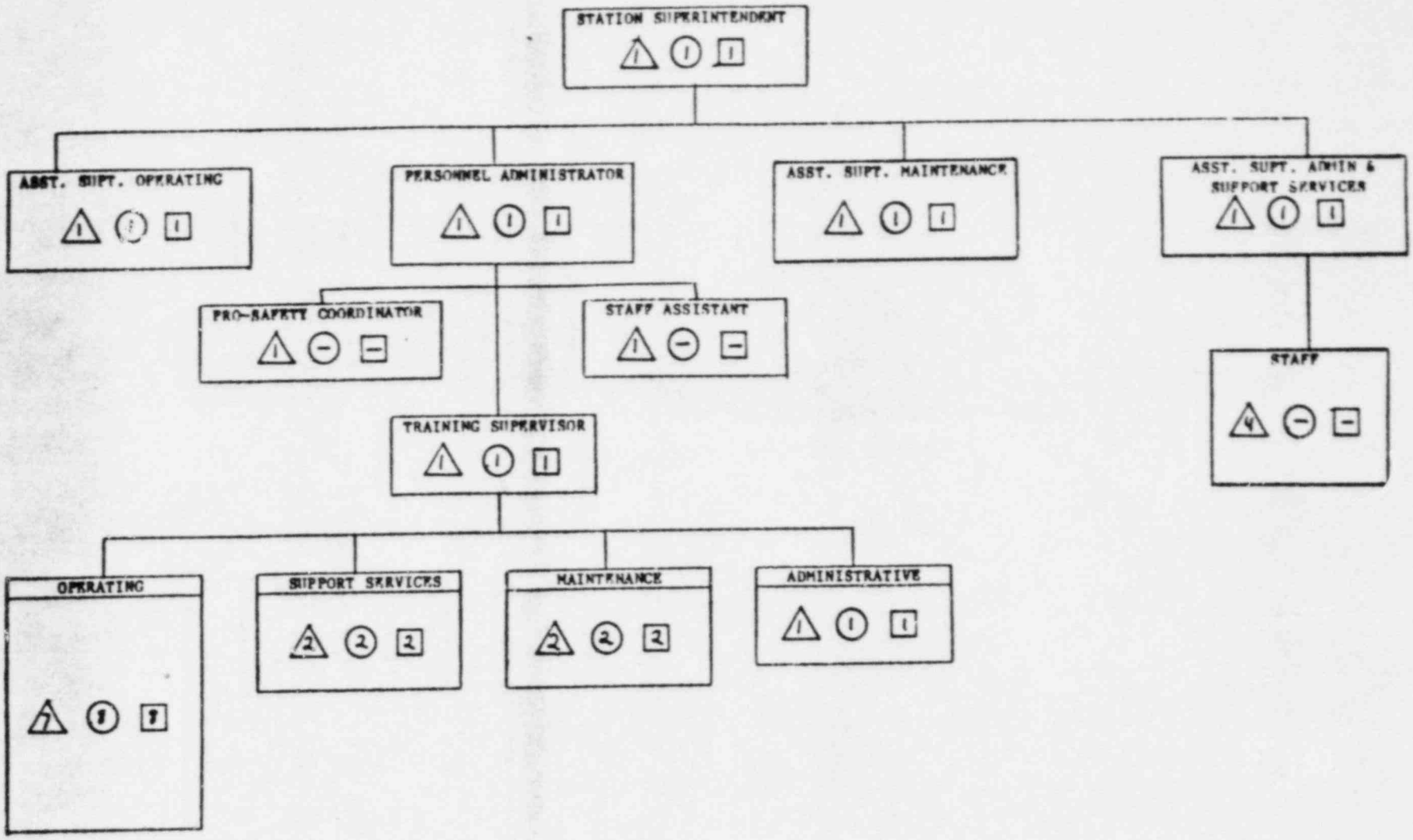
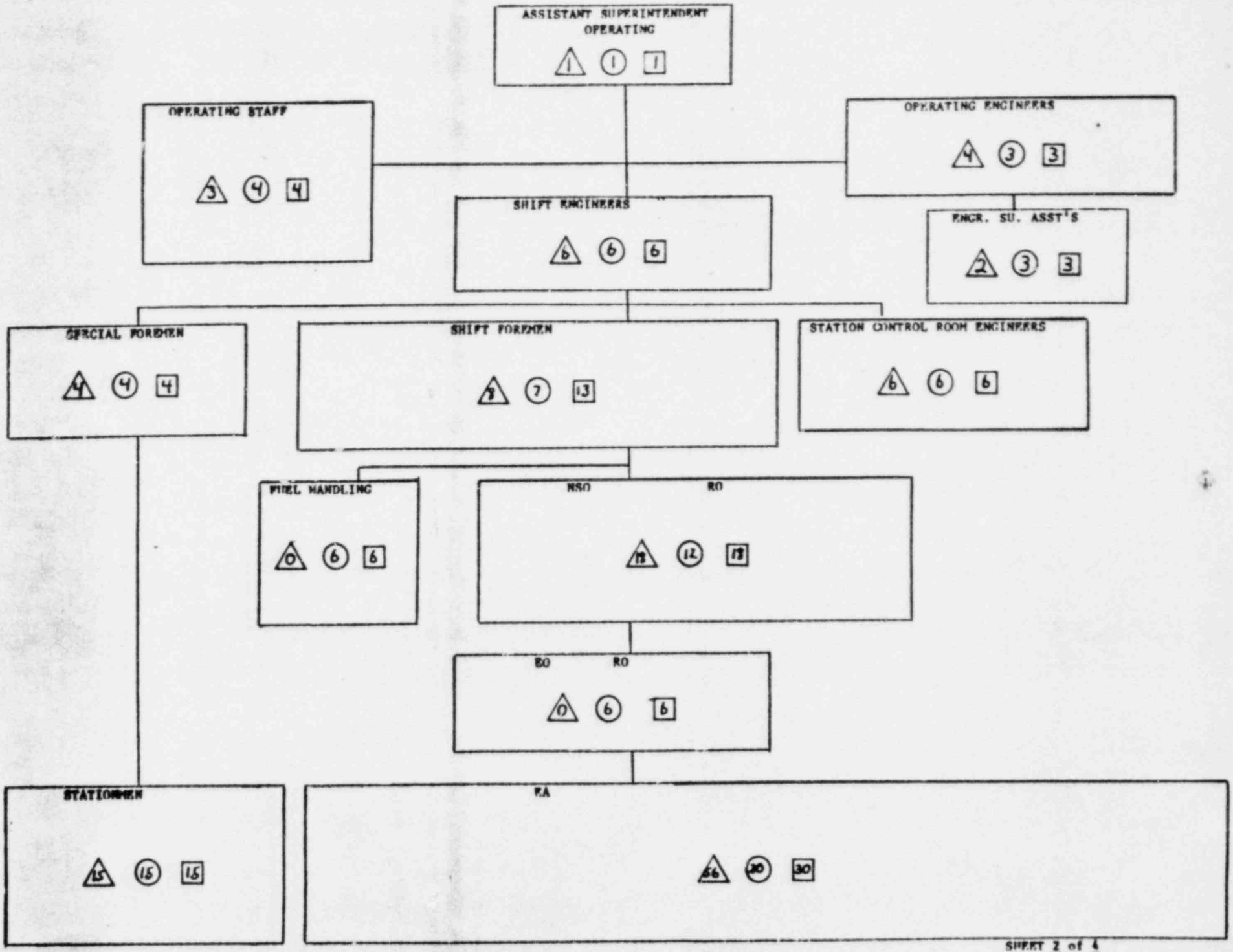


△ 12-81
○ UNIT 1 FUEL LOAD
□ UNIT 2 FUEL LOAD
– NOT REQUIRED

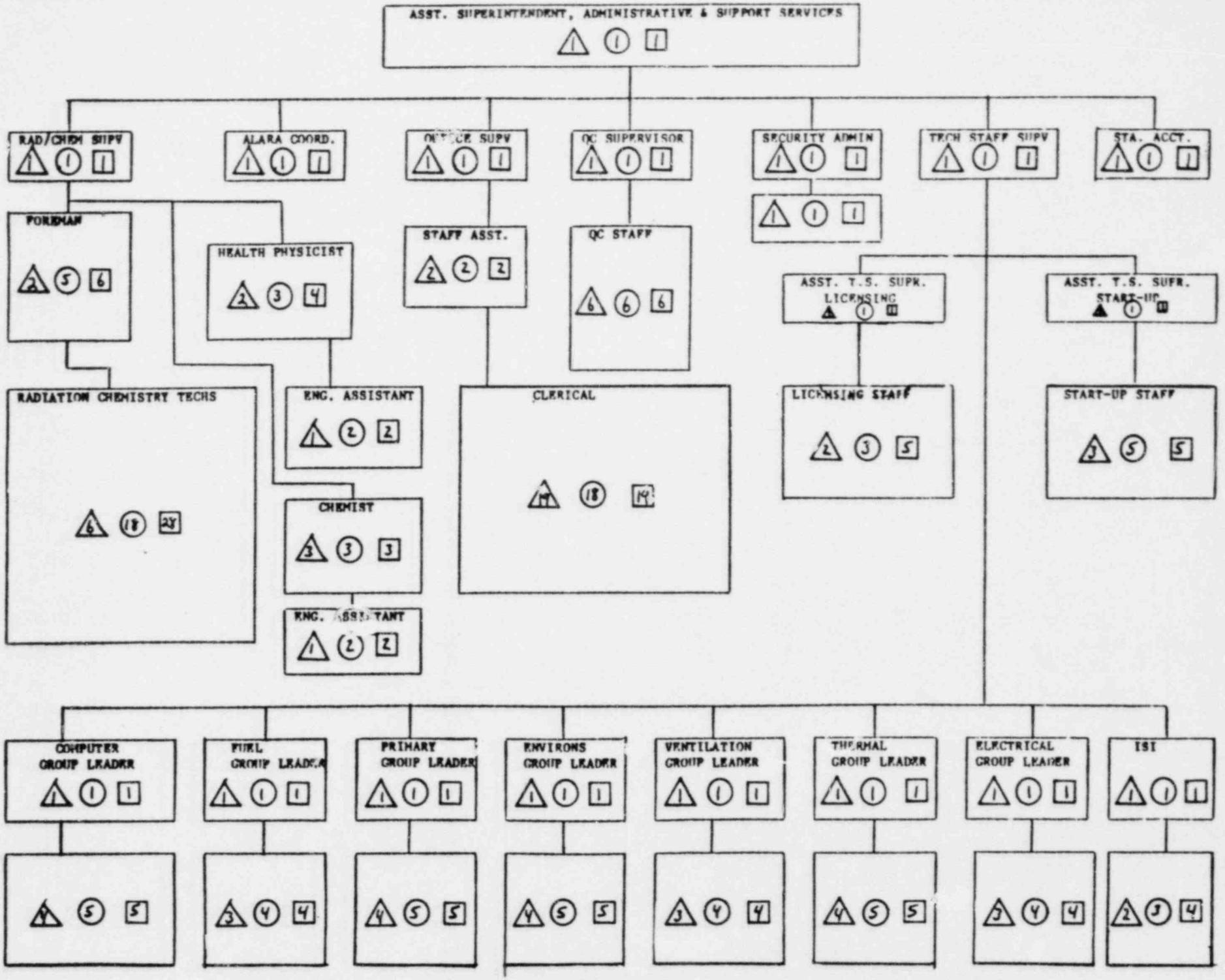
	STAFFING		
	12-81	Unit 1 Fuel Load	Unit 2 Fuel Load
MANAGEMENT PERSONNEL	152	165	177
BARGAINING UNIT PERSONNEL	187	195	233
TOTAL	339	360	410

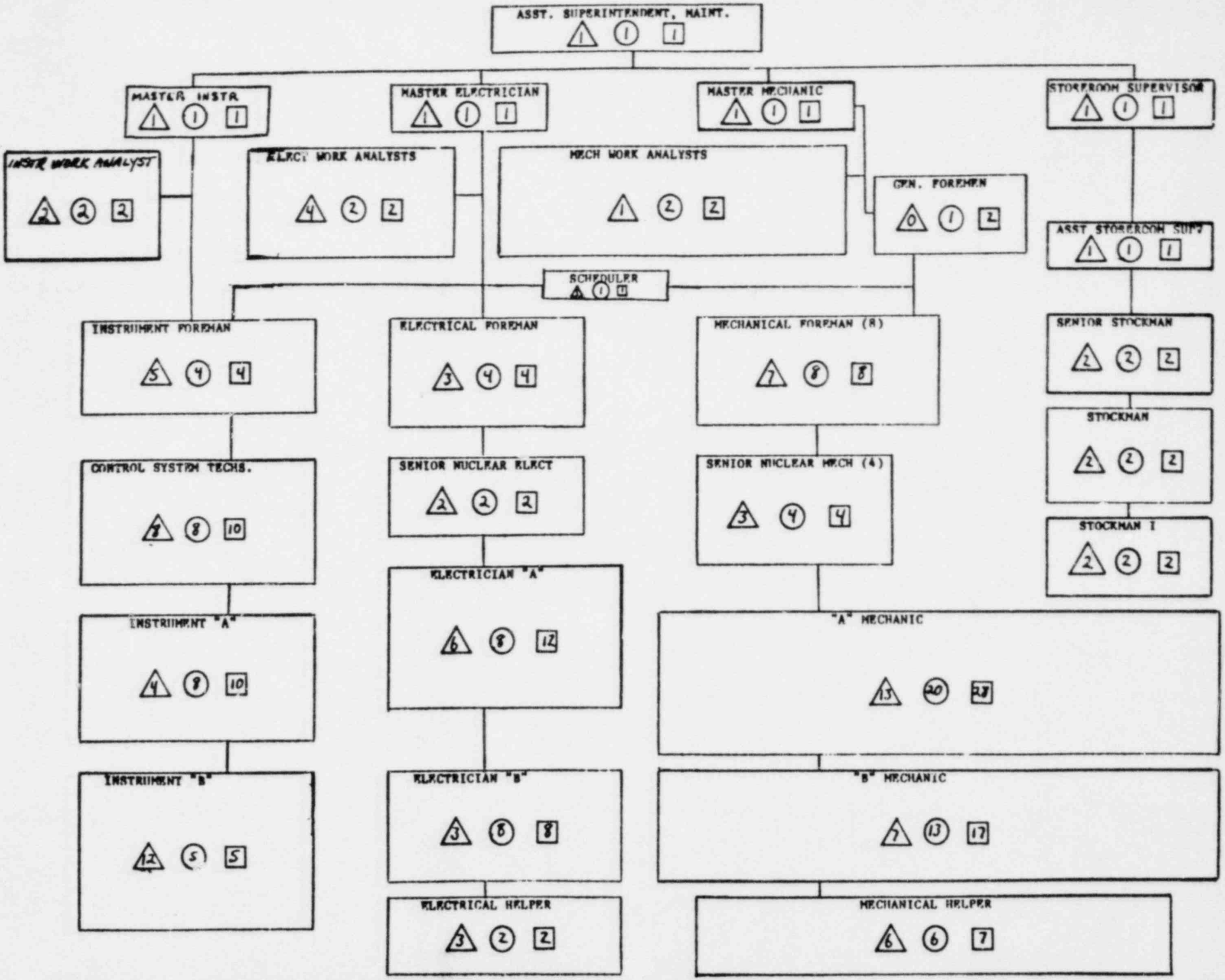
SHEET 1 of 4

BYRON STATION ORGANIZATION



SHEET 2 of 4
BYRON STATION ORGANIZATION


ASST. SUPERINTENDENT, ADMINISTRATIVE & SUPPORT SERVICES
RAD/CHEM SUPV
ALARA COORD.
OFFICE SUPV
QC SUPERVISOR
SECURITY ADMIN
TECH STAFF SUPV
STA. ACCT.
FOREMAN
HEALTH PHYSICIST
STAFF ASST.
QC STAFF
ASST. T.S. SUPR. LICENSING
ASST. T.S. SUPR. START-UP
RADIATION CHEMISTRY TECHS
ENG. ASSISTANT
CLERICAL
LICENSING STAFF
START-UP STAFF
CHEMIST
ENG. ASSISTANT
COMPUTER GROUP LEADER
FUEL GROUP LEADER
PRIMARY GROUP LEADER
ENVIRONS GROUP LEADER
VENTILATION GROUP LEADER
THERMAL GROUP LEADER
ELECTRICAL GROUP LEADER
ISI


ASST. SUPERINTENDENT, MAINT.
1 1 1
MASTER INSTR
1 1 1
MASTER ELECTRICIAN
1 1 1
MASTER MECHANIC
1 1 1
STOREROOM SUPERVISOR
1 1 1
INSTR WORK ANALYST
2 2 2
ELECT WORK ANALYSTS
4 2 2
MECH WORK ANALYSTS
1 2 2
GEN. FOREMEN
0 1 2
ASST STOREROOM SUP'T
1 1 1
SCHEDULER
1 1
INSTRUMENT FOREMAN
5 4 4
ELECTRICAL FOREMAN
3 4 4
MECHANICAL FOREMAN (8)
7 8 8
SENIOR STOCKMAN
2 2 2
STOCKMAN
2 2 2
CONTROL SYSTEM TECHS.
8 8 10
SENIOR NUCLEAR ELECT
2 2 2
SENIOR NUCLEAR MECH (4)
3 4 4
STOCKMAN I
2 2 2
INSTRUMENT "A"
4 8 10
ELECTRICIAN "A"
6 8 12
"A" MECHANIC
13 20 23
INSTRUMENT "B"
12 5 5
ELECTRICIAN "B"
3 8 8
"B" MECHANIC
7 13 17
ELECTRICAL HELPER
3 2 2
MECHANICAL HELPER
6 6 7

Replace 6

TABLE 13.1-2

BYRON/BRAIDWOOD ORGANIZATIONAL TITLES

AND ANSI N18.1 EQUIVALENT TITLES

ANSI N18.1 TITLE	TYPE OF LICENSE REQUIRED	B/B TITLE
Plant Manager	***	Station Superintendent
Maintenance Manager	***	Maintenance Asst. Supt.
Operations Manager	SRO/***	Operations Asst. Supt.
Technical Manager	***	Admin. and Support Serv. Asst. Supt.
Supervisors Requiring NRC Licenses	SRO	Shift Engineer
	SRO	Shift Foreman
	SRO	~~Start-Up Foreman~~ SCRE
	SRO	TRAINING SUPERVISOR #4
	SRO	FUEL HANDLING FOREMAN
Supervisors Not Requiring NRC Licenses		Master Mechanic
		Master Electrician
		~~Training Supervisor~~
		Operating Engineers
		~~Technical Staff Supervisor~~
		Quality Control Supervisor
		Rad-Chem. Foreman
		Mech. Maint. Foreman
		Elect. Maint. Foreman
		Instrument Foreman
		~~Stores Supervisor~~
Reactor Engineering & Physics		Lead Nuclear Engineer
Instrument and Control ENGINEER		Master Instrument Mechanic
Radiochemistry-Radiation Protection MANAGER		Rad/Chem Supervisor*
Operator-Licensed	RO	Nuclear Station Operator
Technicians		~~Controls Systems Technician~~
		Rad-Chem. Technician
Repairmen		Senior Nuclear Mechanic
		Senior Nuclear Electrician
Operator-Non-Licensed		CONTROL SYSTEMS TECHNICIAN & FUEL HANDLER
		Equipment Operator
		Equipment Attendant

TABLE 13.1-2 (Cont'd)

ANSI N18.1 TITLE	TYPE OF LICENSE REQUIRED	B/B TITLE
Technical Support Engineer in Charge		Technical Staff Supervisor
~~Staff Specialist~~ Other Personnel ****		~~Technical Staff Personnel~~

**** Other personnel hired will have a high school diploma or equivalent.

** This qualification may alternately be met by a training instructor reporting to the training supervisor.

*These qualifications may alternately be met by technical personnel reporting to the Rad/Chem Supervisor.

***Either the Station Superintendent or one of his assistants must have an SRO License.

13.2 TRAINING PROGRAM

13.2.1 Program Description

The Training Department has the responsibility of providing trained personnel for various departments at the station in accordance with the Program Outline.

The Program Outline has three objectives; first, to provide employees with information concerning the station which will ensure their safety; second, to provide each employee with the necessary training for the safe and efficient performance of his/her job by completion of predetermined objectives involving classroom sessions, hand-on training and on-the-job certification guidelines, each where applicable; and third, to provide a program to train operating personnel on plant systems and procedures prior to fuel loading.

Training for plant personnel, not having equivalent experience, will be provided as indicated in Table 13.2.1. This schedule shows the training sequence prior to fuel loading. A brief course description, minimum content, is outlined in the following subsection.

a. New Employee Orientation

A one week course provided to employees new to the Commonwealth Edison Company. The completion of this course should result in familiarizing the employee to Commonwealth Edison Company and Byron Station in particular.

b. Stationperson Training Program

A course presented in accordance with the current Stationperson Training Program Objectives. Included in this course shall be the necessary training to meet the minimum acceptable standards required of a Stationperson to perform his/her job safely and efficiently, as identified by the Operations Department in the program objectives.

c. Annual Retraining Program

A training program designed to provide training to station employees to meet the requirements of Corporate Directives and federal laws. This program shall consist of but not be limited to the required general courses (i.e. CPR, OOS cards, Hold Cards, NGET, etc.) as identified on the Master Training Summary.

d. Byron Station General System Training

A course designed to provide training to station employees on basic system operation in order to meet the needs of the station and the individual concerning overall plant function. This program will normally be conducted for identified station staff. Systems training shall be presented in a manner to give the employee an integrated plant focus but may detail certain areas if necessary.

e. Radiation Chemistry Technician Training Program

A training program designed to provide to employees information required in the performance of assigned responsibility areas for both normal and abnormal plant operating status. Included in this program shall be the training necessary to meet the minimum acceptable standards required as identified by the Administration and Support Services Department in the program objectives.

f. Maintenance Training Program

This training program shall be presented in three seperate programs to coincide with the areas of the Maintenance Department. Each program shall be designed to provide the employee with the information necessary to perform the assigned tasks in a safe and efficient manner. The training presented may be classroom instruction, hand-on, vendor supplied or self-study depending on the material content being addressed. Included in these programs shall be the training necessary to meet the minimum acceptable standards required as identified by the Maintenance Department in the program objectives.

g. Equipment Attendant Training Program

A training program designed to provide to employees information required in the performance of assigned responsibility areas along with an understanding of plant response to abnormal and emergency situations. Included in this program shall be the training necessary to meet the minimum acceptable standards required as identified by the Operations Department in the program objectives.

h. High Voltage Switching Program

A training program designed to provide to employees the information required to perform operations and surveillances associated with electrical plant components in a safe and efficient manner. Included in this program shall be the training necessary to meet the minimum acceptable standards required as identified by the Division Superintendents of Power, Electrical Operator Training Board of Review OPS-7 and by the Operations Department in the program objectives.

i. Licensed Training Program

A training program designed to provide to the Licensed Operator candidate the information and training required to perform nuclear power plant operations throughout all operational modes including abnormal and emergency conditions. Included in this program shall be training to meet the minimum acceptable standards required as identified by the Code of Federal Regulations Title 10 Part 55 in conjunction with the detailed guidelines in NuReg 0094 NRC Operator Licensing Guide; the topics addressed in Enclosure 2 and Enclosure 3 of the H.R. Denton letter, dated March 28, 1981 to All Power Reactor Applicants and Licenses in conjunction with the detailed guidelines for these topics provided in NuReg 0737 Clarification of TMI Action Plan Requirements and by the Operations Department in the program objectives.

j. SCRE Training Program

A program designed to provide training to designated employees incorporating the outline of NuReg 0737 Clarification of TMI Action Plan Requirements Item I.A.1.1 Appendix C Section 6 Education and Training Requirements under the direction of Commonwealth Edison Company Production Training Department.

k. License Review Program

A program designed to integrate and review previously learned topics from the Licensed Training Program and to present material on a first time bases, if necessary, concerning plant modifications and information upgrading resulting from Operating Experience Assessment Reports or other similar documents. This program is purposely flexible in order to fill any time voids which may exist due to an unforseen delay in fuel loading. Program content shall be documented in the Byron Station Training Program with the minimum acceptable standards required identified by the Operations Department in the program objectives.

PERSONNEL TRAINING SCHEDULE

	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.
1. Superintendent	X		**	*					*		*
2. Asst. Supt. Operating	X		**	*					*		*
3. Personnel Administrator	X		**	*					*		*
4. Asst. Supt. Maintenance	X		**	*					*		*
5. Asst. Supt. Admin. & Support Services	X		**	*					*		*
6. Training Supervisor	X		**	*				*	*	*	*
7. Instructors	X		**	*				*	*	*	*
8. Operating Staff	X		**	*				*	*	*	*
9. Operating Engineers	X		**	*				*	*	*	*
10. Shift Engineers	X		**	*				*	X	*	X
11. Shift Control Room Eng.	X		**	*				*	X	X	X
12. Special Foremen	X		**	*				*	*		*
13. Shift Foremen	X		**	*				*	X	*	X
14. Fuel Handling	X		**	*			*	*	*		*
15. Nuclear Station Operator	X		**	*			*	*	X		X
16. Electrical Operator	X		**	*			*	X	X		X
17. Equipment Attendant	X		**	*			X				
18. Stationmen	X	X	**	*							
19. Master Instr. Mechanic	X		**	*							
20. Master Electrician	X		**	*							
21. Master Mechanic	X		**	*							
22. Storeroom Supervisor & Asst.	X		**	*							
23. Stockmen	X		**	*							
24. Maintenance Work Analysts	X		**	*		X					
25. Maintenance Foremen	X		**	*		X					
26. A Maintenance Men	X		**	*		X					
27. B Maintenance Men	X		**	*		X					
28. Senior Nuclear Mech.	X		**	*		X					
29. Senior Nuclear Elect.	X		**	*		X					

X Attend
* Optional
** Courses indicated by Master Training Summary

a. New Empl. Orientation
b. Stationmen Training
c. Annual Retraining
d. General Systems Training
e. RCT Training
f. Maintenance Training
g. EA Training
h. High Voltage Switching
i. Licensed Training
j. SCRE Training
k. License Review Program

PERSONNEL TRAINING SCHEDULE

	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.
30. Control Systems Tech.	X		**	*		X					
31. Helpers	X		**			X					
32. Station Accountant	X		**								
33. Tech. Staff Supervisor	X		**	*				*	*	*	*
34. Tech. Staff Assist. Supv.	X		**	*				*	*	*	*
35. Tech. Staff Group Leaders	X		**	*				*	*	*	*
36. Tech. Staff Engineers	X		**	*				*	*	*	*
37. ALARA Coord.	X		**	*							
38. QC Supervisor	X		**	*							
39. QC Staff	X		**	*							
40. Office Supervisor & Staff Assistant	X		**								
41. Clerical	X		**								
42. Rad/Chem Supervisor	X		**	*	*						
43. Rad/Chem Foremen	X		**	*	X						
44. Health Physicists & Eng. Assist.	X		**	*	*						
45. Rad. Chem Techs.	X		**	*	X						
46. Chemist and Eng. Assist.	X		**	*	*						

TABLE 13.1-3

SCHEDULE FOR FILLING POSITIONS

(BYRON STATION)

POSITION	MONTHS PRIOR TO CORE LOAD
Station Superintendent	62
Maintenance Assistant Superintendent	60
Operating Assistant Superintendent	61
Administrative and Support Services Assistant Superintendent	61
Personnel Administrator	24
Training Supervisor	55
Master Mechanic	52
Mechanical Maintenance Foreman	25
Master Electrician	32
Electrical Maintenance Foreman	25
Master Instrument Mechanic	56
Control Systems Technician	53
Instrument Mechanics	53
Operating Engineers	56
Shift Engineers	42
Shift Foreman	42
Start-Up Foreman	42
Nuclear Station Operators	42
Equipment Operators	42
Equipment Attendants	21
Fuel Handlers	5
Office Supervisor	57

TABLE 13.1-3 (Cont'd)

POSITION	MONTHS PRIOR TO CORE LOAD
Radiation-Chemistry Supervisor	45
Station Chemists	33
Station Health Physicists	43
Radiation-Chemistry Foremen	36
Radmen	5-36
Quality Control Supervisor	32
Quality Control Group Members	6-27
Technical Staff Supervisor	57
Group Leaders, Technical Staff	50
Station Nuclear Engineer	45
Nuclear Engineers	31
Security Administrator	47
TRAINERS	15-22
WORK ANALYSTS	12-15
MAINT GENERAL FOREMAN	0-4
INSTRUMENT FOREMAN	25
MECHANICS (SR/A/B)	5-18
ELECTRICIANS (SR/A/B)	5-18
MAINT HELPERS	0-10

CHAPTER 13.0 - CONDUCT OF OPERATIONS

13.1 ORGANIZATIONAL STRUCTURE OF APPLICANT

13.1.1 Management and Technical Support Organization

The Commonwealth Edison Company (Commonwealth Edison) corporate organization and its function and responsibility are described in Reference 1.

13.1.1.1 Design and Operating Responsibilities

Design and Construction Activities

a. Principal site-related work such as meteorology, seismology, hydrology, demography, and environmental effects has been completed and is described in Chapter 2.0. Postoperational environmental evaluations are scheduled for the first 2 years of plant operation.

b. The design of the Byron/Braidwood plant and auxiliary systems is described in Chapter 9.0. Design completion is June 1979. Design refinements and late requirements such as those related to security keep the design efforts open even though the total design effort is essentially complete.

c. The review and approval of plant design features has been underway for 3 years and is essentially completed.

d. Site layout with respect to environmental effects is described in Chapter 2.0 and is completed. Section 13.6 acknowledges the security plan with respect to site layout.

e. This FSAR was prepared through the combined efforts of Commonwealth Edison Company, Westinghouse Electric Corporation, and Sargent & Lundy. Some FSAR updating with onsite meteorological data is anticipated prior to plant operations. Specific security procedures were written for use during the construction of Unit 2 while Unit 1 is being operated. The station security plan was submitted separately with the FSAR.

f. Review and approval of material and component specifications is 80% complete as of April 1978. ~~All remaining hardware specifications are scheduled for release during 1978.~~

g. All equipment is scheduled for delivery at least 24 months prior to fuel loading for each unit.

h. Management control and review of construction activities is currently exercised routinely during construction of the plant. Actual completion of construction depends more on external factors such as strikes, delayed equipment deliveries, and revisions to construction schedules by manpower availability than on internally controllable factors.

Preoperations Activity

a. The consideration of human engineering factors in the design and design phase review of proposed control room layouts is completed.

b. Staff recruiting and training programs are being developed. Implementation is progressing in accordance with the program as outlined in Table 13.1-3 and Figure 13.2-1.

c. Outline plans for initial testing are complete. Chapter 14.0 includes test abstracts for the preoperational tests and system demonstrations.

d. The development of plant maintenance programs is not complete. The schedule for completing plant maintenance programs is keyed to the startup date for Unit 1. The initial Section XI baseline inspection and the ISI program are being prepared in accordance with ASME requirements.

Technical Support of Operation

Technical services and backup support for the operating organization are provided prior to the initial testing program and continue through the life of the plant from the following departments within Commonwealth Edison and from support groups outside the company through contractual agreements:

a. Project Engineering Department

b a. Station Nuclear Engineering Department,

c b. Station Electrical Engineering Department,

d c. Station Construction Department,

e d. Operational Analysis Department,

f e. Production Maintenance Department, and

g f. Production Systems Analysis Department.

13.1.1.2 Organizational Arrangement

The organizational arrangement of Commonwealth Edison is included in Reference 1.

13.1.1.3 Qualifications

General responsibility and activities of the above support groups are described in Reference 1. Ultimate responsibility for contractor performance from support contractors rests with the Station Superintendent.

The supportive department heads are generally employees of from 12 to 25 years' experience with operations-related experience derived from the 16 years of Commonwealth's nuclear power generation, starting from Dresden-1.

The individuals named in the organizational positions for both the operational functions and the technical support functions are the incumbents as of ~~April 1, 1978~~ August 1, 1978. It is the policy of Commonwealth Edison Company to rotate personnel through developmental assignments with increasing responsibility as indicated in the experiences recorded on the resumes in Attachment 13A. In a practical sense then, the individuals named specifically herein for these functions are typical of those utilized throughout the company for these responsibilities. It is not Commonwealth Edison's intent to retain the named individuals indefinitely in these positions simply because they were so designated in this FSAR. Likewise, this FSAR will not be amended simply to update personnel changes. Routine contacts with Region III inspectors and staff are adequate to inform the Commission of station staff qualification at any time.

Technical Support for Operations - Engineering

The ultimate engineering responsibility for the stations is assigned to the Station Nuclear Engineering Department of Commonwealth Edison Company, which is currently managed by Mr. W. Stiede. A resume is included in Attachment 13A along with those of other principals associated with the Byron and Braidwood Stations. Section 1.4.1 of Reference 1 outlines the specific engineering responsibilities for nuclear station design. Chapter 3 of Reference 1 outlines the design control function; other chapters treat the related functions of procurement, inspection, quality assurance, etc.

The division of responsibility for engineering within the Station Nuclear Engineering Department (SNED) acknowledges the inherent differences between PWR's and BWR's. A Section Engineer is designated as the cognizant engineer for each of these generic approaches to reactor power systems. The PWR Section Engineer, currently Mr. J. D. Deress, is responsible for the engineering review of changes to the existing PWR plant (Zion Station) and for the engineering review of design for planned plants or for

see attached sheet

plants in construction, such as Byron and Braidwood Stations. At this intermediate engineering review level, the practical experience at existing plants is factored into the design of the newer plants. Mr. Deress' resume is included in Attachment 13A.

see attached sheet

The individual whose job position corresponds most closely to that of "engineer in charge" is Mr. J. T. Westermeier. His resume is also included in Attachment 13A. He is responsible to Mr. Deress.

Electrical engineering details for station design are under the purview of ~~SNED~~ PED. Design assistance and technical support is provided to ~~SNED~~ PED upon request to the Station Electrical Engineering Department. Figure 13.1-1 identifies that support organization.

The Station Electrical Engineering Department provided engineering reviews and technical recommendations on major electrical equipment such as power transformers, generators, large motors, cable, metal-clad switchgear and motor control centers.

Additionally, it reviews the design of protective relaying, in-plant radio communications systems, network microwave facilities, and the control and instrumentation systems for the non-nuclear part of the station.

The Station Electrical Engineering Department also provides technical support to an operating station via investigation of long-term equipment trouble, grounding problems, equipment modifications to prevent failures or circuit problems, etc. All personnel assigned to nuclear plant systems for design review and equipment modification are graduate engineers or have equivalent technical capability achieved through years of testing, operating, and engineering design experience.

Technical Support for Operations - Testing, Calibration, and Inservice Inspection Support, Laboratory Services and Computer Maintenance

The System Operational Analysis Department (SOAD) (see Reference 1 pages 1-13 through 15) provides specialized technical support. This support consists of the following:

a. Electrical testing during construction of the unit (these are construction tests to authenticate installation and functional correctness; they precede the preoperations testing).

b. Certification of test and measurement equipment, calibration of equipment, meters, etc. used by Commonwealth Edison Construction forces during construction and by Generating Station personnel during operation.

Technical Support for Operations - Engineering

The ultimate engineering responsibility for the stations under construction is assigned to Project Engineering. Once the stations become operational, the responsibility for design and schedules, operations, station modifications, and maintenance becomes that of the Station Nuclear Engineering Department. Section 1.4.1 of Reference 1 outlines the specific engineering responsibilities for nuclear station design. Chapter 3 of Reference 1 outlines the design control function; other chapters treat the related functions of procurement, inspection, quality assurance, etc.

The division of responsibility for engineering within the Projects Department acknowledges the inherent differences between PWR's and BWR's. A Project Engineering Manager is designed as the cognizant engineer for each of these generic approaches to reactor power systems. The PWR Project Engineering Manager, currently Mr. J. D. Deress, is responsible for the engineering review of design for planned plants or for plants in construction, such as Byron and Braidwood Stations At this intermediate engineering review level, the practical experience at existing plants is factored into the design of the newer plans. Mr. Deress' resume is included in the Attachment 13A along with those of other principals associated with the Byron and Braidwood Stations.

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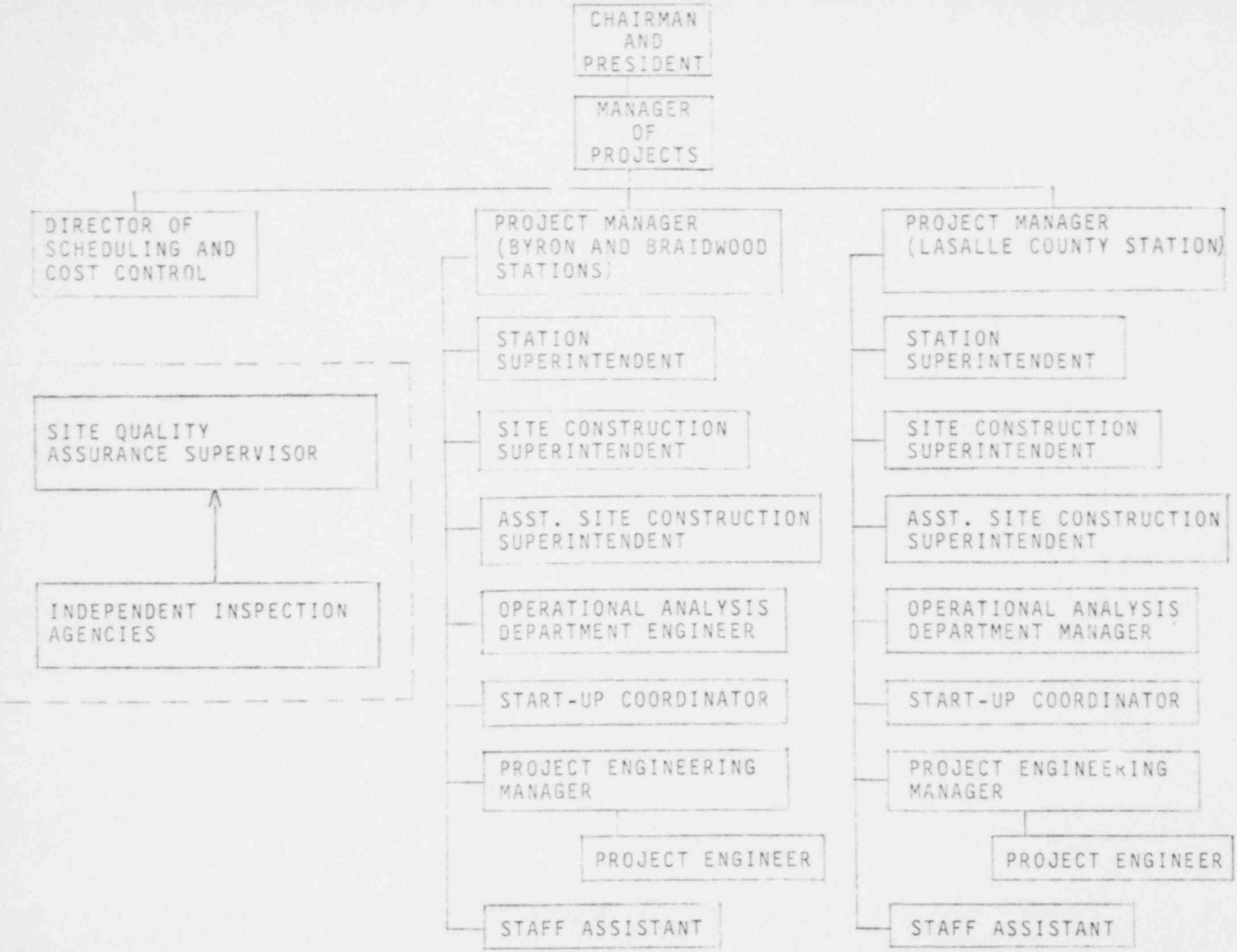

Rev. 15
7-31-81

Figure 1-4
PROJECTS DEPARTMENT

13.4.1 References

1. Topical Report ~~CE-1A~~ CE-1A REV 15, Commonwealth Edison Company Quality Assurance Program for Nuclear Generating Stations.

from plant operations. The operations department prepares the procedures described in this section.

13.5.2.2.6 Maintenance Procedures

The maintenance procedures prescribe the technique, tools, and equipment used to perform inspection, repair, and overhaul of unit equipment. The maintenance department prepares the procedures in this category.

13.5.2.2.7 Materials Control Procedures

Materials control requirements and procedures are identified in Section 8.0 of the Commonwealth Edison Quality Assurance Manual.

13.5.2.2.8 Plant Security Procedures

The plant security procedures are acknowledged in the industrial security section of this FSAR (Section 13.6). A separate set of station security procedures ~~is to be~~ has been written to implement the Byron/Braidwood Master Security Plan.

13.5.2.2.9 Surveillance Procedures

The surveillance procedures prescribe the frequency at which major components and systems are inspected and tested. This includes unit equipment, the surveillance of which is not included in the technical specifications or instrumentation procedures.

It is the responsibility of the appropriate department requiring surveillance items to prepare surveillance procedures.

13.5.3 References

1. Topical Report ~~CE-1A~~ CE-1A REV. 15, Commonwealth Edison Company Quality Assurance Program for Nuclear Generating Stations.

ATTACHMENT 13A

RESUMES OF PEOPLE WITH KEY POSITIONS ON THE BYRON/BRAIDWOOD

PROJECT ENGINEERING DEPT. (PED)

~~NUCLEAR ENGINEERING DEPT. (SNED)~~ AND STATION STAFF

ATTACHMENT 13A
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ATTACHMENT 13A
TABLE OF CONTENTS

13A./ PROJECT MANAGER, BYRON/BRAIDWOOD

NAME:

Vernon I. Schlosser

CITIZENSHIP:

United States of America

AGE:

59

PRIOR AEC/NRC LICENSE (S):

None

FORMAL EDUCATION:

B.S.M.E. from Chicago Technical College, Registered Professional Engineer (Illinois)

TRAINING:

12-Week Course on Boiler Water Reactor Technology, Lou Allen Management Program, Westinghouse Pressurized Water Reactor Training, Westinghouse Option II -- Simulator Training, Fire Fighting Training, Management By-Objectives--I & II, "Achieving Your Potential" Management Training, Nuclear General Employee Training

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 6/21/48

Total work experience: 34 years

8/11/80 to Present: Project Manager, Byron and Braidwood

12/6/76 to 8/11/80: Superintendent of Byron Station

6/10/74 to 12/6/76: Administrative Assistant of Quad-Cities Station

4/14/69 to 6/10/74: Maintenance Engineer at Quad-Cities Station

3/10/49 to 4/14/69: Construction Engineer in Station Construction Department

6/21/48 to 3/10/49: Electrical Sales Department

13A.2 Project Engineering Manager, PWR-Project Engineering Dept. (PED)

NAME:

James D. Deress

CITIZENSHIP:

United States of America

EDUCATION:

B.S. In Mechanical Engineering, Illinois Institute of Technology

I joined Commonwealth Edison Company in 1941 as a draftsman. I worked in this capacity until 1953 with the exception of 3-1/2 years that I served in the Army Air Force during World War II. My duties as a draftsman included preparation of maps for our distribution and transmission system and the preparation of design and drawings for revisions to our fossil-fired power plants.

In 1953 I joined the Mechanical and Building Engineering Department as an Engineering Assistant and then as an engineer. I worked with other engineers on the design of new fossil-fired power plants.

In 1959 I joined Commonwealth Edison's Station Construction Department and worked as a field construction engineer during which I was responsible for overseeing and directing the activities of various contractors who were erecting the mechanical equipment and systems at Fisk Station power plant.

In 1960 I went into Edison's commercial area as an engineer in the Electric Space Heating Program. We were responsible for training sales personnel and working with architects and consulting engineers in the design of electric heating systems.

In 1963 I was assigned as a staff assistant to the financial area executive vice president. My duties consisted of preparing reports and policy research into company activities both engineering and financial.

In 1965 I rejoined the Mechanical and Building Engineering Department (now the Station Nuclear Engineering Department) as Project Engineer on the coal-fired units 7 & 8 at Joliet Station. I was responsible for the design of mechanical, structural, and electrical facilities at Joliet Station.

In 1966 I became a Supervising Design Engineer in the Mechanical and Building Engineering Department with responsibility for direction of a group of engineers who design, guide and direct consultant architect-engineering firms who are employed in the design of Commonwealth Edison's Central Station Power Plants.

In 1969 I became a General Design Engineer with the same responsibilities as above, which now includes nuclear power plants.

13A.2 (Cont'd)

In 1972 I became a Section Engineer with supervisory responsibility for all PWR plants on the Edison System. This includes responsibility for engineering and design of all new PWR plants and modifications to plants in operation.

In 1981 I was appointed Project Engineering Manager for the Byron and Braidwood Projects with responsibility for engineering and design of Byron and Braidwood.

13A.3 Project Engineer, PWR-Project Engineering Dept. (PED)

NAME:

James T. Westermeier

AGE:

50

FORMAL EDUCATION:

B.S. Eng., U.S. Naval Academy, 1953; M.S.N.E., U.S. Air Force Institute of Technology, 1959

WORK EXPERIENCE:

10-79 to Present

Commonwealth Edison Company, Project Engineer, Byron/Braidwood Stations, Units 1 & 2. Responsible for design, equipment/material/field labor specifications, licensing, and engineering activities associated with these stations. Supervises structural, electrical, mechanical, and nuclear engineering groups who coordinate the detail design with the architect-engineer and NSSS contractor. Directs the budget and program aspects of the project; responsible for quality assurance, code compliance, and contractual matters. Coordinates project activities with construction, production, and other departments within the company.

2-79 to 10-74

Commonwealth Edison Company, Project Engineer, Carroll County Station, Units 1 & 2. Responsible for the preparation of bid specification and evaluation of NSSS proposals, initial site environmental studies, and interface with other participating utilities. Project was deferred.

9-73 to 2-79

Commonwealth Edison Company, Field Engineer, Station Construction Department, Zion Station.

8-68 to 8-73

U.S. Air Force. Directorate of Nuclear Safety, Kirtland, AFB, N.M. Responsible for regulatory review and inspection of Air Force nuclear reactor, nuclear test, and aerospace nuclear facilities and equipment world-wide.

10-66 to 8-68

U.S. Air Force. Air Force Technical Applications Center, Washington, D.C. Classified Project

13.A.3 (Cont'd)

9-63 to 10-66

U.S. Air Force. Air Force Weapons Laboratory, Kirtland AFB, N.M. Responsible for research and development work on Advanced Nuclear Reactor and radioisotope concepts for both aerospace and terrestrial applications. Engineering support and consultant work, including extensive site work, on various military nuclear power plants.

2-63 to 9-63

U.S. Air Force. Electronic Systems Division, Hanscom Field, Mass. Project officer for nuclear power plant portion of hardened, deep underground command and control system. Project cancelled before reaching construction phase.

2-61 to 2-63

U.S. Air Force. Loaned to New York Operations Office, Atomic Energy Commission. Located at Baltimore, Maryland 2-61 to 6-61; Sundance AFS, Wyoming from 6-61 to 2-63. Resident engineer and officer-in-charge of PM01 nuclear power plant. Responsible for shop fabrication and testing in plant, shipment to field, installation, initial plant operation, and crew training. Turned operational plant over to Air Defense Command.

8-59 to 2-61

U.S. Air Force. National Reactor Testing Station, Idaho. Operations/ training officer and later officer-in-charge of SL-1 nuclear power plant. Responsible for research and development, engineering, operation, and crew training functions. Participated in recovery operations following reactor accident.

8-57 to 8-59

U.S. Air Force. Wright-Patterson AFB, Ohio. Graduate student in nuclear engineering, U.S. Air Force Institute of Technology

6-53 to 8-57

U.S. Air Force. Various training, operations, and maintenance assignments in Air Training Command and Strategic Air Command; none related to the nuclear power field.

13.A.4 Station Superintendent, Byron Station

NAME:

Robert E. Querio

CITIZENSHIP:

United States of America

AGE:

39

PRIOR AEC/NRC LICENSE(S):

Quad Cities, Units 1 & 2, RO and SRO

FORMAL EDUCATION:

B.S.M.E. from Illinois Institute of Technology

WORK EXPERIENCE:

Commonwealth Edison Company Starting Date: 2/1/65

Total work experience: 16 years

~~8-80 to Present:~~

Station Superintendent, Byron Station

1-3-77 to 8-80 Assistant Superintendent of Byron Station

3-74 to 1-3-77: Technical Staff Supervisor at Quad Cities Station

3-73 to 3-74: Operating Shift Foreman at Quad Cities Station

11-68 to 3-73: Technical Staff at Quad Cities Station:

a. Computer Engineer
b. Thermal Engineer
c. NRC License Training

9-66 to 11-68: Efficiency Department at Joliet Station, Units 7 & 8

11-65 to 9-66: Efficiency Department at Joliet Station, Units 1-6

2-1-65 to 11-65: Graduate Development Program:

a. Efficiency Department at Joliet Station
b. Construction Department at Joliet Station
c. Operating Department at Crawford Station
d. Mechanical and Structural Engineering Department

13.A.5 Superintendent, Braidwood Station

NAME:

John F. Gudac

CITIZENSHIP:

United States of America

AGE:

48

PRIOR AEC/NRC LICENSE(S):

SRO Quad Cities Units 1/2

FORMAL EDUCATION:

B.S.M.E. from the University of Notre Dame in Mechanical Engineering

TRAINING:

General Electric BWRTC Certification, Lou Allen Management Program, Kepner-Tregoe decision-making program, plus miscellaneous management courses.

WORK EXPERIENCE:

Commonwealth Edison starting date: 2-56

Total work experience: 25 years

6-79 to Present: Superintendent of Braidwood Station

3-74 to 6-79: Assistant Superintendent of Quad Cities Station

4-70 to 3-74: Operating Engineer of Quad Cities Station

12-69 to 4-70: Tech Staff Supervisor of Quad Cities Station

12-67 to 12-69: Shift Engineer at Quad Cities Station

2-59 to 12-67: Miscellaneous assignments as an engineer at various power plants, both fossil and nuclear, including the startup of Unit 1 at Dresden Station.

9-58 to 2-59: Graduate Development Program

9-56 to 9-58: U.S. Army

2-56 to 9-56: Graduate Development Program

13.A.6 Assistant Superintendent, Maintenance and Stores - Byron Station

NAME:

Lee A. Sues

CITIZENSHIP:

United States of America

AGE:

37

PRIOR AEC/NRC LICENSE(S):

Zion Units 1 & 2 SRO; Operators Certificate, Saxton Nuclear Experiment Corp., Saxton, Pa.

FORMAL EDUCATION:

B.S.M.E., University of Wisconsin

TRAINING:

SRO Training, Zion Station; RO Training, Westinghouse, Saxton Nuclear Experiment Corp.

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 6/20/66

Total work experience: 15 years

1977 to Present:	Assistan Superintendent Maintenance and Stores Byron Station
1977 to 1979:	Maintenance Engineer for Byron Station
1975 to 1977:	Outage Coordinator at Zion Station
1970 to 1975:	Shift Engineer at Zion Station
1969 to 1970:	Central Efficiency at Fisk Station
1967 to 1969:	Production Control and Efficiency at Waukegan Station.
1966 to 1967:	Graduate Orientation Program

13.A.7 ASSISTANT SUPERINTENDENT MAINTENANCE AND STORES, BRAIDWOOD STATION

NAME:

Douglas E. Paquette

CITIZENSHIP:

United States of America

AGE:

34

PRIOR AEC/NRC LICENSE(S):

U.S. Naval Reactors Commission Licensed Mechanical Operator DIG & SSW Reactor Plants November 1967 to August 1971.

FORMAL EDUCATION:

A.S. College of Lake County, Grayslake, Illinois 1973
B.S. in Mechanical Engineering, University of Illinois, Urbana/Champaign 1975

TRAINING:

Codes & Standards October 1975
Westinghouse Steam Turbine Generator Maintenance October 1976
Certified Level II Observer Eddy Current Testing Steam Generators
Basic IRD Vibration Analysis 6-24-76
Advanced IRD Vibration Analysis 5-3-77

WORK EXPERIENCE:

Total Work Experience: 15 years

10-79 to Present:	Assistant Superintendent (Maintenance) Braidwood Station
5-77 to 10-79	Maintenance Engineer Braidwood Station
8-75 to 5-77:	Maintenance Staff Engineer Zion Station
9-73 to 8-75:	University of Illirois Urbana/Champaign
9-71 to 9-73:	College of Lake County Grayslake, IL
8-65 to 8-71:	U.S. N. Nuclear Power Program Mechanical Operator Machinist Mate Rating

13.A.8 ASSISTANT SUPERINTENDENT, OPERATING - BYRON STATION

NAME:

Richard Pleniewicz

CITIZENSHIP:

United States of America

AGE:

36

PRIOR AEC/NRC LICENSES(S):

Zion Station Units 1 & 2, 1976 Qualified Reactor Operator SSBN-641, 1967

FORMAL EDUCATION:

M.S.N.E., Northwestern University in progress, B.S.E.E., University of Illinois, 1973

TRAINING:

License Training, Zion Station, 1976; U.S. Navy Nuclear Power School, 1964-1965; U.S. Navy Submarine School, 1964; U.S. Navy Electronics "A" School, 1963

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 2-13-73

Total work experience: 13 years

8-80 to Present: Assistant Superintendent, Operating - Byron Station

5-2-77 to 8-80: Operating Engineer at Byron Station

7-76 to 5-77: Shift Foreman at Zion Station

9-75 to 6-76: In training for license at Zion Station

9-74 to 9-75: Electrical Group Leader on Tech Staff at Zion Station

2-73 to 9-74: Tech Staff Engineer at Zion Station

6-72 to 8-72: Summer Student, Distribution Engineering, at the Tech Center

2-69 to 9-71: Lab Technician at Solid State Lab, University of Illinois

9-62 to 9-68: Qualified Reactor Operator, Electronics Technician First Class, Qualified in Submarines. One Year in Radar Maintenance on U.S.S. Teconic AGC-17.

13.A.9 ASSISTANT SUPERINTENDENT - ADMINISTRATION and SUPPORT SERVICES, BYRON STATION

NAME:

Robert C. Ward

CITIZENSHIP:

United States of America

AGE:

39

PRIOR AEC/NRC LICENSE(S):

SRO - #SOP-3006-1977

FORMAL EDUCATION:

B.S. Eng. Mech. from University of Illinois - 1965, M.B.A. from University of Oklahoma - 1972, U.S. Navy, 1965/66

TRAINING:

Westinghouse Nuclear Power Plant Training Simulator - 1977, Plant Quality Assurance - 1977, C.E.E.P. Command Center Training - 1978, Q.A. Training - 1978.

WORK EXPERIENCE:

Commonwealth Edison Comp , Starting date: 5-12-72

Total work experience: 16 years

10-80 to Present:	Assistant Superintendent Administration and Support Services, Byron Station
9-76 to 10-80:	Operating Engineer - Zion Station
11-73 to 9-76:	Project Engineer - SNED - Zion
6-72 to 11-73:	Staff Engineer - Prod. Control Efficiency (G.O.)
9-70 to 5-72:	Graduate Program - University of Oklahoma
2-65 to 8-70:	U.S. Navy Nuclear Submarine duty Qualified ECDW Submarines

13A.10 ADMINISTRATIVE AND SUPPORT SERVICES ASSISTANT SUPERINTENDENT - BRAIDWOOD

NAME:

Denis E. O'Brien

CITIZENSHIP:

United States of America

AGE:

38

PRIOR AEC/NRC LICENSE(S):

Zion Units 1 and 2 SRO (SOP-1915-2)

FORMAL EDUCATION:

B.E.E. - Marquette University - 1965
M.S. Industrial Administration - Purdue University - 1971

TRAINING:

SRO Training, Zion Station
United States Navy Nuclear Power Program

WORK EXPERIENCE:

Commonwealth Edison Company starting date: August, 1971
Total Work Experience: 16 years

1979 to present: Administrative and Support Services Assistant Superintendent - Braidwood
1978 to 1979: Administrative Assistant - Braidwood
1976 to 1978: Nuclear Licensing Administrator - Corporate Office
1971 to 1976: Zion Station
- a. Operating Engineer
- b. Startup Engineer
- c. Shift Foreman
- d. Technical Staff Engineer

1965 to 1970: Officer in United States Navy
Qualified Propulsion Plant Watch Officer

OTHER:

Registered Professional Nuclear Engineer - California (NU-1076)
American Nuclear Society - Member of Reactor Operations Division Executive Committee

13.A.1 PERSONNEL ADMINISTRATOR, BRAIDWOOD STATION

NAME:

Edward L. Pierard

CITIZENSHIP:

United States of America

AGE:

46

PRIOR AEC/NRC LICENSE(S):

RO for Dresden Nuclear Generating Station, Units 1, 2, and 3

FORMAL EDUCATION:

Illinois Benedictine Institute for Management Program
Associate Degree in Applied Science - Mid Management Marketing

TRAINING:

United States Army Signal School Field Carrier Equipment Repairman;
General Electric BWRTC Certification, Morris, Illinois

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 9-10-59

Total work experience: 22 years

6-18-79 to Present: Braidwood Personnel Administrator

7-14-75 to 6-18-79: Generating Stations Industrial Relations Representative

6-3-74 to 7-14-75: Southern Division Generating Stations Safety Advisor

5-8-74 to 6-3-74: Engineering Assistant on the Dresden Technical Staff

9-10-59 to 5-8-74: Operations Classifications, Dresden Station

13.A.13 OPERATING ENGINEER, BYRON STATION

NAME:

W. Robert Blythe

CITIZENSHIP:

United States of America

AGE:

52

PRIOR AEC/NRC LICENSE(S):

1971 through 1977 - Senior

FORMAL EDUCATION:

Trade School, 3 years, 1947; B.A. Business Administration, 1979

TRAINING:

Trade School - Power Plant Operation; U.S. Army - Power School - Portable Generators; Commonwealth Edison Company - BWR - Technology, BWR - Simulator

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 7-14-47

Total work experience: 30 years

1976 to Present:	Shift Engineer - Outage Coordinator
1967 to 1976:	Shift Engineer - Quad Cities
1960 to 1967:	Shift Engineer - Central Illinois Electric & Gas Company
1960 to 1960:	Relief Shift Supervisor
1953 to 1960:	Utility Operator - All Departments
1951 to 1953:	U.S. Army Combat Engineers Powerman - Bridge Company
1947 to 1951:	Utility Operator - Lab. Technician and Operations Training Program - Boiler Room, Turbine Room, Switchboard

13.A.13 OPERATING ENGINEER, BYRON STATION

NAME:

Willem P. Dijstelbergen

CITIZENSHIP:

United States of America

AGE:

37

PRIOR AEC/NRC LICENSE(S):

SRO Certification - 1979

FORMAL EDUCATION:

B.S.M.E. from Hogere Technische - Rotterdam, Netherlands, 1966
M.B.A. from Roosevelt University, 1976

TRAINING:

Introduction to Nuclear Power

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 7-14-69

Total work experience: 15 years

8-80 to Present: Operating Engineer, Byron Station

3-80 to 8-80: SCRE Byron Station

8-79 to 3-80: Start-up foreman - Byron Station

6-77 to 8-79: Engineer, SNED

12-73 to 6-77: Technical Staff Engineer - Zion Station

6-69 to 12-73: Field Engineer - Zion Station and Waukegan Station

8-66 to 8-69: Engineer - Rotterdam Rockyard Company - Rotterdam

Other: Illinois Registered Professional Engineer - 1974

13.A.14 OPERATIONS ENGINEER, BYRON STATION

NAME:

Robert D. Branson

CITIZENSHIP:

United States of America

AGE:

35

FORMAL EDUCATION:

B.S. Electrical Engineering, 1968

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 6-13-67

Total work experience: 19 years

6-77 to Present:	Operating Engineer - Byron Station
7-75 to 6-77:	Staff Assistant (Operating) Quad Cities
9-70 to 7-75:	O.A.D. - Rock River
5-69 to 9-70:	District Planning Eng. - Rock River Division
9-65 to 6-69:	Co-op Student: Distribution Engineering, System Planning, Tech. Operating, Div. Engineering
10-64 to 9-65:	Drafting
9-58 to 10-64:	Clerical - Allied Radio

13.A.15 SENIOR OPERATING ENGINEER, BRAIDWOOD STATION

NAME:

Ronald J. Legner

CITIZENSHIP:

United States of America

AGE:

51

PRIOR AEC/URC LICENSE(S):

None

FORMAL EDUCATION:

M.S. - Systems Management
University of Southern California

B.S. - Aeronautical Engineering
Air Force Institute of Technology

TRAINING:

25 week PWR Senior Reactor Operator License Training Program

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 10-21-74

Total work experience: 31 years

12-18-78 to Present: Senior Operating Engineer - Braidwood Station

8-23-77 to 12-18-78: Quality Assurance Department Supervisor - Braidwood and LaSalle County Stations

10-21-74 to 8-23-77: Quality Assurance Engineer - Braidwood, Dresden and LaSalle County Stations

1-9-51 to 8-31-74: U.S. Air Force - Fighter Pilot, Operations and Maintenance Officer, Chief of Maintenance, Director of Material, Organization Commander

13.A.1b OPERATING ENGINEER, BRAIDWOOD STATION

NAME:

Robert J. Ungeran

CITIZENSHIP:

United States of America

AGE:

35

PRIOR AEC/NRC LICENSE(S):

SRO - Zion

FORMAL EDUCATION:

B.S.M.E. from Michigan Technological University, 1967
M.S.N.E. from Michigan Technological University, 1969

TRAINING:

Westinghouse Nuclear Energy Systems - 1971, Westinghouse PWR
Station Nuclear Engineering - 1971

WORK EXPERIENCE

Commonwealth Edison Company starting date: 10-13-69

Total work experience: 12 years

1-79 to Present: Operating Engineer, Braidwood Station

8-77 to 1-79: Assistant Tech Staff Supervisor, Zion Station

6-76 to 8-77: Shift foreman - Zion Station

9-75 to 6-76: Training for SRO License, Zion Station

4-73 to 9-75: Station Nuclear Engineer - Zion Station

10-71 to 4-73: Nuclear Group Engineer, Zion Station

13.A.18 OFFICE SUPERVISOR BYRON STATION

NAME:

David M. Meier

CITIZENSHIP:

United States of America

AGE:

29

PRIOR NUCLEAR LICENSES:

None

FORMAL EDUCATION:

Associate in Science, Kishwaukee College

TRAINING:

PWR Training program, Phase II - 1979; PWR Simulator Training Program, Phase III - 1979; BWR Reactor Startup Program - 1978

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 3-9-70

Total Work Experience: 11 years

7-20-81 to Present: Office Supervisor, Byron Station

7-7-80 to 7-20-81: Staff Assistant, Byron Station

5-8-78 to 7-7-80: Equipment Operator, Byron Station

1-14-76 to 5-8-78: Construction Order Clerk, DeKalb District Headquarters

1-31-72 to 1-14-76: General Clerk I, DeKalb District Headquarters

2-8-70 to 1-31-72: General Clerk III, Belvidere Sales Department

13.A.19 OFFICE SUPERVISOR, BRAIDWOOD STATION

NAME:

Nancy R. Coan

CITIZENSHIP:

United States of America

AGE:

47

PRIOR AEC/NRC LICENSE(S):

None

FORMAL EDUCATION:

Associate in Science - Business

WORK EXPERIENCE:

7-78 to Present:	Office Supervisor at Braidwood Nuclear Station Commonwealth Edison Company
9-73 to 7-78:	Administrative Supervisor Electric Power Research Institute

13.A.2C RADIATION/CHEMISTRY SUPERVISOR, BYRON STATION

NAME:

James R. Van Laere

CITIZENSHIP:

United States of America

AGE:

28

PRIOR AEC/NRC LICENSE(S):

None

FORMAL EDUCATION:

B.S. Environmental Health from Purdue University, 1975

TRAINING:

G.S.E.P. Command Center Training - 1978, I.P.P.O. Training - 1978

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 6-2-75

Total work experience: 7 years

6-78 to Present:	Group Engineer, Byron Station Radiation/Chemistry Supervisor, Byron Station
12-77 to 6-78:	Lead Health Physicist, Zion Station
6-76 to 12-77:	Health Physicist, Zion Station
6-75 to 6-76:	Health Physicist, Product System Analysis Dept.
8-74 to 6-75:	Radiological Technician, Purdue University

13.A.21 RADIATION/CHEMISTRY SUPERVISOR, BRAIDWOOD STATION

NAME:

Paul A. Corwin

CITIZENSHIP:

United States of America

AGE:

37

FORMAL EDUCATION:

A.S. in Chemistry from College of Lake County - 1974
B.A. in Biology and Natural Science from Carthage College - 1977

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 8-29-49

1978 to Present: Radiation/Chemistry Supervisor, Braidwood Station

1975 to 1978: Assistant Chemist, Zion Station

1971 to 1975: Radiation/Chemistry Technician, Zion Station

1965 to 1971: U.S. Navy - Nuclear Power Program

13.A.22 TRAINING SUPERVISOR, BYRON STATION

NAME:

Thomas K. Higgins

CITIZENSHIP:

United States of America

AGE:

39

PRIOR AEC/NRC LICENSE(S):

RO and SRO Quad Cities Station

FORMAL EDUCATION:

62 semester hours in college
U.S. Navy, 1961-1969

TRAINING:

PWR Nuclear Power Plant Operations - Westinghouse Simulator, BWR Nuclear Power Plant Operations - G.E. Simulator, U.S. Navy Nuclear Power Prototype (AIW),
U.S. Navy Basic Nuclear Power School

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 3-69

Total work experience: 20 years

9-80 to Present:	Station Training Supervisor, Byron Station
6-78 to 9-80:	Shift Engineer, Byron Station
9-77 to 2-78:	Engineering Assista (Training), Quad Cities
2-73 to 3-77:	Nuclear Station Operator, Quad Cities
5-71 to 2-73	Equipment Operator, Quad Cities
1-70 to 5-71:	Equipment Attend t, Quad Cities
9-69 to 1-70:	Station man, Dixon Station
11-64 to 8-69:	U.S. Navy; USS James K. Polk Leading Petty Officer, Reactor Control Division
3-64 to 9-64:	U.S. Navy; USS Permit Second Class Petty Officer, IC Division
9-61 to 9-62:	U.S. Navy; USS Preble Engine Room Watch Stander

13A.23 STARTUP COORDINATOR

NAME:

Charles J. Tomashek

CITIZENSHIP:

United States of America

AGE:

39

PRIOR AEC/NRC LICENSE (S):

Zion Units 1 and 2 SRO

FORMAL EDUCATION:

B.S., United States Naval Academy, M.S.N.E., University of Wisconsin, 1969-1971

TRAINING:

SRO Training, Zion Station, United States Navy Nuclear Power Program

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 6/71

Total work experience: 17 years

1980 to Present: Startup Coordinator, Byron and Braidwood Stations

1977 to 1980: Administrative Assistant of Byron Station

1975 to 1977: Production Systems Analysis

a. Senior Participant, Off-Site Review for Zion Station

b. Production Department Comments for Byron/Braidwood

1971 to 1975: Zion Station

a. Training Supervisor

b. Operating Shift Supervisor

c. Technical Staff Engineer

1964 to 1969: United States Navy

Qualified EOOW and OOD

Nuclear Weapons Officer

13.A.4 STAFF ASSISTANT

NAME:

Gordon E. Smith

CITIZENSHIP:

United States of America

AGE:

59

POSITION:

Startup Coordinator

FORMAL EDUCATION:

B.S.E.E., Purdue University, 1946-1950

TRAINING:

None

WORK EXPERIENCE:

Commonwealth Edison Company starting date: 8-29-49

Total work experience: 30 years

1980 to Present:	Project Construction Department - Startup Group
1976 to 1980:	Station Construction Engineer - Lead Electrical
1975 to 1976:	Staff Engineer, Corporate Quality Assurance
1971 to 1975:	District Manager, C.L. District
1968 to 1971:	Area Sales Supervisor - Northbrook
1963 to 1968:	Power Engineer - Mt. Prospect
1956 to 1963:	Operational Analysis Dept. Engineer - Maywood
1949 to 1956:	Operational Analysis Dept. Engineer - Chicago

13A.25

Technical Services Manager - Nuclear Stations Division

Name: George P. Wagner

Age: 41

Formal Education:

BS Electrical Engineering, Illinois Institute of Technology - 1962
U.S. Navy Advanced Nuclear Power School and Prototype Training - 1962-1963

Work Experience:

6/81 to Present: Commonwealth Edison - Technical Services Manager, Nuclear Stations Division

Functional responsibility for the Nuclear Station Technical Staff organization and work assignments. Responsible for technical support for the nuclear stations in the area of health physics, chemistry, fire protection, computer services, thermal efficiency, emergency planning, and radwaste management.

2/76 to 6/81: Commonwealth Edison - Station Nuclear Design Engineer Assistant Manager of the Station Nuclear Engineering Department

Responsible for engineering design in support of Commonwealth Edison's operating nuclear power stations; Responsible for Reliability and Design Engineering activities for availability improvement.

4/73 to 2/76: Commonwealth Edison - Assistant Superintendent, Zion Nuclear Power Station

Responsible for day-to-day direction of all station operating, maintenance, and technical activities. Senior participant in technical review of preoperational and start-up test results. Conducted safety reviews of plant operational occurrences. Obtained and maintained NRC Senior Reactor Operator (SRO) License for Zion.

1/73 to 4/73: Commonwealth Edison - Administrative Engineer, Zion Nuclear Power Station

Developed plant operating license technical specifications. Developed initial surveillance program to comply with the requirements of the license technical specifications.

9/72 to 1/73: Commonwealth Edison - Senior Staff Engineer

Conducted operating design review of Zion Nuclear Power Station for the Superintendent of Generating Stations - Nuclear.

5/70 to 9/72: Commonwealth Edison - Operating Engineer, Dresden Nuclear Power Station

Directed day-to-day operation of Dresden 2 and 3, including two refueling outages. Directed Dresden 3 preoperational and start-up testing. Licensed SRO on Dresden 1, 2, and 3.

2/68 to 5/70: Commonwealth Edison - Start-up Engineer, Dresden Units 2 and 3

Developed and directed preoperational tests on individual systems. Licensed RO on Dresden 1 and SRO on Dresden 1, 2, and 3.

9/67 to 1/68: Engineer I, Dresden Nuclear Power Station

Conducted performance testing on Dresden 1 and developed preoperational tests for Dresden 2.

1962 to 1967: United States Navy

Commissioned Officer - Nuclear and conventional propulsion plant operation.

Other:

Standards Work: ANS Nuclear Power Plant Standards Committee (1979 - Present)
ANS-50 Power Reactor System Committee (1976 to 1978)

Professional Memberships:

American Nuclear Society
Institute of Electrical and Electronic Engineers
Western Society of Engineers

B/B - FSAR

August 11, 1981

13A-26

RESUME OF
HENRY E. BLISS, DIRECTOR
NUCLEAR FUEL SERVICES

Work Experience	Director of Nuclear Fuel Services
October 1980 to Present	This department is a technical support organization responsible for in-core nuclear fuel management and related transient and safety analyses for all of the Company's nuclear stations.

Specific activities are:

- Development and implementation of analytical methods for fuel management and transient and safety analysis.
- Determination of reload design neutronic parameters for use in licensing analysis and cycle operations.
- Performance of reactor transient and safety analysis for licensing and operations.
- Determination of reactor operating cycle energies, nuclear fuel requirements and refueling schedules.
- Economic evaluations of alternative fuel loadings and nuclear plant operating strategies.
- Development of reactor operating strategies and plans to optimize the operation of the several nuclear plants with the fossil fueled generation on the system.
- Analysis of nuclear fuel performance and evaluation of nuclear fuel designs.
- Maintain nuclear material accountability records through a Nuclear Fuel Data Bank.
- Research and development projects for nuclear fuel improvements, inspection methods and reactor operations.
- Technical and training support for nuclear engineering activities at the stations.

September 1978 to October 1980	Supervising Fuel Management Engineer reporting to the Director of Nuclear Fuel Services. Spent first 10 months of 1979 on assignment to Westinghouse Nuclear Fuel Division (Monroeville,PA) to acquire overall management expertise in the various aspects of the reload design process.
February 1978-September 1978	Staff Assistant to Vice-President Byron Lee, Jr. Involved in Management Consultant study of Nuclear Operations, review and appraisal of company training program for Station Nuclear Engineers, and monitoring of developments in occupational radiation exposure standards.
September 1971-June 1975	Manager of Technical Service for Project Management Corporation (PMC). Responsible for PMC's activities in support of NRC licensing of the Clinch River Breeder Reactor Plant.
February 1971-September 1972	Staff Assistant to the Manager of Mechanical and Structural Engineering Department.
December 1969-February 1971	Nuclear Licensing Administrator
November 1968-December 1969	Preoperation Test Engineer on Dresden Unit 2 Technical Staff.
November 1966-November 1968	Active Duty with U. S. Army Corps of Engineers. Assigned to Nuclear Power Field Office at Fort Belvoir, Virginia.

Education

1957-1962	Cornell University Ithasca, New York	BS in Engineering Physics
1962-1966	Mass. Inst. of Tech. Cambridge, Mass.	MS and ScD in Nuclear Engineering

Other

Number of Electric Power Research Institute's Safety and Analaysis Task Force since January, 1979.

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