Superseded by Amend. 15/16

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13 CONDUCT OF OPERATIONS

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SECTION 13

CONDUCT OF OPERATIONS

13.1 ORGANIZATION AND RESPONSIBILITY

13.1.1 Organization. The Dresden Station organization is shown on Figure 13.1.1. This chart shows a total of 180 full time employees at the Station for the operation of Units 1, 2, and 3. The service groups such as maintenance, radiation protection, clerical, stores, and fuel handling will render an integrated service to all three units. Those operators used in the operation of each unit, such as the control (reactor) operator, will be trained, qualified, and assigned to a single operating unit, while other operators will be assigned monitoring and operational duties common to all units.

In addition to the Commonwealth Edison Staff, General Electric will have a Site Operations Manager and four shift supervisors and other technical personnel at the site during pre-operational testing, fuel handling, initial fuel loading, low power testing and through the time rated power is demonstrated. During this period prior to acceptance of each unit by Commonwealth Edison, the following working arrangements between Commonwealth Edison and General Electric will be in effect.

General Electric will specify, after consultation with Commonwealth Edison, the testing required to verify reactor system design and the techniques to be utilized in carrying out the requirements of the test procedures. All tests to be conducted will be discussed in detail as to content and techniques employed so that all responsible persons concerned will have understanding of the test significance. The General Electric engineers will direct all activities affecting completion of the unit until acceptance by Commonwealth Edison or until other contractual arrangements are made. All direction involving Commonwealth Edison personnel will be through and in cooperation with the Commonwealth Edison engineers, supervisors, or management.

Regularly scheduled meetings will be held to discuss and plan testing operations for an ensuing period. The chairman of these meetings will be the General Electric Site Operations Manager. Commonwealth Edison has the right to defer any action until responsible Commonwealth Edison personnel fully understand the requirements and expected results of a test and has the right to refuse to perform any function, which in Commonwealth Edison's judgment, would compromise safety of the unit or station. Likewise, Commonwealth Edison will not schedule or initiate any actions or operations, which in the judgment of the General Electric Site Operations Manager, would compromise safety of the unit or station.

If at any time either Commonwealth Edison or General Electric supervisors feel that continued operation would jeopardize safety or would violate the technical specifications or license, operations will be suspended or modified in a safe manner pending evaluation and agreement on a mutually acceptable

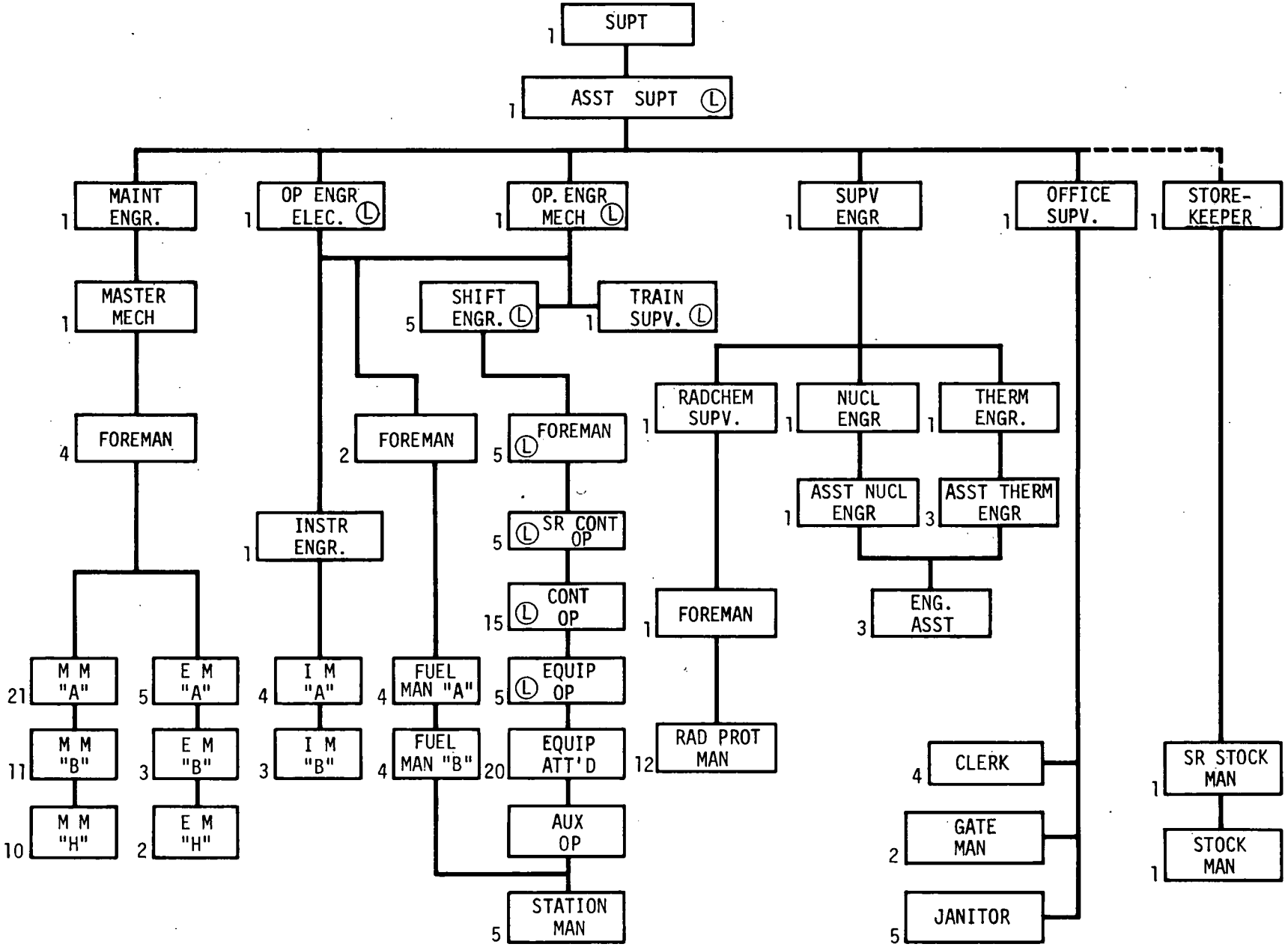

Figure 13.1.1 Organization Chart

basis before proceeding. AEC licensed Commonwealth Edison supervisors will work closely with and be supervised by AEC licensed General Electric supervisors commencing with arrival of nuclear fuel at the unit and through the time rated power is demonstrated. An adequate number of Commonwealth Edison control room operators will be licensed prior to the turnover of each unit by General Electric Co.

Prior to the time of turnover, General Electric has responsibility for overall supervision of unit operation. At all times after the arrival of nuclear fuel at the station for each unit Commonwealth Edison has the ultimate responsibility for compliance with the operating license and technical specifications issued for such work.

13.1.2 Station Management. The managerial duties of administrative planning, procuring materials and parts, supervision, and public and industrial relations will be under the direction of the Station Superintendent and/or the Assistant Superintendent. Most of the duties will be administrative and managerial.

13.1.3 Operating Group. Supervision of the operation will be under the direction of the Mechanical or Electrical Operating Engineers respectively who will be responsible to the Assistant Superintendent and Superintendent. The Mechanical and Electrical Operating Engineers will work closely with the Technical and Maintenance Engineers. The operation of all the units, including auxiliary systems of each will be under the direction of a shift engineer and/or foreman. Initially, each operating shift for Units 1 and 2 will consist of the shift engineer; shift foreman; senior control (coordinating and relief) operator; two control (reactor) operators, each of which is assigned to a specific unit; one equipment operator; and three equipment attendants. Ultimately when Unit 3 is ready for service, one additional control operator, and one additional equipment attendant will be added to each shift. Five complete operating shifts will be provided, each including a shift engineer and/or shift foreman who is competent to supervise all shift operations. The regular duties of each shift include operation and surveillance of all station equipment, including auxiliary systems, such as radwaste, reactor cleanup, makeup water, etc., record keeping and operational housekeeping. It is expected that the Mechanical and Electrical Operating Engineers, five shift engineers, five shift foremen, Assistant Superintendent, and the technical staff supervisory will be licensed operators prior to the initial fuel loading and that the ten control room operators will be licensed during the period between the initial startup and prior to turnover of each unit by General Electric. A licensed senior operator will be on duty at the station at all times. There will also be one licensed operator in the control room for each reactor that is not in the shutdown mode, or when any condition exists making possible reactivity addition to the core. Station management and technical support will be present or on call at all times.

13.1.4 Fuel Handling. Supervision of the fuel handling group is under the direction of the Mechanical and Electrical Operating Engineers who are responsible through a foreman for the fuel preparation, loading, unloading, in-plant transporting and shipping. During fuel loading into the reactor, the shift engineer or shift foreman and the licensed control room operator will monitor the reactor instruments, controls, and will follow approved procedures. The foreman reports to the Mechanical and Electrical Operating Engineers who report to the Assistant Superintendent and Superintendent.

13.1.5 Instrument Maintenance. Instrument maintenance is under the supervision of an Instrument Engineer or foreman who reports to the Electrical Operating Engineer. This group is responsible for maintaining instruments and related controls.

13.1.6 Technical Group. Supervision of the technical group is under the direction of the Technical Supervisor who is responsible for nuclear engineering, thermal and mechanical engineering, radiation protection and radiation surveillance, chemical and radiochemical surveillance, and other engineering matters. He reports to the Assistant Superintendent and Superintendent.

13.1.7 Maintenance Group. Maintenance responsibilities are under the direction of the Maintenance Engineer and the Master Mechanic, who are responsible to the Assistant Superintendent and Superintendent. Except for control instrumentation, this group is responsible for all maintenance, including mechanical and electrical maintenance. During major maintenance such as that performed during refueling periods, the maintenance staff may be supplemented by other employees of Commonwealth Edison and/or contractor organizations as required. Where contractor organizations are used, there will be close surveillance of work by Commonwealth Edison personnel.

13.1.8 Personnel Qualifications

A. Superintendent and Assistant Superintendent
Requirements:

(1) College degree or equivalent.

(2) Ten years of electric utility experience including five years experience in the engineering, operation and/or maintenance of power plant facilities, with at least three years in a responsible supervisory position of such facilities.

(3) Assistant Superintendent to obtain a senior operations license for Dresden Units 1, 2, and 3.

B. Mechanical Operating Engineer and Electrical Operating Engineer
Requirements:

(1) College degree or equivalent.

(2) Five years experience in the engineering, operation and/or maintenance of power plant facilities including two or more years in a responsible supervisory position.

(3) Obtain a senior operator license for Dresden Units 1, 2, and 3.

C. Shift Engineer and Foreman

Requirements:

(1) High School education

(2) Three or more years experience in operation of a power plant facility.

(3) Obtain a senior operator license for Dresden Units 1, 2, and 3.

D. Technical Supervisor

Requirements:

(1) College degree or equivalent.

(2) Three years of relevant experience including a minimum of two years in a responsible supervisory position.

E. Technical Engineer, such as Nuclear, and Thermal or Instrument

Requirements:

(1) College degree or equivalent.

(2) Three years of relevant experience, including one or more years in a nuclear facility.

F. Radiation-Chemical Supervisor

Requirements:

(1) Two years of college or equivalent.

(2) Three years of relevant experience including a minimum of one year in the chemistry group at a nuclear facility.

G. Maintenance Engineer and Master Mechanic

Requirements:

(1) Two years of college or equivalent.

(2) Three years of relevant experience including one year of experience at a nuclear facility in maintenance activity.

H. Training Supervisor

Requirements:

(1) Five years experience in operating power plants.

(2) Obtain a senior operator license for Dresden 1, 2, and 3.

13.2 PRE-OPERATIONAL TRAINING. The preoperational training has been or will be given for personnel as indicated in Table 13.2.1.

a. Fundamental courses/or equivalent experience:

Power Plant Steam and Mechanical Fundamentals
Power Plant Electrical Fundamentals
Introduction to Nuclear Power
Radiation Protection

These courses will be offered to new operators and those who have not had these courses.

TABLE 13.2.1

DRESDEN UNIT 2 PERSONNEL TRAINING

DRESDEN TITLE	NO. OF PEOPLE	ACTIVITY						
		F	BWRT	ED	OP	ST	OJ	OS
Plant Supt.	1		X	X	X	X		
Ass't. Supt.	1		X	X	X	X	X	X
Op. Engr. E & M	2		X	X	X	X	X	X
Shift Engr. & Train. Supv.	6	X	X	X	X	X	X	X
Startup & Shift Foremen	10	X	X	X	X	X	X	X
Senior C. R. Oper.	5	X		X	X	X	X	X
Control Rm. Oper.	15	X		X	X	X	X	X
Equip. Oper.	5	X		X	X	X	X	X
Equip. Att.	20	X		X	X		X	X
Supv. Engr.	1		X	X	X	X		X
Nuclear Engr.	1		X	X	X			X
Thermal Engr.	1		X	X	X			X
Instr. Engr.	1		X	X	X			X
Rad. Chem. Engr.	1		X	X	X			X
Maint. Engr. & Master Mech.	2		X	X	X			X
Maint. Foreman	4		X	X	X			X
Fuel Foreman	2	X	X	X	X			X
OTHER PLANT PERS.		X		X			X	X

F - Fundamental Courses
BWRT - Boiling Water Reactor Technology Course
ED - Equipment Description Course
OP - Operating Procedure Course
ST - Simulator Training
OJ - On the Job BWR Training
OS - On Site Training

13.6 REVIEW, APPROVAL AND AUTHORIZATION OF CHANGES

13.6.1 Administrative Controls: Administrative controls are established to assure that the Commonwealth organization and managerial procedures provide that required record keeping, review of the operation of the unit, and appropriate reporting are performed.

The administrative controls specify the administrative organizations and functions which provide the assurance of proper operation of the unit. The controls define as a part of their functions the actions to be taken in the event prescribed limits are exceeded.

13.6.2 Authority to Terminate Power Production: The Superintendent is directly responsible for the safe, orderly and efficient operation of the Station. As such he is responsible for safeguarding the general public and Station personnel from radiation exposure and for adherence to all requirements of the Operating License and Technical Specifications. In the absence of the Superintendent, the Assistant Superintendent assumes this responsibility.

At least ten management employees reporting to the Operating, Mechanical and Electrical Engineers are qualified Shift Engineers and Shift Foremen, normally two for each shift, who are competent to supervise all shift operations. At all times, the Shift Engineer and/or Shift Foreman on duty has direct authority to shut down the unit if in his opinion serious abnormal conditions (radiological or otherwise) exist. In addition, the Radiation-Chemical Supervisor also has the authority to order the shut down of the unit if in his opinion serious radiation hazards exist. He has direct recourse to the Superintendent.

13.6.3 The Nuclear Review Board is composed primarily of engineers knowledgeable in the various disciplines affecting nuclear safety. The Board as presently constituted is comprised of individuals with extensive operating experience gained during assignments at Commonwealth's Dresden Station Unit 1. or other applicable experience and training. None of the members has any direct responsibility for the operation of Dresden or any other nuclear station. The Board presently performs a comparable review function for Dresden Unit 1 and is now known as the Dresden Review Board. The Nuclear Review Board reports to the Assistant to the President.

Dresden Station Management and supervisors are directly responsible for daily operation of the individual units and entire Station.

13.6.3.1 Action to be Taken if a Limiting Safety System Setting or a Limiting Condition for Operation is Violated: The Assistant to the President and the Nuclear Licensing Administrator serve jointly as the formal contact with the Atomic Energy Commission insofar as reporting technical specification violations and requests for technical specifications modifications are concerned.

Operation is Violated

1) A unit shutdown initiated by a Limiting Safety System Setting will be reviewed by the Dresden Station Management and logged in the permanent records. If required, suitable modification of operating procedures will be made to prevent exceeding Limiting Safety System Setting.

2) In the event a unit parameter exceeds its corresponding Limiting Safety System Setting without initiating an automatic corrective action, the event will be considered a violation of the Technical Specifications and will be reported in writing to the Nuclear Review Board. The result of the review of the violation by this Board and the actions taken will be recorded and maintained as part of the permanent records.

3) In the event a Limiting Condition for Operation is not being met, the unit will be shut down or reduced to a lower power level if warranted. The conditions will be remedied as soon as possible. The incident will be reviewed by the Dresden Station Management and the action taken will be recorded and maintained as part of the permanent records.

4) If a Limiting Condition for Operation is exceeded the incident will be reported in writing to the Nuclear Review Board since this represents a violation of the Technical Specifications. The result of the review of the violation by this Board and the actions taken will be recorded and maintained as part of the permanent records.