

RELATED CORRESPONDENCE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

COMMONWEALTH EDISON COMPANY

(Byron Nuclear Power Station,
Units 1 & 2)



Docket Nos. 50-454 OL
50-455 OL

SUMMARY OF ROBERT E. QUERIO'S TESTIMONY
ON
CONTENTION 1

- I. Robert E. Querio is the Station Superintendent for the Byron Station. He is responsible for the direct management of the station.
- II. Mr. Querio's testimony will discuss the following:
 - A. The commitment of Station personnel to the safe operation of Byron;
 - B. The qualifications of Byron Station personnel; and
 - C. The Station's plans for the safe packaging and transport of radioactive waste materials.
- III. As Station Superintendent, Mr. Querio has the responsibility to carry out Commonwealth Edison Company's strong commitment to the safe operations of its nuclear power plants.
- IV. Mr. Querio will be able to safely maintain and operate Byron Station through the assistance of a large and qualified staff.
 - A. Approximately 470 people will be assigned to Byron Station when it is fully operational.
 - B. Byron Station's organizational structure is as follows:

DS03

1. Operating Group:
 - a. This group is responsible for the day-to-day activities of the Station.
 - b. The Operating Group includes the following personnel:
 - i. Operating Assistant Superintendent;
 - ii. Station Shift Engineers; and
 - iii. SRO-Licensed Station Control Room Engineers.
2. Maintenance Group:
 - a. This group is responsible for maintaining and repairing equipment.
 - b. This group has four department supervisors who report to the Maintenance Assistant Superintendent:
 - i. Master Instrument Mechanic;
 - ii. Master Electrician;
 - iii. Master Mechanic; and
 - iv. Storeroom Supervisor.
3. Administrative and Support Services Group:
 - a. This group has broad responsibilities not within the areas of Operations and Maintenance.
 - b. The group has five Department Supervisors:
 - i. Technical Staff Supervisor;
 - ii. Radiation Chemistry Supervisor;
 - iii. Station Quality Control Supervisor;
 - iv. Security Administrator; and
 - v. Office Supervisor.
4. Personnel Administration Group:
 - a. This group has a Training Supervisor which reports to the Personnel Administrator.

- b. The Training Department is responsible for all personnel training.
 - C. The staff at Byron Station have appropriate levels of skill, experience, and training to enable them to carry out their responsibilities.
- V. Byron Station will have appropriate procedures and the necessary equipment to assure that low level radioactive waste is properly packaged and shipped to disposal facilities.
 - A. The Station's equipment and administrative controls will incorporate improvements suggested by Edison's prior operating experience.
 - B. Byron Station will have the facilities to appropriately process solid radioactive waste for shipment to burial sites.
 - C. The Station is developing a Process Control Program which will describe methods to be used to assure that the solid waste system will perform as intended.

TESTIMONY OF ROBERT E. QUERIO

ON CONTENTION 1

Q.1. State your name and present occupation.

A.1. My name is Robert E. Querio. I am presently employed by Commonwealth Edison Company as Station Superintendent for the Byron Nuclear Station.

Q.2. Briefly state your educational background and professional qualifications.

A.2. I graduated from the Illinois Institute of Technology in January, 1965. My background includes three years of fossil station experience prior to being assigned to the Commonwealth Edison Quad Cities Nuclear Station. I have since accumulated 14 years of nuclear experience including positions as: Technical Staff Engineer, Senior Reactor Operator (SRO), licensed Operating Shift Foreman and Technical Staff Supervising Engineer, all at Quad Cities Nuclear Station. I then served as the Byron Station Operating Assistant Superintendent for 3-1/2 years and have been the Station Superintendent for the past 2-1/2 years.

Q.3. Describe your responsibilities as Station Superintendent for the Byron Nuclear Station.

A.3. As Station Superintendent, I fulfill the position of Plant Manager as described in American National

Standard ANSI N18.1-1971. I am responsible for the direct management of the station including the planning, coordination and direction of the operation, maintenance, refueling, and technical activities. I am responsible for the final approval of all Station procedures and reports. When I prepared this testimony, over 450 individuals were subject to my supervision and control.

Q.4. What is the purpose of your testimony?

A.4. In Contention 1 the Intervenors have stated that, by virtue of the Company's history of non-compliance with Nuclear Regulatory Commission regulations, the Company has demonstrated its inability or unwillingness to operate the Byron Station within NRC regulations. My testimony addresses the qualifications of the Station personnel, the commitment of the Station personnel, including myself, to safe operation of the Station, and the Station's plans for the packaging and transport of waste materials. By this testimony I show that the Station will be staffed by able and experienced personnel with the necessary technical qualifications to safely operate the Byron Station within NRC regulations and that the Station management has the same strong commitment to safe operations as does Edison's corporate management.

Q.5. Could you explain what you mean when you say that the Station's management has the same strong commitment to safe operations as has the corporate management?

A.5. Yes. Commonwealth Edison Company's commitment to safe operations of its nuclear power plants begins with the highest level of corporate management. This commitment is reflected in Vice-President's Instruction No. 1-0-17 signed by the Vice-President of Nuclear Operations, Cordell Reed, which states in part:

This Instruction reaffirms Company policy regarding adherence to nuclear procedures and technical specifications. The primary concern of the Company with respect to the operation of its nuclear generating plants is to ensure the health and safety of the public as well as station personnel. All personnel within the Company share this responsibility.

As Station Superintendent, it is my responsibility to carry out this instruction and to ensure long-term safe operation of Byron Station.

Q.6. How do you, as Station Superintendent, carry out that responsibility?

A.6. Basically by assuring that there exist appropriate procedures for the safe operation and maintenance of the Station, and that the procedures and other necessary

steps are performed in a satisfactory manner. I have a large and qualified staff assigned to the Byron Station to assist me in maintaining and operating the plant safely.

Q.7. Please describe the staff which will be assigned to the Byron Station.

A.7. When fully operational, and after completion of all start-up tests, there will be approximately 470 persons assigned to the Byron Station to operate and maintain the plant on a day-to-day basis. During initial start-up there will be additional personnel. Of these, approximately 450 are currently assigned to the Station and are currently involved in preparation of the plant for operation and the performance of various pre-operational testing and checks that are required.

The current organizational structure for the Byron Station was developed as a result of a study performed in late 1978 on behalf of the Company by Booze, Allen & Hamilton Company. This study was designed to develop a management organization and administrative controls at our nuclear stations and corporate offices to enhance both operational safety and overall reliability of our nuclear generating units. As a result of this

study, additional personnel were assigned to our operating stations to strengthen management controls and various operating systems and procedures have been improved. The management structure at the Byron Station incorporates a number of these improvements.

Q.8. Would you please describe the operational structure to be employed at the Byron Station when it becomes operational?

A.8. The Byron staff will be organized into four main functional groups consisting of the Operating Group, the Maintenance Group, the Administrative and Support Services Group, and the Personnel Administration Group. There are three Assistant Superintendents and a Personnel Administrator in charge of the four functional areas.

The Assistant Superintendents and the Personnel Administrator report directly to me as Station Superintendent. Exhibit 1 to this testimony shows the organizational chart for the Station's main functional groups.

Q.9. What are the responsibilities of the Operating Group?

A.9. Day-to-day operations of the Station are the responsibility of the Operating Group under the general supervision of the Assistant Superintendent-Operating and the specific supervision of the Station Shift Engineer. The Station Shift Engineer is the equivalent of the Shift Supervisor and is responsible for operating the plant in compliance with the NRC Operating License and Station Procedures on a day-to-day basis. Each Shift Engineer must have an NRC Senior Reactor Operator (SRO) License, and one Shift Engineer will be present at all times. The Shift Engineers supervise the shift personnel and are responsible for the plant being operated in a safe and reliable manner during their shift. They have the authority to order the shutdown of either or both units at any time. The Shift Engineers report directly to the Operating Assistant Superintendent.

Assisting each Shift Engineer with day-to-day operating activities are the SRO-Licensed Station Control Room Engineers (SCRE). Each SCRE has a four-year college degree in a technical area such as science or engineering and meets the NRC requirements for shift technical advisor. The SRO-Licensed Nuclear Station Operators are responsible for all Control Room operations. The Equipment Operators and Equipment Attendants observe, inspect and operate plant equipment

which is outside of the Control Room. These Operators and Attendants receive direction from the Shift Engineer or from the Shift Foreman. Special Foremen such as the Stationman Foreman, Auxiliary Services Foreman and Fuel Handling Foreman and their respective crews report to the Shift Engineer.

In addition, three Operating Engineers with SRO-Licenses report directly to the Operating Assistant Superintendent. The Operating Engineers, who are among the most experienced people in the Department, assist the Operating Assistant Superintendent in directing the activities of the Operating Department.

Two SRO-Licensed operators are required to be at the Station at all times. The Byron Station will have sufficient SRO-Licensed personnel so that under normal circumstances at least three SRO-Licensed Operators will be at the Station. One of the more senior SRO people on the Station staff will be assigned on-call duty so that administrative level support is available for the Shift Engineer on a twenty-four-hour-a-day basis.

This operating organization provides for the presence at the Station of highly qualified licensed senior Reactor Operators to supervise operations at all times and, in addition, provides for high level administrative support on an on-call basis.

Q.10. What is the function of the Maintenance Department?

A.10. The Maintenance Department is organized to provide for normal repairs of equipment in the event of equipment failure and additionally to provide for surveillance, preventive maintenance, testing and other checks to verify that the plant equipment is maintained at its designed condition to ensure the safe operation of the equipment. The Maintenance Department procedures establish administrative controls to assure that maintenance work is performed in accordance with the regulatory requirements and design specifications.

Q.11. Describe the organization of the Maintenance Group.

A.11. The Maintenance Group is organized into four departments. Each of the four Department Supervisors, the Master Instrument Mechanic, the Master Electrician, the Master Mechanic, and the Storeroom Supervisor report directly to the Maintenance Assistant Superintendent.

The Master Instrument Mechanic is responsible for calibrating, maintaining and repairing plant instrumentation. He is supported by Instrument Work Analysts, Instrument Foremen, Control System Technicians, Instrument "A" Grade Mechanics and Instrument "B" Grade Mechanics.

The Master Electrician is responsible for maintaining and repairing all plant electrical equipment. He is supported by Electrical Work Analysts, Electrical Foremen, Senior Nuclear Electricians, Electrician "A" Grade Mechanics, Electrician "B" Grade Mechanics and Electrical Helpers.

The Master Mechanic is responsible for maintaining and repairing all plant mechanical equipment. He is supported by Mechanical Work Analysts, Mechanical Foremen, Senior Nuclear Mechanics, "A" Grade Mechanics, "B" Grade Mechanics and Mechanic Helpers.

The Storeroom Supervisor orders and stores parts and other supportive materials. He is supported by an Assistant Storeroom Supervisor and Stockmen.

Q.12. What are the responsibilities of the Administrative and Support Services Group?

A.12. This Group, consisting of five departments, has broad responsibilities for most aspects of plant operation not directly within the areas of Operations and Maintenance. Five Department Supervisors, namely: The Technical Staff Supervisor, the Radiation Chemistry Supervisor, the Office Supervisor, the Quality Control Supervisor and the Security Administrator report directly to the Assistant Superintendent for administrative and support services.

The Technical Staff Supervisor (TSS) provides technical support for plant operations, refueling, maintenance and plant modifications. He is responsible for monitoring equipment performance and implementing the Station onsite review and inspection function as described in the technical specifications. This function includes review of all related activities at the plant to ensure they are carried out in compliance with all applicable regulations. The TSS is supported by the Assistant Tech Staff Supervisor of Licensing and his staff; the Assistant Tech Staff Supervisor of Startup and his staff; the Assistant Tech Staff Supervisor of Operations and his staff; and various Group Leaders and their respective system test engineers.

The Radiation Chemistry Supervisor, who is also the Radiation Protection Manager, is responsible for the Chemistry and Health Physics Programs. The Station Chemist, Station Health Physicist and Radiation Chemistry Foremen report to this supervisor.

The Station Quality Control Supervisor reports to the Administrative and Support Services Assistant Superintendent and is responsible for the Quality Control activities at the station such as: Reviewing drawings, specifications, maintenance/modification procedures and requests for purchase for inclusion of applicable quality requirements; performing receiving

inspection for ASME and safety-related incoming materials and items; inspecting of fabrication and installation activities; and having non-destructive examination and other testing performed as required.

The Security Administrator is responsible for administering the Station's Security Plan and interfacing with the Contractor Security Guard Force.

The Office Supervisor is responsible for directing the activities of the Clerical Staff in the Central File and Word Processing areas through his staff assistants. The Central File provides for document control to ensure that all safety-related activities in the plant are conducted according to the latest quality assurance requirements.

Q.13. What is the function of the Personnel Administration Group as it relates to the safe operation of the plant?

A.13. The Training Supervisor, Professionalism-Safety Coordinator, and a Staff Assistant report directly to the Personnel Administrator.

The Training Supervisor is responsible for all personnel training and re-training activities. This training responsibility includes planning, scheduling, preparing, presenting and documenting the completion of all training courses. The supportive training staff, which reports to the Training Supervisor, is organized

into the following training areas: Operating Training; Maintenance Training; Administrative Training; and Support Services Training. The Support Services Training includes concerns such as radiation protection training and plant security training.

Q.14. Does Edison have people with the appropriate level of skills and training to carry out their responsibilities at the Byron Station?

A.14. Yes. Commonwealth Edison's long-term experience in nuclear power provides a pool of qualified individuals to staff Byron Station. The Byron Station will be staffed in accordance with the requirements of ANSI Standard 18.1. Exhibit 2 illustrates present experience levels attained by the people currently assigned to the various job positions on the Byron Station staff. I believe this table gives a reasonably accurate picture of the experience levels we have at the station now.

Q.15. Intervenors have claimed applicant's record of packaging and hauling of low level wastes caused it to be banned from South Carolina's low level waste disposal site, and in Washington, all importation of low level waste was banned after an incident of waste leakage in transport by Applicant. Will the Byron Station have the

procedures in place and the necessary equipment to assure the proper packaging and shipment of low level waste to licensed waste disposal facilities?

A.15. Yes. Commonwealth Edison Company currently institutes considerably more control over the processing of radioactive wastes than had been the case at the time of the incidents mentioned by Intervenor. Due to improved radwaste processing technology and increased administrative controls, the Company is reducing the amount of solid waste actually produced at the Station; it is upgrading the waste handling systems to further improve volume reduction; it is implementing methods to eliminate free-standing liquids within packaged wastes; it has improved control of the design of packages used in shipment of radioactive materials; and it has increased quality inspections of prepared shipments of radioactive waste materials. The equipment and administrative controls at the Byron Station will incorporate improvements suggested by prior operating experience.

Q.16. How will low level solid radioactive waste be processed for shipment to burial sites?

A.16. The solid radioactive waste system at Byron Station is designed to process two general types of solid wastes: "wet" solid wastes and "dry" solid wastes.

Wet solid wastes consist mainly of spent filter cartridges, demineralizer resins and evaporator bottoms.

Dry solid wastes consist mainly of ventilation air filtering medium, contaminated clothing, paper, rags, laboratory glassware and tools. Spent filter cartridges will be placed directly in drums for disposal. For those filters which contain large amounts of radioactive materials, the drum will be lined with precast concrete.

Two methods of treatment will be available for evaporator bottoms and dry compactible trash. Evaporator bottoms can be solidified in 55 gallon drums using portland cement. Dry compactible trash can be compacted into 55 gallon drums. Alternatively, either type of wastes may be treated in the volume reduction system. Using this system, evaporator bottoms can be reduced to a powder form in a fluidized bed dryer where they will be decreased in volume and increased in activity per unit volume. The dry salts are collected and solidified using a polymer binder. The volume of compactible trash can be reduced in the dry waste processor. The ash from the dry waste processor will be combined with the salts from the fluidized bed dryer and solidified using a polymer binder. The Station will have a capacity to store 1210 drums of packaged radioactive waste in designated storage areas.

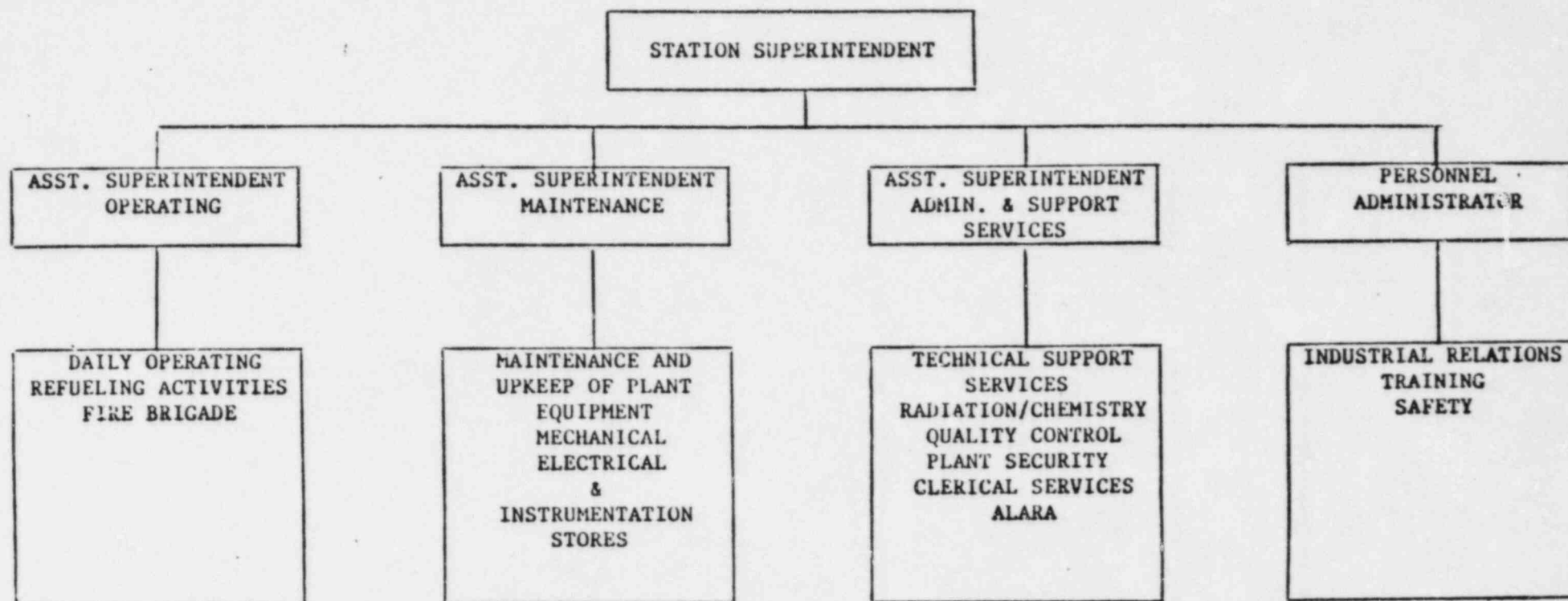
Q.17. What administrative controls will be implemented to assure that the solid wastes have in fact been properly packaged for shipment to appropriate sites?

A.17. The Station is in the process of preparing a Process Control Program (PCP) for the solid radwaste system. This PCP is scheduled to be filed with the Commission six months prior to receipt of an Operating License. The purpose of the PCP is to describe the methods to be used to assure that the solid waste system will perform its intended function. It will be a manual detailing the program of sampling, analysis and formulation determination by which solidification of radioactive wastes from liquid systems is assured. The PCP will provide a means for assurance that the solid waste system is operated as designed and produces a final product that contains no free water and has completely solidified all waste. Detailed implementing procedures to carry out the guidelines of the PCP will also be developed before Station operation.

The Quality Assurance Program provides a final check to ensure proper preparation of radioactive materials for shipment. The Quality Assurance procedures require that all areas of potential concern are checked prior to shipment of the materials. The condition of tie downs, supports, truck tires, shipping casks, radioactive contamination levels and shipping

papers are among the items checked. If problems are encountered with a shipment, they are corrected prior to shipment and further actions are taken to prevent recurrence. Follow-up action usually involves the revision of waste preparation or survey procedures. I believe that Byron Station will have adequate equipment and administrative controls to ensure that radioactive waste will be packaged and transported within applicable regulatory standards.

EXHIBIT 1
BYRON STATION ORGANIZATION



BYRON STATION
AVERAGE EXPERIENCE LEVELS IN YEARS

Job Title	Ave. Commercial Nuc.	Ave. Military Nuc.	Total Other*	Total Experience	Total Exp. Per Job Title
Station Supt. (1)	15	0	3	18	18
Pres't. Supt. (1)	10	6	0	16	16
Int. Asst. Supt. (1)	11	0	1	14	14
Min. Asst. Supt. (1)	10	6	0	16	16
Operating Eng. (3)	10.6	0	21	53	17.6
IFT Eng. (6)	9.0	3.1	15	28	14.6
IFT Foreman (14)	4.6	1.0	27	94	6.7
IRE SCRE (7)	4.7	1.0	8	48	6.8
C NSO (13)	5.7	0	5	109	6.0
/EO EA/EO (65)	0.7	0.4	1	69	1.1
Asst Staff (23)	5.2	0	172	240	18.5
Asst Mech. (4)	5.5	0	42	64	16
Asst/Chem Supt. (1)	7	0	2	9	9
Asst/Chem Hgmt. (15)	4.7	0	46	117	7.8
Asst/Chem Tech. (18)	2	0	5	42	2.3
Asst. Supt. (1)	10	6	0	16	16
Asst. Staff (5)	3.2	0	3	25	9
Security Admin. (1)	2	0	0	2	2
Asst Staff Supt. (3)	8	0	6	14	14
Asst Staff (73)	2.5	0.3	187	230	3.1
Training Supt. (1)	14	8	0	22	22
Nuclear Trng. Staff (17)	3.8	3.1	83	200	11.8
Members** (211)	3.7	0	928	1708	8.0
Totals (478)	-	-	-	3214	-

Indicates Power Plant Related Experience Areas

Indicates Remainder of Plant Staff other than Clerical Staff.

etc:

The average experience level of the technical personnel in this figure is approximately 7.8 years.