



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

August 7, 1984

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

Subject: Braidwood Station Units 1 and 2
FSAR Change Concerning Project
Start-up Organization
NRC Docket Nos. 50-456/457

Dear Mr. Denton:

The purpose of this letter is to advise NRR of the Commonwealth Edison Company decision to organize and implement a Project Start-up Organization at our Braidwood Station. This decision was made as a result of the experience gained from our entire Nuclear program and most recently from the Start-up programs at our LaSalle County and Byron Stations.

As the time of fuel load of Braidwood Unit 1 approaches, preparation for operation including training, emergency planning, operating procedure preparation, etc., places great demands on our Braidwood Station personnel. We have learned that the response to these demands come at the expense of our preoperational testing schedule. Therefore, in order to maintain this schedule, we have decided to organize and implement the Project Start-up Organization. This approach has benefits over a total contract services approach in that it will serve to keep responsibility for, and direct control of the program within Commonwealth Edison's proven nuclear organization under a proven and fully accepted QA structure.

The transfer of the preoperational testing responsibilities will be implemented gradually. It is anticipated that parallel organizations will exist between Braidwood Station and the Project Start-up Organization while duties and system responsibilities are being transferred.

Enclosed for your advance information are changes to the Byron/Braidwood FSAR that fully explain our new Braidwood Project Start-up Organization. Our Byron/Braidwood FSAR Chapters 13 and 14 will be amended to include this information in the next Amendment.

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H.R. Denton

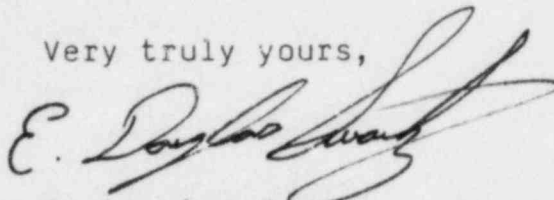
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August 7, 1984

Please address any questions that you or your staff may have concerning this matter to this office.

One signed original and fifteen copies of this letter with Attachments are provided for your use.

Very truly yours,

A handwritten signature in cursive script, appearing to read "E. Douglas Swartz".

E. Douglas Swartz
Nuclear Licensing Administrator

bs

Attachments

cc: J.G. Keppler - RIII
RIII Inspector - Braidwood

9059N

Attachment

On page 13.1-6, insert the following note under the title:

"e. Site Operational Analysis Lead Engineer"

NOTE: At the Braidwood Station, these responsibilities fall under the title of Project OAD Supervisor. See FSAR Section 13.1.5.2.

13.1.5 Project Start-up Organization

This subsection describes the structure, functions, and responsibilities of the Braidwood Project Start-up Organization. This organization has been established to assume complete onsite responsibility for the Preoperational testing phase of the initial testing program. The interaction of this organization with the Station organization and with Project Engineering is described in Section 14 of the FSAR and in the Commonwealth Edison Quality Assurance Program.

13.1.5.1 Project Start-up Organization

An organization chart of the Project Start-up Organization is provided in Figure 13.1-3.

This chart indicates the title of each position and the anticipated number of persons assigned to common or duplicate positions at the time of peak activity.

A schedule for filling all indicated positions for each unit relative to fuel loading is provided as shown in Table 13.1-4. This schedule represents the estimated manpower requirements and is subject to change as need dictates.

13.1.5.2 Project Start-up Personnel Responsibility and Authorities

The functions, responsibilities, and authorities of various Project Start-up positions and organizations are as follows:

Project Start-up Superintendent

The Project Start-up Superintendent has complete onsite responsibility for the preoperational testing phase of the initial testing. He is responsible for completing the testing of systems to meet the required fuel load and commercial service dates while adhering to all quality requirements.

He will coordinate the activities of Project Construction, Project Operational Analysis, Station, and Project Start-up to complete systems for fuel load and commercial service, as required by the technical specifications, and to turn these systems over to the Station staff.

He will also plan and schedule activities for the completion of construction, preparation for testing, testing, onsite evaluation, and onsite approval of results and turnover of systems to operating. He will provide schedules in a usable format.

In carrying out these duties, he must establish priorities for Project Construction completion of system for Test and Turnover; establish priorities for Project Engineering Department and Project Field Engineering Department design to support Test and Turnover; establish need dates for the purchase and expediting of materials to support Test and Turnover; and establish priorities and support the testing of systems by the Project Start-up Organization.

Project Start-up Testing Supervisor

The Project Start-up Testing Supervisor is responsible for completing all preoperational and system demonstration test procedure writing, system turnover for test, test execution, and test completion. His duties include following and completing systems for turnover for flush, test, and test completion; supervising the preparation of all preoperational and system demonstration test results for Test Review Board; controlling and completing testing deficiencies identified during system preparation for test, flush, testing, and prior to release for operation; supervising testing and flushing activities; resolving conflicts between PCD and Project Production concerning flushing and testing; and ensuring project implementation of the start-up manual.

Project Scheduling

Project Scheduling is responsible for development and maintenance of a Braidwood Project Schedule and other supporting schedules within the Braidwood Project Organization; ongoing monitoring and assessment of progress made in the Project Schedule; incorporation of constraints into the schedule including budget and manpower resources.

Project OAD Supervisor

Project Operational Analysis Department performs all electrical construction tests and will assist both the Station and the Project Start-up Organization when requested in the performance of preoperational tests. The Project OAD Supervisor has signoff authority for construction testing tasks, and he executes the construction test plan as coordinated with Project Construction Department personnel who are responsible to declare when plant equipment is available for construction test and calibration. He is also responsible for evaluating the adequacy of site specific programs used to train and test Project OAD personnel in electrical construction test procedures.

Qualifications: Four year college graduation plus five years of related experience in equivalent inspection, examination, or testing activities with at least two years of this experience associated with nuclear facilities or if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear facility. Technical competence to supervise and work on electrical systems is attested by the System OAD Generation Group Supervising Engineers and reviewed by the System OAD Supervisory Staff Engineer.

Project Material Coordinator

The Project Material Coordinator will work with CECO Construction, Engineering, Quality Assurance, and Purchasing Departments and S&L in obtaining all necessary material, drawings, documentation, schedules, and any related information necessary to complete the testing and turnover of each system demonstration and preoperational test within the framework created by the approved CECO Q.A. program.

Project Start-up Turnover Supervisor

The primary responsibilities of this position are the planning and completion of activities required for the turnover of systems to Operations. Included as one of these activities is to coordinate the completion and resolution of all deficiencies required for system turnover to Operations. The direction for the maintenance and monitoring of the deficiency program is also a responsibility of this position.

Project Start-up Staff Supervisor

The Project Start-up Staff Supervisor's primary responsibility is for the Start-up Organization's Test Review Board effort. The Staff Supervisor is responsible for assigning participants to Test Review Boards consistent with the requirements of the Quality Assurance Manual. He will also be a Test Review Board participant. In addition, Project Scheduling, the Project Material Coordinator and Westinghouse's Site Engineering Team also report to the Staff Supervisor.

Succession of Authority

The Braidwood Project Start-up Superintendent will ultimately have overall responsibility for the Braidwood Station preoperational test program onsite activities. He designates, in writing, which of those direct reports will be responsible in his absence. That person must, however, satisfy the requirements of ANSI 18.1-1971 for Plant Manager.

13.1.5.3 Qualification Requirements

The Braidwood Project Start-up Management follows the guidelines of ANSI N18.1-1971 for personnel selection and training.

Table 13.1-5 lists Project Start-up staff positions and designates ANSI N18.1 equivalent titles.

13.1.5.4 Qualifications of Start-up Personnel

The qualifications of the initial staff personnel holding key managerial and supervisory positions in the Braidwood Project Start-up Organization are provided in the resumes included in Attachment 13A.

BRAIDWOOD-FSAR

TABLE 13.1-4

SCHEDULE FOR FILLING POSITIONS

(BRAIDWOOD STATION PROJECT START-UP ORGANIZATION)

<u>POSITION</u>	<u>MONTHS PRIOR TO CORE LOAD</u>
Project Start-up Superintendent	In Place
Project Start-up Testing Supervisor	In Place
Project Start-up Staff Supervisor	In Place
Project Start-up Operation Specialists	12 - 16
Project Start-up Technical Specialists	12 - 16
Project Start-up Turnover Supervisor	In Place
Project OAD Supervisor	In Place

BRAIDWOOD FSAR

TABLE 13.1-5

BRAIDWOOD PROJECT START-UP ORGANIZATIONAL TITLES
AND ANSI N18.1 EQUIVALENT TITLES

<u>ANSI N18.1 TITLE</u>	<u>TYPE OF LICENSE REQUIRED</u>	<u>BRAIDWOOD PROJECT START-UP TITLE</u>
Plant Manager	None	Start-up Superintendent
Technical Manager	None	Proj. Start-up Testing Supv. Proj. Start-up Staff Supv.
Supervisors Not Requiring NRC Licenses	None	Project Start-up Operation Specialists
Technical Support	None	Project Start-up Technical Specialists
Other Personnel*	None	Project OAD Supervisor Other Testing Personnel

* The qualifications of the Project OAD Supervisor are given in Section 13.1.5.2. The qualifications of other testing personnel are described in Commonwealth Edison's response to FSAR Question 423.2.

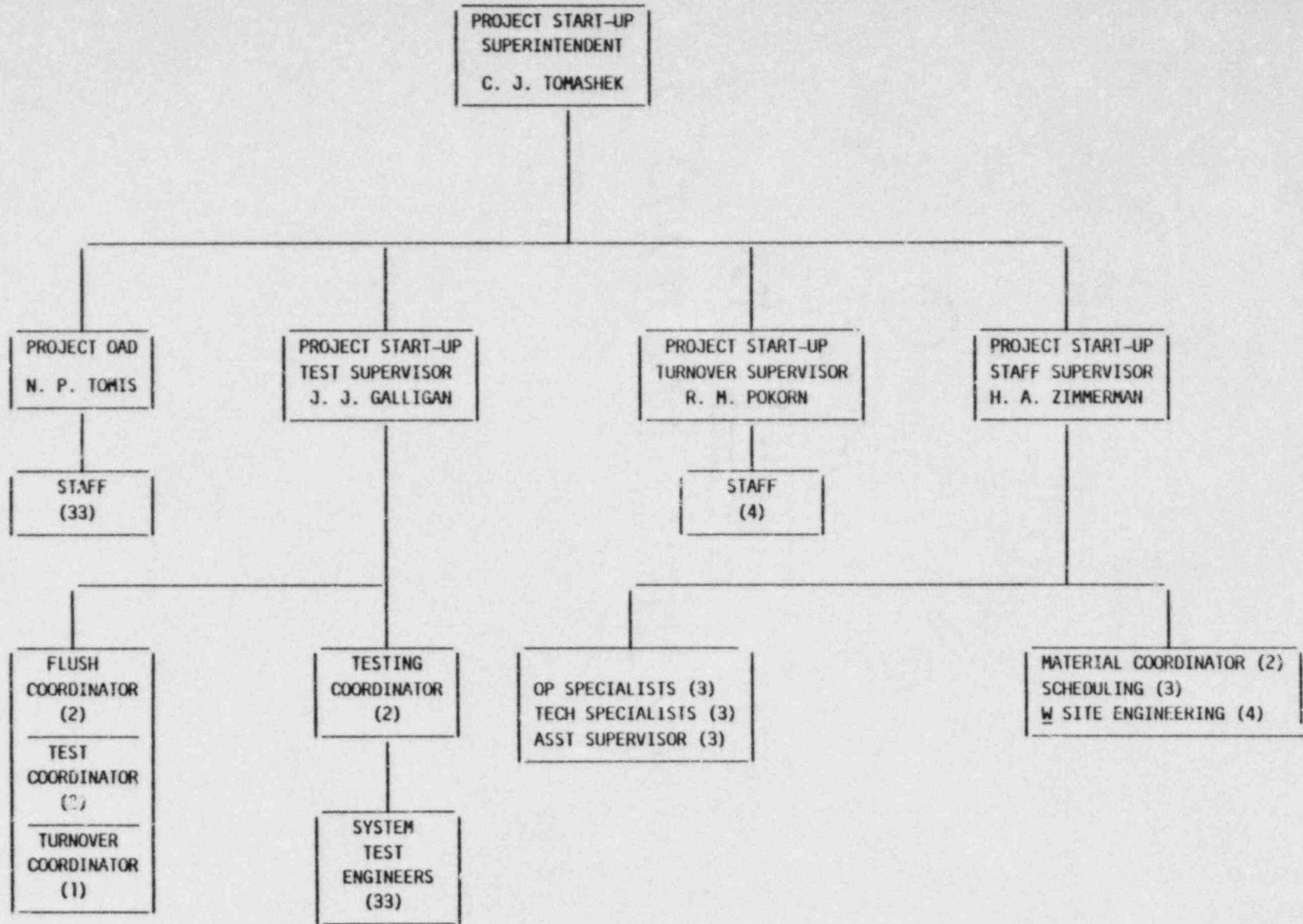


Figure 13.1-3

B/B FSAR

ATTACHMENT 13A

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13.A.27 Project Start-up Testing Supervisor, Braidwood Station

NAME:

James J. Galligan

CITIZENSHIP:

United States of America

AGE:

28

FORMAL EDUCATION:

B. S. University of Wisconsin - Applied Science and Tech.

TRAINING:

USAF- One year Electronics and System Training.
Westinghouse- P-250 Computer School, EHC, 7300 Series Electronics, IPP0.
Other- EGC, Honeywell, Conitel (L&N), Response Time Measurement,
Management: Basic Supervisory, Kepner-Tregoe, MBO.

WORK EXPERIENCE:

1983-present	Start-up Test Evaluation and System Preparation for Test and Test Completion
1978-1983	Master Instrument Mechanic, Instrumentation Installation, Testing, Calibration (Braidwood)
1975-1978	Electrical Installation and Testing of Power Distribution Systems, Modification Installation and Testing (Zion)
1970-1975	Computer and Electronics Maintenance, Electrical/Electronic Testing (Zion)
1966-1970	USAF Missile System Start-up, Testing, and Maintenance

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13.A.28 Project Start-up Staff Supervisor, Braidwood Station

NAME:

Henry A. Zimmerman

CITIZENSHIP:

United States of America

AGE:

33

FORMAL EDUCATION:

BS Nuclear Engineering - University of Wisconsin, August 1972

Master of Management - Northwestern University, 1982

TRAINING:

General Electric - BWR Technology, 1973

Commonwealth Edison - Introduction to Power Plant Operation, 1984

Commonwealth Edison - PWR Systems Descriptions, 1984

WORK EXPERIENCE:

Commonwealth Edison:

1983-Present Project Start-up Test and Test Results Review Supervisor,
Braidwood

1982-1983 Dresden Station Maintenance Staff

1980-1982 Statistical Research

1979-1980 Fuel Buyer for Zion, Byron/Braidwood

General Electric:

1974-1979 Project Application Engineer: Plant - Clinton; Fuel -
Dresden, Quad Cities, LaSalle County

1972-1974 Field Engineer: Maintenance and refueling at Millstone,
Dresden, Monticello

Start-up Engineer: Duane Arnold Energy Center

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13.A.29 Project Start-up Operational Analysis Supervisor,
Braidwood Station

NAME:

Niccoli P. Tomis

CITIZENSHIP:

United States of America

AGE:

37

FORMAL EDUCATION:

Associate in Applied Science - Milwaukee School of Engineering.
BS in Applied Science and Technology - University of Wisconsin -
Parkside, 12/74-5/75.

TRAINING:

Management Coaching, 1982
Introduction to Power Plant Operations, 1981
Protective Relaying for Generating Station Equipment, 1977
Special Course conducted at Braidwood Station on Braidwood Plant Systems

WORK EXPERIENCE:

Commonwealth Edison:

6/78-present Braidwood Station Project O.A.D. - Supervising Engineer in
charge of electrical testing.
10/76-6/78 LaSalle County Station S.O.A.D. - Tested equipment up to
345KV including aux power, fans, pumps, heaters, valves,
instruments, and miscellaneous equipment; also acting LTE
during LTE's absences.
6/75-10/76 Collins Station S.O.A.D. - Tested equipment up to 765KV
including aux power, fans, pumps, heaters, valves,
instruments, and miscellaneous equipment.
9/71-11/73 Station Construction at Zion Station - Tested equipment up
to 4KV including aux power, fans, pumps, heaters, valves,
and miscellaneous equipment.

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13.A.30 Project Start-up Turnover Supervisor, Braidwood Station

NAME:

Robert M. Pokorn

CITIZENSHIP:

United States of America

AGE:

41

FORMAL EDUCATION:

University of Illinois - Graduated 1965 BSEE

TRAINING:

1984 Introduction to Power Plant Operation; PWR Simulator -
Commonwealth Edison
1978 Project/2 Basic Scheduling - Project Software & Development, Inc.
1977 ASME Survey Member - Bechtel, Midland
BWR Simulator Training - General Electric
Welding Training - Hobart
1976 NDE Training: Radiography Interpretation - Magnaflux
Magnetic Partical/Liquid Penetrant - Magnaflux
Ultrasonic Testing - Magnaflux
Codes and Standards - Energy Incorporated
1971 Basic Supervision - Commonwealth Edison

WORK EXPERIENCE:

1983-Present Braidwood Project Start-up, Braidwood Station, Lead
Project Scheduler for Braidwood Station
1980-1983 Project Scheduling and Cost Control, General Office; Lead
Project Scheduler for Byron/Braidwood Stations
1978-1980 Construction Scheduling and Cost Control, General Office;
Lead Project Scheduler for Byron/Braidwood Stations
1976-1978 Quality Assurance, LaSalle County Station; Lead of
Electrical and Later Lead of Structural Section of Site
Q.A.
1976- Quality Assurance, General Office

WORK EXPERIENCE (continued):

1975-1976 Division Engineering, Chicago South Division; Supervisor of the Planning Section

1973-1975 Division Engineering, Northern Division; Supervisor of the Planning Section

1972-1973 Office of the Operating Manager, General Office; Staff Assistant

1971-1972 District Engineering, Waukegan; supervised field engineers in the design of distribution facilities.

1968-1971 Distribution Engineering, General Office; worked on the design of transmission and distribution substations. Also, was assigned to a special studies section of the department dealing in power distribution related problems. Another assignment was the planning of additional distribution facilities.

1966-1968 Division Engineering, Chicago North Division; worked in field engineering related to the design of distribution facilities.

1965-1966 Assigned to the Graduate Training Program to learn about the activities and functions of departments within Commonwealth Edison Company.

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13.A.31 Project Material Coordinator, Braidwood Station

NAME:

Francis L. Wirkus

CITIZENSHIP:

United States of America

AGE:

41

FORMAL EDUCATION:

Bachelor of Science in Business Administration - Loyola University

TRAINING:

WORK EXPERIENCE:

8/83-Present	Project Material Coordinator (Staff Assistant) - Braidwood Station
8/82-Present	Project Material Coordinator (Staff Assistant) - LaSalle County Station
5/81-8/82	Investment Recovery (Salvage)
6/79-5/81	Project Expediter
6/76-6/79	Senior Expediter
9/74-6/76	Expediter
6/72-9/74	Supervisor Code Control
2/70-6/72	Order Analyst
10/69-2/70	Order Analyst I
4/69-10/69	Equipment Inspector
9/58-4/69	Various bargaining unit positions

14.2.2 Organization and Staffing

At Byron Station, the operating and technical staffs will manage and execute the initial test program in accordance with the Quality Assurance Program as outlined in the QA Topical Report referenced in Chapter 17.0. The Technical Staff Supervisor is the senior participant of the Onsite Review Group. The senior participant will choose the necessary participants for a particular review from designated individuals qualified in the disciplines listed in Technical Specification 6.1.G.1.f. The station technical staffs are responsible for writing and conducting the initial test program. The Test Review Board is responsible for the onsite review and approval of the test procedures and test results.

At Braidwood, two Commonwealth Edison organizations have been established to execute the initial testing program. These two organizations are the Station and the Project Start-up Organization. For initial start-up testing, the Braidwood Station's efforts will parallel those of the Byron Station's. That is to say, the Braidwood Station's Operating and Technical Staffs will manage and execute the initial start-up test program in accordance with the Quality Assurance Program as outlined in the QA Topical Report referenced in Chapter 17.0. The Technical Staff Supervisor is the senior participant of the Onsite Review Group. The senior participant will choose the necessary participants for a particular review from designated individuals qualified in the disciplines listed in Technical Specification 6.1.G.1.f. The station technical staffs are responsible for writing and conducting the initial start-up test program. The Test Review Board is responsible for the review and the approval of the start-up test procedures and start-up test results.

After April, 1984, responsibility for preoperational testing at the Braidwood Station rests with the Project Start-up Organization. The preoperational test program will be executed in accordance with the Quality Assurance Program as outlined in the QA Topical Report referenced in Chapter 17.0. For any tests performed during and after fuel load, the Technical Staff Supervisor is the senior participant of the Onsite Review Group. The senior participant will choose the necessary participants for a particular review from designated individuals qualified in the disciplines listed in Technical Specification 6.1.G.1.f. The Project Start-up Organization's Testing Staff (as and when applicable) will be responsible for writing and conducting the Preoperational Test program. A Test Review Board, organized consistent with the Quality Assurance Manual from the Station or from the Project Start-up organization (as and when appropriate), will be responsible for the onsite review and approval of the preoperational test procedures and test results.

The Commonwealth Edison Operational Analysis and Station Construction Departments will provide technical support or participate in the test program as required. The Project Engineering Department (PED) has overall responsibility for the successful review, approval, and completion of the initial test program. PED conducts its review in accordance with an approved procedure (PED Procedure Q.19). PED also provides the interface between the test personnel at the stations and the architect-engineer and the Nuclear Steam Supply Vendor.

The Nuclear Steam Supply System vendor (Westinghouse) and the architect-engineer (Sargent & Lundy) will, as required, provide technical assistance during testing of systems. The authority and responsibility of each organizational unit involved in the initial test program is further specified in the Quality Assurance Program, Quality Assurance Procedures Manual, Section 11.

The organizational structure that will implement the test program is discussed in Section 13.1. Personnel conducting the testing will be qualified by experience and training as described in Chapter 13.0.

14.2.3 Test Procedures

The initial test program will be conducted using detailed written procedures for each individual test. Tests of Safety-Related Systems and specially designated non-safety-related systems (for purposes of initial plant start-up only) are called Preoperational or Start-up Tests. The Quality Assurance Program for the Commonwealth Edison Company (referred to in Chapter 17.0) describes the procedures for administration of Preoperational and Start-up Tests. All other tests will be called System Demonstrations or Operational Demonstrations. Preoperational Tests and System Demonstrations will be performed during the "preoperational test phase." Start-up Tests and Operational Demonstrations will be performed during the "start-up test phase."

Sargent & Lundy or Westinghouse, as appropriate, and as directed by Commonwealth Edison, will prepare rough draft test procedures. The station staff (Project Start-up's Testing Staff as and when applicable for preoperational tests at the Braidwood Station) will prepare final draft test procedures based on the rough draft and on comments received from appropriate Commonwealth Edison departments. Sargent & Lundy and/or Westinghouse will review the final draft procedures as directed by Project Engineering. The final draft of Preoperational Test and Start-up Test procedures will be reviewed and approved by the Project Engineering Department. Revisions to Preoperational Tests or Start-up Tests will be prepared by the station staff (or Project Start-up's Testing Staff as and when applicable for preoperational tests at the Braidwood Station) and submitted to the Project Engineering Department for review and approval.

System Demonstration and Operational Demonstration test procedures will be written, reviewed, and approved by the station staff (or Project Start-up's Testing Staff as and when applicable for System Demonstration tests at the Braidwood Station) in accordance with station procedures.

Individual test procedures will specify prerequisites, data to be obtained, and requirements and acceptance criteria to be fulfilled. Table 14.2-1 identifies the information typically provided in the individual test procedures.

14.2.5 Review, Evaluation, and Approval of Test Results

Initial preoperational and start-up tests that fall within the scope of the Quality Assurance program will be subject to two stages of evaluation. First, a detailed and comprehensive review by Station or Project Start-up personnel (as applicable) will be made. The Project Engineering Department project personnel will perform a second and final review and evaluation. Modifications or rework of systems or equipment required to resolve deficiencies will be accomplished in accordance with controlled procedures. Retesting, if required because of modification or rework, will be documented and filed with the initial test record.

The initial core loading procedure will specify the start-up tests that must be completed prior to commencement of fuel load. All testing identified as falling within the preoperational test phase will be completed and the results evaluated prior to core load.

Modification and rework on systems that is required to resolve test deficiencies is controlled by the Test Review Board during post test review and by Project Engineering who has responsibility for final test acceptance and approval. Project Engineering may specify additional test requirements to resolve test deficiencies prior to final test approval.

The power ascension procedure will specify those start-up tests or portions of start-up tests that must be completed as a prerequisite for commencing each phase. The data obtained at each power test plateau will be evaluated and approved before increasing power level.

The last paragraph of Section 14.2.9 revised to read:

"Personnel from other facilities make up a significant portion of the Station's Operating and Tech Staffs as well as Project Start-up's Testing Staff at the Braidwood Station. Their experience will be utilized in both preparing and implementation of the test procedures."