

Evaluation
Report

July, 1981

Oconee
Nuclear Station
Duke Power
Company

Inspection - June 1981



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EVALUATION

of

OCONEE NUCLEAR POWER STATION

Duke Power Company

July 1981

SUMMARY

INTRODUCTION

The Institute of Nuclear Power Operations (INPO) conducted its first evaluation of Duke Power Company's Oconee Nuclear Station during the weeks of May 25 and June 1, 1981. Oconee consists of three 886 megawatt (electrical) Babcock & Wilcox pressurized water reactor plants. The station is located on Lake Keowee near Walhalla, South Carolina. Unit I was placed in commercial operation in 1973, Units II and III in 1974.

PURPOSE AND SCOPE

INPO conducted an evaluation of site activities to make an overall determination of plant operating safety, to evaluate management systems and controls and to identify areas needing improvement. Information was assembled from discussions, interviews, observations and review of plant documents.

The team examined station organization, training, operations, maintenance, radiological and chemistry activities and on-site technical support. Corporate activities were not included in the scope of the evaluation, except as they related to the areas evaluated. As a basis for our evaluation, INPO used its own experience on best practices within the industry and written evaluation criteria that were furnished to the plant in advance. The evaluation standards are high, and the findings and recommendations are not limited to minimum safety concerns.

DETERMINATION

E. P. Wilkinson
President

DUKE POWER COMPANY

Response Summary

Duke Power Company is pleased to have had INPO perform an evaluation of the Oconee Nuclear Station. INPO has confirmed previously known areas needing improvement and provided new ideas and information causing us to re-evaluate our management systems that will lead to other improvements.

While programs developed and implemented at the Station have contributed to the Station's operating and safety record, INPO's evaluation has contributed greatly in reviewing these programs and their implementation. We intend to use the entire INPO evaluation beneficially.

During the evaluation, the dialogue between members of the INPO evaluation team and members of the Station staff provided opportunity to share and discuss various approaches to management control systems. We feel we have been the beneficiary of these discussions whether they resulted in an INPO finding or not.

We appreciate the notation of "beneficial practices and accomplishments" and recognize the need for improvement in the areas listed in the Determination Section of the Summary. While it is recognized that the noted recommendations for improvements are a summary of specific findings in the body of the report, we offer the following responses to these three recommendations:

DETAILS

This portion of the report includes the detailed findings. It is composed of six sections, one for each of the major evaluation areas. Each section is headed by a summary describing the scope of the evaluation and the overall finding in that area. The summary is followed by the specific findings, recommendations and utility responses related to each of INPO's evaluation procedures. The evaluation procedures that were used are listed in the ADMINISTRATIVE APPENDIX.

ORGANIZATION AND ADMINISTRATION

Seven performance areas were evaluated using current INPO criteria. The areas included objectives, organization structure, administrative controls, quality assurance programs, industrial safety, equipment surveillance and personnel qualifications.

The Oconee organization has many well qualified people, an effective and positive industrial safety program, and a progressive and effective objectives program.

Improvements were recommended in the area of Quality Programs.

OBJECTIVES

(INPO Procedure OA-101, Revision 2)

An evaluation was performed to determine how effectively goals and objectives are disseminated throughout all levels of the station and how effective they are in conveying intended operational and maintenance directions. Areas reviewed included specific goals in use, management goals issued to all personnel and measurement of goals and objectives attainment.

Finding

ORGANIZATION STRUCTURE

(INPO Procedure OA-102, Revision 2)

An evaluation was performed to determine if the organizational structure is defined and provides the capability of managing Oconee on a day-to-day basis in a safe and efficient manner. Areas reviewed included the organizational structure and reporting requirements, the establishment of written position descriptions based on job analysis, the use of position descriptions to periodically evaluate each individual's performance, the span of control for plant management positions, the backup capability for plant management positions and the staff size.

Finding

ADMINISTRATIVE CONTROLS

(INPO Procedure OA-103, Revision 2)

An evaluation was conducted to determine the effectiveness of the controls for administrative functions. Areas reviewed included completeness, flexibility, level of administrative actions and effectiveness of the administrative controls programs.

Finding

QUALITY PROGRAMS

(INPO Procedure OA-104, Revision 5)

An evaluation was performed to determine that quality programs were in effect to provide sufficient monitoring and auditing capability to ensure safe, efficient accomplishment of plant and company missions. Areas reviewed included management controls, approved quality assurance program, quality assurance organization, self-auditing capability, effectiveness of the program and effectiveness of corrective actions.

Finding (General Criterion)

Recommendation

Response

INDUSTRIAL SAFETY

(INPO Procedure OA-106, Revision 3)

An evaluation was performed to determine if a safe and ordered working environment was provided for station personnel. Areas reviewed included plant commitment to safety, attitude toward safety, employees involvement and cooperation in accident prevention and work practices and safety considerations peculiar to the plant.

Finding

SURVEILLANCE PROGRAM

(INPO Procedure OA-107, Revision 2)

An evaluation was performed to determine that a surveillance program existed and accomplished the required surveillance inspection and testing. Areas reviewed included procedures that addressed all areas of surveillance, acceptance criteria, out-of-range reporting requirements, timely completion requirements, management control systems and actions to correct deficiencies.

Finding

PERSONNEL QUALIFICATIONS

(INPO Procedure OA-108, Revision 2)

An evaluation was performed to determine if appropriately qualified individuals were available to safely and efficiently operate and maintain the plant. Areas reviewed included written qualification requirements for each plant staff position, policies for ensuring every position is filled by individuals meeting qualification requirements, and periodic reviews and revisions of these qualification requirements.

Finding

TRAINING AND QUALIFICATION

The following areas were evaluated using current INPO criteria: training organization, training administration, training resources, licensed operator training and requalification, non-licensed operator training, and shift technical advisor training. In addition, training of mechanics and instrument and electrical technicians was reviewed.

Duke Power Company has established an extensive training program for operations and maintenance personnel. Classroom and on-the-job training are utilized in these programs. Although most criteria against which the training function was evaluated were met, it was noted that improvements could be made regarding evaluation of training program effectiveness, licensed operator requalification and in-plant non-licensed operator training.

TRAINING ORGANIZATION

(INPO Procedure TQ-201, Revision 0)

An evaluation was performed to determine if the plant has a clearly defined training organization staffed with qualified personnel and capable of accomplishing all assigned training tasks. Areas reviewed included the organizational structure, size of staff, position descriptions and instructor qualifications. The staff's position descriptions were found to be excellent tools for selection, evaluation and promotion of employees.

Finding

TRAINING ADMINISTRATION

(INPO Procedure TQ-202, Revision 0)

An evaluation was performed to determine if the organizational functions necessary to initiate and control training and qualification programs are accomplished in a well-defined, coordinated and effective manner. Areas reviewed included training policies, records, instructor evaluation, program audits and trainee evaluations.

Finding (General Criterion)

Recommendation

Response

TRAINING RESOURCES

(INPO Procedure TQ-205, Revision 0)

An evaluation was performed to determine if the organization has sufficient resources to support the delivery of quality training for plant personnel. Areas reviewed included classrooms, workshops, simulator, office areas, training aid production and utilization capabilities, and reference materials. The Technical Training Center has excellent resources to back up the on-site facilities. Site facilities included well-equipped classrooms, and a site-specific simulator is scheduled for installation in January 1982.

Finding

LICENSED OPERATOR REQUALIFICATION TRAINING

(INPO Procedure TQ-223, Revision 0)

An evaluation was performed to determine if adequate training exists to maintain a high level of knowledge and skill in individuals licensed as reactor and senior reactor operators. Areas reviewed included the requalification program, program content (both knowledge and skills training), procedure revision and plant modification training, trainee evaluation methods, training materials, accelerated retraining provisions and program evaluation.

Finding (Criterion F)

Recommendation

Response

SHIFT TECHNICAL ADVISOR TRAINING
(INPO Procedure TQ-224, Revision 0)

An evaluation was performed to determine if an adequate program exists to provide shift technical advisors (STAs) with initial and continuing training necessary to ensure safe and effective performance of assigned duties. Areas reviewed included the STA program plan, program content (both knowledge and skills training), retraining, training materials, trainee evaluation and program evaluations. Because all STAs are experienced senior reactor operators, the STA program is a streamlined program of education and simulator skills training.

Finding

NON-LICENSED OPERATOR TRAINING
(INPO Procedure TQ-242, Revision 2)

An evaluation was performed to determine if an effective program exists to provide initial and continuing training for non-licensed operators to ensure they are capable of performing their jobs safely and effectively. Areas reviewed included the program plan, selection and promotion requirements, initial training and retraining.

Finding (Criterion C)

Recommendation

Response

LICENSED OPERATOR TRAINING

(INPO Procedure TQ-243, Revision 2)

An evaluation was performed to determine if an effective program exists to provide training to candidates for operator and senior operator licenses and is adequate to permit them to operate the plant reliably and safely. Areas reviewed included the program plan, training material, program content (both knowledge and skills training), trainee evaluation methods, training for senior operator candidates and program evaluation.

Finding

OPERATIONS

An evaluation of the Operations area was performed and included actual observations of operations such as performance tests, shift turnovers, tagouts and other normal evolutions. Also reviewed were the methods and controls for communicating and controlling plant status, organization and administration, facilities and equipment, and the use and content of procedures relating to operation of the facility.

ORGANIZATION AND ADMINISTRATION

(INPO Procedure OP-301, Revision 3)

An evaluation was performed to determine the existence of a clearly defined operations organization that provides for the assignment of responsibilities and delegation of adequate authority for accomplishment of required tasks. Areas reviewed include organizational structure, job descriptions, shift administrative assignments, written and oral instructions and orders, and miscellaneous administrative programs.

Finding

TAGOUT PRACTICES

(INPO Procedure OP-302, Revision 2)

An evaluation was performed to determine if established tagout practices ensure protection for personnel and station equipment. Areas reviewed included senior reactor operator (SRO) approval of safety-related tagouts, double verification of equipment tagged for personnel safety and for important manual valves that are repositioned but do not have control room indication, distinctive identification of safety tags, and finally periodic review of clearance logs.

Finding (Criterion G)

Recommendation

Response

CONDUCT OF SHIFT OPERATIONS

(INPO Procedure OP-303, Revision 2)

The team evaluated the conduct of shift operations to verify that operator activities and the aids for these activities effectively support safe and efficient operation of the facility. Included in this review were actual observations of operations and responses, cleanliness and order, logkeeping, instrumentation, and operator awareness and attitude.

Finding

USE OF PROCEDURES

(INPO Procedure OP-304, Revision 2)

An evaluation was performed to determine if management policies exist which describe the development, use, control and revision of procedures relating to operation and support of operation for the facility. In addition, procedures were reviewed for clarity, content, continuity and suitable advisory information and to ensure that emergency procedures allow quick and appropriate responses to all perceived situations.

Finding

PLANT STATUS CONTROLS

(INPO Procedure OP-305, Revision 2)

An evaluation was performed to determine if approved policies exist that give guidance in the areas of communication and control of plant status. Also, a review was made to determine if an SRO is responsible for status control, and if special situations such as outages and post accident recovery have provisions for adequate status controls.

Finding (General Criterion)

Recommendation

Response

OPERATIONS FACILITIES AND EQUIPMENT

(INPO Procedure OP-306, Revision 2)

In this area, operations facilities and equipment were evaluated to verify that equipment is accessible for operation. Programs are implemented to maximize equipment availability, the working environment contributes to overall efficiency and safety of plant operations, and watch stations and communications are adequate.

Finding (Criterion B)

Recommendation

Response

SHIFT TURNOVER

(INPO Procedure OP-307, Revision 1)

In this area, shift turnovers were evaluated to determine if procedures specify watch turnover requirements for all operating shift positions, if turnovers include mechanisms to communicate pertinent information regarding equipment status, operations or testing in progress, and if appropriate logs are reviewed. It was noted that within the Operations Department, turnovers are conducted efficiently with documents that were well thought out; however, a need for improvement was observed as follows:

Finding (Criterion B)**Recommendation****Response**

MAINTENANCE

An evaluation was performed of the maintenance organization, preventive maintenance program, maintenance history, and administrative systems for controlling and documenting work using current INPO criteria. The methods used to control test equipment, using the welding program, and adequacy of maintenance facilities and equipment were also assessed. The maintenance program is comprehensive and well organized. The Maintenance Department is staffed by experienced, qualified personnel who are highly motivated. The maintenance administrative programs are thorough and usable. Recommendations for improvement are made in the areas of preventive maintenance and work control.

MAINTENANCE ORGANIZATION AND ADMINISTRATION

(INPO Procedure MA-401, Revision 3)

An evaluation was performed to assess the effectiveness of maintenance administrative programs and organization. Areas reviewed included organizational structure, reporting requirements and practices, staff size, training and retraining, position descriptions, span of control for supervisors and certain administrative programs.

Finding

PREVENTIVE MAINTENANCE

(INPO Procedure MA-402, Revision 2)

An evaluation was performed to determine the effectiveness of the maintenance effort to optimize equipment reliability and performance. Areas of review included assessment of formal preventive maintenance (PM) programs, equipment included in the program, type and frequency of preventive maintenance and effectiveness of program control and coordination.

1. Finding (General Criterion).

Recommendation

Response

2. Finding (Criterion I)

Recommendation

Response

MAINTENANCE PROCEDURES

(INPO Procedure MA-403, Revision 3)

An evaluation was performed to determine the ability of maintenance procedures to enhance the quality and effectiveness of maintenance activities. Areas reviewed included an assessment of activities governed by procedures, methods of procedure development and revision and content of procedures. The extent that maintenance procedures are actually utilized for accomplishment of work is also within the scope of the evaluation.

Finding

WORK CONTROL SYSTEM
(INPO Procedure MA-404, Revision 3)

An evaluation was performed to determine the effectiveness of the work control system in use at the plant. The system functions were checked to see if they define and authorize work to be performed by the maintenance groups; provide for planning, scheduling and control of actual work; and have a mechanism to input the maintenance results into an equipment history file for future evaluation.

Finding (General Criterion)

Recommendation

Response

MAINTENANCE HISTORY
(INPO Procedure MA-405, Revision 3)

A review was made to determine if complete, functional maintenance history records are being retained and used in evaluation of equipment performance. Specific areas of interest included the amount and types of equipment included in the program; type, level of detail, traceability and retrievability of records; methods used for review and evaluation of maintenance histories; and assignment of responsibility for implementing the program.

Finding

CONTROL AND CALIBRATION OF TEST EQUIPMENT AND INSTRUMENTATION

(INPO Procedure MA-406, Revision 2)

A review was made to determine the adequacy and effectiveness of methods used for calibration and control of test equipment and instrumentation. Areas reviewed included identification, calibration, storage, issuance, use, shipment and documentation.

Finding

CONTROL OF SPECIAL PROCESSES

(INPO Procedure MA-407, Revision 1)

A review was made of the system used to control special processes including welding. Areas evaluated included training and qualification of personnel, administrative controls, receipt and issuance of material and periodic maintenance of special process equipment.

Finding

MAINTENANCE FACILITIES AND EQUIPMENT

(INPO Procedure MA-408, Revision 2)

A review was made to determine the adequacy and condition of maintenance facilities and equipment. The location, size and condition of office, work and storage space were examined, along with the number, type, condition and location of maintenance tools and equipment.

Finding

RADIATION PROTECTION AND CHEMISTRY

Organization, administration, radiological protection, radioactive waste management and process water chemistry were evaluated using current INPO criteria. This portion of the evaluation was primarily an examination of station programs and facilities as they function under normal operating conditions.

RADIATION PROTECTION AND CHEMISTRY (INPO Procedure RC-501, Revision 1)

An evaluation was performed to determine the effectiveness of the radiation protection and chemistry organizations and their associated administrative control mechanisms in providing the level of services currently required at the station under normal operating conditions. Areas reviewed included the formal organizational structure, procedures, staffing levels, training and retraining programs, position descriptions and management authority.

Finding (General Criterion)

Recommendation

Response

PERSONNEL DOSIMETRY

(INPO Procedure RC-503, Revision 1)

An evaluation was performed to determine the effectiveness of the station's dosimetry program in measuring, evaluating and recording occupational radiation exposures. Areas examined included the scope of the dosimetry program, procedures, external dosimetry selection and use, system operation, quality controls and exposure records.

1. Finding (Criterion D)**Recommendation****Response**

A

2. Finding (General Criterion)

Recommendation

Response

RADIATION SURVEILLANCE AND CONTROL
(INPO Procedure RC-504, Revision 1)

An evaluation was performed to determine the effectiveness of the radiological surveillance and control mechanisms in maintaining the risk of exposure and actual exposures to workers as low as reasonably achievable (ALARA). Areas reviewed included procedures, program scope, methodology, access and work controls and the level of review and evaluation of surveillance data.

1. **Finding (Criterion B)**

Recommendation

Response

2. **Finding (General Criterion)**

Recommendation

Response

3. Finding (General Criterion)

Recommendation

Response

4. Finding (General Criterion)

Recommendation

Response

5. Finding (General Criterion)

Recommendation

Unated areas.

Response

6. Finding (Criterion C)

radioactive systems) have not been eliminated.

Recommendation

appropriate.

Response

WASTE AND DISCHARGE CONTROL (Liquid)
(INPO Procedure RC-505, Revision 2)

An evaluation was performed to determine the effectiveness of the radioactive liquid waste control programs in minimizing the generation of liquid waste and limiting releases to levels as low as is reasonably achievable (ALARA). The program elements reviewed included procedures, effluent monitoring systems design and function, clean systems sampling, and training and management methods. The station was effectively controlling the generation, processing and release of liquid radioactive wastes within the capabilities of the current systems and facilities.

Finding

RADIOLOGICAL SURVEY EQUIPMENT CONTROL AND CALIBRATION
(INPO Procedure RC-506, Revision 2)

An evaluation was performed to determine the effectiveness of the radiological survey equipment control and calibration program in maintaining a sufficient inventory of instruments and a high degree of accuracy for the measurements made with these instruments. The evaluation covered procedures, storage conditions, reference standard traceability, calibration methods, operational response checks, equipment identification and status controls.

Finding (General Criterion)

Recommendation

Response

PERSONNEL HEALTH PHYSICS INDOCTRINATION
(INPO Procedure RC-507, Revision 2)

An evaluation was performed to determine the effectiveness of the health physics indoctrination program in preparing personnel for work in and around radiologically controlled areas. Areas reviewed included management policy, scope and depth of training, environment for training and documentation.

1. Finding (Criterion B)

Recommendation

Response

2. Finding (Criterion E)

Recommendation

Response

PROCESS WATER CONTROLS

(INPO Procedure RC-508, Revision 2)

An evaluation was performed to determine the effectiveness of station water chemistry controls in minimizing corrosion and maintaining integrity of systems. Areas reviewed included procedures, laboratory quality control, bulk chemical, cleaning agent and reagent control, training and facilities.

Finding

HEALTH PHYSICS FACILITIES AND EQUIPMENT

(INPO Procedure RC-509, Revision 2)

An evaluation was performed to determine the effectiveness of the station's health physics facilities and equipment in satisfying station needs and in contributing to safe and efficient operations. Areas of interest included the number and types of instruments and equipment, the protective clothing inventory and the design and working environment of facilities.

Finding**Response**

RESPIRATORY PROTECTION PROGRAM

(INPO Procedure RC-511, Revision 2)

An evaluation was performed to determine the effectiveness of the respiratory protection program in protecting personnel from inhalation of particulate matter, noxious gases and vapors and from oxygen deficiency. Areas reviewed included policy and procedures, identification and control of airborne materials, selection and use of respirators, respirator maintenance and emergency capabilities.

Finding

RADIATION EXPOSURE REDUCTION GOALS
(INPO Procedure RC-538, Revision 0)

An evaluation was performed to determine the effectiveness of efforts toward reducing occupational radiation exposures at the station. Areas reviewed included goal setting, exposure accumulation as measured against goals, evaluations of exposure monitoring results and trends in occupational radiation exposure.

Finding (Criterion C)

Recommendation

Response

TECHNICAL SUPPORT

On-site engineering support was evaluated in the areas of organization and administration, engineering functions performed, nuclear operating experience evaluation, plant modifications and reactor engineering. The Oconee Technical Services group is well-organized and staffed with conscientious and well-qualified personnel to perform nuclear station engineering functions. Good programs were found to exist in the areas of plant performance monitoring, nuclear station modifications, evaluation of operating experiences occurring at Oconee and control of important technical documents. Results observed in the areas evaluated indicate that improvements can be made as detailed below.

TECHNICAL SUPPORT ORGANIZATION & ADMINISTRATION (INPO Procedure TS-701, Revision 1)

The Technical Services staff was evaluated to determine if it is capable of performing all assigned responsibilities, personnel are knowledgeable of their duties, a training program exists to enhance and develop the skills and knowledge of engineering personnel, and technical personnel are not utilized for non-technical tasks.

Finding (Criterion D)

Recommendation

Response

ENGINEERING SUPPORT

(INPO Procedure TS-702, Revision 2)

On-site engineering support functions were evaluated including plant performance monitoring, communication with other support groups, control of important documents and the adequacy of engineering support facilities.

1. Finding (Criterion B)

Recommendation

Response

2. Finding (Criterion C)

Recommendation

Response

NUCLEAR OPERATING EXPERIENCE EVALUATION PROGRAM
(INPO Procedure TS-703, Revision 1)

An evaluation was performed of the programs in place to review in-house operating events as well as those occurring throughout the nuclear industry. The reporting, review and follow-up corrective actions for in-house events were examined, along with the method of disseminating the information to appropriate personnel and the industry. For industry-wide events, examination was made of the sources of information reviewed, the screening process employed in surveying events and the disposition of events relevant to the plant.

1. Finding (Criterion C)

Finding (Criterion G.4)

Recommendation

Response

2. Finding (Criterion G.2 and G.3)

Recommendation

Response

PLANT MODIFICATIONS

(INPO Procedure TS-704, Revision 1)

The program for processing nuclear station modifications (NSMs) was evaluated to see if changes are implemented in a timely manner while maintaining the quality of plant systems, structures and components. Review of proposed modifications, prioritization, tracking, testing, verification of installation and closeout of the NSM package were examined.

Finding (Criterion I)

Recommendation

Response

ON-SITE REACTOR ENGINEERING

(INPO Procedure TS-705, Revision 2)

Reactor engineering at Oconee was evaluated to assess the use of appropriate procedures, computer programs and changes to them, communication with other groups who coordinate with the site reactor engineers, the dedication to the maintenance of fuel cladding integrity, and the involvement of the reactor engineers in refueling outage activities.

Finding

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ADMINISTRATIVE APPENDIX

I. LISTING OF AREAS EVALUATED

ORGANIZATION AND ADMINISTRATION

OA-101 Objectives
 OA-102 Organization Structure
 OA-103 Administrative Controls
 OA-104 Quality Programs
 OA-106 Industrial Safety
 OA-107 Surveillance Program
 OA-108 Personnel Qualifications

TRAINING AND QUALIFICATIONS

TQ-201 Training Organization
 TQ-202 Training Administration
 TQ-205 Training Resources
 TQ-223 Licensed Operator Requalification Training
 TQ-224 Shift Technical Advisor Training
 TQ-242 Non-Licensed Operator Training
 TQ-243 Licensed Operator Training

OPERATIONS

OP-301 Operations Organization and Administration
 OP-302 Tagout Practices
 OP-303 Conduct of Shift Operations
 OP-304 Use of Procedures
 OP-305 Plant Status Controls
 OP-306 Operations Facilities and Equipment
 OP-307 Shift Turnover

MAINTENANCE

MA-401 Maintenance Organization and Administration
 MA-402 Preventive Maintenance
 MA-403 Maintenance Procedures
 MA-404 Work Control System
 MA-405 Maintenance History
 MA-406 Control and Calibration of Test Equipment and Instrumentation
 MA-407 Control of Special Processes
 MA-408 Maintenance Facilities and Equipment

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OA-102 Organization Structure
OA-103 Administrative Controls
OA-104 Quality Programs
OA-106 Industrial Safety
OA-107 Surveillance Program
OA-108 Personnel Qualifications

TRAINING AND QUALIFICATIONS

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TQ-202 Training Administration
TQ-205 Training Resources
TQ-223 Licensed Operator Requalification Training
TQ-224 Shift Technical Advisor Training
TQ-242 Non-Licensed Operator Training
TQ-243 Licensed Operator Training

OPERATIONS

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OP-307 Shift Turnover

MAINTENANCE

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MA-402 Preventive Maintenance
MA-403 Maintenance Procedures
MA-404 Work Control System
MA-405 Maintenance History
MA-406 Control and Calibration of Test Equipment and Instrumentation
MA-407 Control of Special Processes
MA-408 Maintenance Facilities and Equipment

RADIATION PROTECTION AND CHEMISTRY

RC-501 Radiation Protection and Chemistry
RC-503 Personnel Dosimetry
RC-504 Radiation Surveillance and Control
RC-505 Waste and Discharge Control (Liquid)
RC-506 Radiological Survey Equipment Control
and Calibration
RC-507 Personnel HP Indoctrination
RC-508 Process Water Controls
RC-509 Health Physics Facilities and Equipment
RC-511 Respiratory Protection Program
RC-538 Radiation Exposure Reduction Goals

TECHNICAL SUPPORT

TS-701 Technical Support Organization and Administration
TS-702 Engineering Support
TS-703 Nuclear Operating Experience Evaluation Program
TS-704 Plant Modifications
TS-705 On-Site Reactor Engineering

II. DUKE POWER COMPANY PERSONNEL CONTACTED

President
Senior Vice President, Engineering and Construction
Senior Vice President, Production and Transmission
Vice President, Steam Production
Manager, Nuclear Production
Plant Manager
Operating Superintendent
Technical Services Superintendent
Maintenance Superintendent
Administrative Services Superintendent
Operating Engineer (Units 1, 2 and 3)
Assistant Engineer
Shift Supervisor
Shift Technical Advisor
Assistant Shift Supervisor
System Health Physicist
Health Physicist
Station Chemist
Health Physicist, Projects and Training Leader
Health Physics Coordinator, Support Functions
Health Physics Coordinator, Surveillance and Control
Radwaste Coordinator (Chemistry)
Primary Chemistry Supervisor, Acting
Secondary Chemistry Supervisor
Health Physics Technical Specialist, ALARA
Safety Supervisor
Safety Assistant
Health Physics Supervisor, Count Room and Environmental
Health Physics Supervisor, Radioactive Materials Control
Health Physics Supervisor, Surveillance and Control
Health Physics Supervisor, Respiratory Shift and Instruments
Training Supervisor
Training Associate
Training Coordinator
Training and Safety Coordinator
Health Physics Technical Specialist, Projects and Training
Health Physics Specialist
Assistant Health Physics Technician
Health Physics Clerk
Instrumentation and Electrical Engineer
Planning and Materials Engineer
Mechanical Maintenance Support Engineer
Maintenance Supervisor
Performance Engineer
Reactor Engineer
Test Engineer
Project Engineer
Assistant Engineer, Test
Safety Review Engineer
Manager, Project Coordination and Licensing
Licensing and Projects Engineer

Senior Quality Assurance Engineer
Surveillance Supervisor
Station Emergency Preparedness Coordinator
Station Biologist
Medical Clerk
Medical Assistant
Emergency Response Coordinator

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