



## DETAILS

### 1. Persons Contacted

Licensee see Employees

- \*M. McIntosh, Station Manager
- \*W. Sample, Projects and Licensing Engineer
- \*D. Mendezoff, Licensing Engineer
- B. Barron, Operating Engineer, Unit II
- \*G. Cage, Superintendent of Operations
- \*D. Rains, Superintendent of Maintenance
- M. Mobley, Corporate Design Engineering
- J. Boyle, Test Engineer Unit II
- J. Silver, Assistant Operations Engineer
- D. Dycus, Systems Maintenance Area Coordinator
- \*L. Weaver, IAE Engineer
- \*G. Gilbert, Operating Engineer
- \*D. Bradshaw, Operating Engineer

Other licensee employees contacted included superintendents, operating engineers, shift supervisors, reactor operators, unit coordinators, station group supervisors, planners, technicians, mechanics, specialists, security, office personnel, corporate design engineers, training and QA personnel.

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on August 27, 1982, with those persons indicated in Paragraph 1 above. The plant manager acknowledged the findings.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 6.

### 5. Operational History

At the beginning of the inspection period the unit was operating at 50% power. This power level limitation was imposed by the NRC in reference to related problems associated with the Model D steam generators (SC).

On August 13, 1982 NRC approved, after review of Duke Power requests and presentations, a longer power run. The extension was at 50% power until a planned shutdown (November 1982) or until implementation of steam generator modification. Also, permission was granted to operate at no greater than 75 percent power for no longer than 30 days (720 hours).

On August 17, 1982 at 2:30 p.m. McGuire Unit 1 commenced power increase, achieving 75 percent power at 5:45 p.m. the same date. The licensee, however, plans to decrease power to 50 percent during the weekends. The inspection period ended with the plant at 75 percent power.

## 6. Operational Safety Verification

Throughout the inspection interval the inspectors observed operational activities in the plant and the control room. The following activities were reviewed and/or observed as possible on a daily basis: Shift turnover; control room and shift manning; control and other vital area access; control room and plant operator adherence to approved procedures for ongoing activities; instrumentation and recorder traces important to safety for anomalies; operator understanding of alarmed control room annunciators, including initiation of corrective action in a timely manner; operator response to computer alarms; valve and electrical alignment for emergency safeguards features (ESF), and reactor protection system (RPS) inputs in the control room in compliance with technical specification (TS) requirements; shift supervisor, control operator, tag out, and operator's work request logs; access and egress from the protected area in compliance with requirements of the security procedures; and egress from controlled areas in compliance with the health physics plan.

During the inspection period the inspectors also observed, reviewed and/or verified the following: Status of instrument calibration, equipment tags and radiation work permits; results of selected liquid and gaseous samples; and gas and liquid waste discharges and logs. The inspectors toured the accessible areas of the plant to make an assessment of the following: Plant and equipment conditions; areas which could be fire hazards; interior of selected electrical and control panels; proper personnel monitoring practices; housekeeping and cleanliness practices; and radiation protection controls. The inspectors performed a walkdown of upper head injection system, component cooling water system and the boron concentration control system.

Based on this review and observation one unresolved item was identified.

On July 28, 1982 the inspector detected that the control room was very warm. Upon questioning the operations personnel it was found that the control room ventilation system train "A" had a broken part which allowed it to carry only minimum loads. After extended operation on train "A", the control room ambient temperature had reached 90°F, but the technical specification surveillance paragraph 3/4 7.6, control room ventilation operability, only

requires that temperature be maintained below 120°F. Even though the ambient temperature only reaches 90°F the temperatures in the safety system logic cabinets (7300 system) located in the control room can reach over 200°F. A Westinghouse letter to Duke Power Company dated August 4, 1980 informed the licensee that this equipment should not be operated outside the range of 75°F ± 10°F this restriction is based on the correlation between elevated temperature and failure rate of the semiconductor electronics. In addition, in 1979 the McGuire Unit 1 control room experienced high temperatures (90°F area) for an extended period of time and experienced a high failure rate in the 7300 cabinets. In light of the Westinghouse letter and previous experience the inspector believes that the temperature for operability should be evaluated.

Unresolved Item: The matter of allowing higher control room ambient temperatures than recommended by the Westinghouse letter for control of safety equipment is considered an unresolved item pending an NRC evaluation of this concern (369/82-26-01).

## 7. Maintenance

Maintenance activities were observed in progress throughout the inspection period. The inspector verified that the following activities were accomplished by qualified personnel using approved procedures: Radiation controls, fire prevention and safety measures, and QA/QC hold points were observed as appropriate; test equipment used was verified to be calibrated, and data recorded were compared to that observed; required administrative approvals and tagouts were obtained prior to initiating work; limiting conditions for operation (LCO) were met while maintenance was being performed; replacement parts and materials used were properly certified; testing and calibration as necessary were completed prior to returning equipment to service; and housekeeping requirements were met.

The inspector reviewed portions of outstanding work orders for safety-related systems to insure the licensee is performing maintenance in a timely manner and that an excessive backlog is not developing. The inspector examined procedures used for technical adequacy and the completion of work orders. Twenty-two maintenance activities were observed and reviewed on Unit 1 and Unit 2. Examples of those observed are as follows:

Work Request PMP 00023: Perform PM/PT on DG Battery EDGA per section 10.1 of procedure PT/O/A/3061/04, Diesel Generator (Nicaid) and Charger Maintenance Unit 2.

Work request PMP 012805: Provide support for PRF test PT/1/A/4450/06A on containment air return and hydrogen skimmer fan, Train A.

Work Request MNT 52849: Remove, repair and inspect relief valve 2KC152.

Based on this review and observation, no violations or deviations were identified.

## 8. Surveillance

Surveillance activities were observed throughout the inspection interval. The inspector reviewed and/or verified that procedures used conform to the technical specification (TS) requirements and had received proper licensee review and approval; that test instrumentation was properly calibrated; that the systems were removed from service and restored to service per procedure; test prerequisites and acceptance criteria were met; test data was accurate and complete; completed tests were properly reviewed and discrepancies were rectified; and tests were performed by qualified individuals. The following are examples of the sixteen surveillance activities that have been observed and verified.

PT/1/A/4400/08	Pre-criticality Surveillance Items for Unit Startup
OP/1/A/6100/05	Reactor Trip Recovery
HP/0/B/A/1006/05	Westinghouse Initial Entry Survey
PT/0/A/4250/0A	Fire Barrier Inspection
PT/1/A/4350/03A	Electrical Power Source Alignment Verification

Based on this review and observation no violations or deviations were identified.

## 9. Significant Event Followup

On August 11, 1982 the licensee found a fish kill at the intake structure screens from Lake Norman. The fish were perch, small variety. The count was 26,620 dead fish. All of these fish as reported would not fill a 55-gallon size drum. No significant cause has been found for the incident. A final report is to be made by the licensee and environmental control. This item received significant local media coverage.

It has been noted by the licensee that similar past events have taken place with the same fish species at other locations on Lake Norman. Until such time that the licensee determines the cause of the "fish kill" this item will be carried as an Inspector Followup Item (369/82-26-02).

## 10. Plant Transients, Trips and Safety Systems Challenges

On August 9, 1982 at 1:26 a.m., McGuire Unit 1, while operating at 50% power experienced a reactor turbine trip. This was caused by loss of "A" reactor coolant pump (RCP) which tripped due to a loss of control power. Power was lost due to opening of a 125V breaker on the 1TA 6900V auxiliary power system (EPB) that feeds the reactor coolant pump switchgear safety breaker for "A" RCP. Instrumentation and Electrical (IAE) people were looking for ground on the "A" auxiliary control power battery. Preliminary findings

indicate a design deficiency. This will be an Inspector Followup Item (369/82-26-03).

#### 11. Independent Inspections

During this inspection period the inspectors attended and reviewed the startup of hot functional testing for McGuire Unit 2. This testing is to demonstrate the capability of plant systems to function at no load temperatures and pressures and return to ambient temperatures. Further observations and reviews were made of other ongoing performance tests and of maintenance performance.

The inspector witnessed, observed and reviewed the following items:

Work Request 53331 MNT: Provide Assistance for main steam safety valve setpoint test MP/0/A/7650/31, Controlling Procedure for Troubleshooting and Controlling Maintenance

PT/0/A/4250/01 Main Steam Safety Valve Setpoint Test

TP/2/A/1250/05 Main Steam Safety Valve Setpoint Test

TP/2/A/1200/03E Safety Injection System Check Valve Functional Test.

#### 12. Inspector Followup Items

(Closed) Inspector Followup items (369/82-17-04 and 370/82-12-03): Phone installation in lower annulus. Licensee has completed nuclear station modification (NSM) MG 656 and work request 91779 NMS by installing operable telephones in the annulus of Unit 1 and Unit 2.