



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

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Report Nos.: 50-369/84-24 and 50-370/84-21

Licensee: Duke Power Company
422 South Church Street
Charlotte, NC 28242

Docket Nos.: 50-369 and 50-370

License Nos.: NPF-9 and NPF-17

Facility Name: McGuire 1 and 2

Inspection Date: July 30 - August 3, 1984 and August 9, 1984

Inspection at McGuire site near Charlotte, North Carolina

Inspectors:

B. Debs

9/28/84
Date Signed

D. Stadler

9/28/84
Date Signed

H. Christensen

9/28/84
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Approved by:

C. A. Julian
C. A. Julian, Section Chief
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9/28/84
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SUMMARY

Scope: This routine, unannounced inspection entailed 90 inspector-hours in the area of seven NUREG 0737 items including 1.A.1.1 Shift Technical Advisor; 1.A.1.2 Shift Supervisor Administrative Duties; 1.A.1.3 Shift Manning; 1.C.2 Shift Relief and Turnover; 1.C.3 Shift Supervisor Responsibilities; 1.C.4 Control Room Access; and 1.C.6 Verification of Correct Performance of Operating Activities. The inspection included a review of documents related to these NUREG 0737 items as well as observation of control room activities and interviews with Operations and Training personnel.

Results: Of the seven areas inspected, three violations and one deviation were identified (failure to establish, implement and maintain procedures for NUREG-0737 requirements, para. 5, 7, 8, 9, and 10; failure to meet Technical Specification 6.1.2, see para. 6; failure to meet Technical Specification 6.5.1.1 see para. 10).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *J. Boyce, Performance Engineer
- *G. Cage, Superintendent Operations
- *L. Firebaugh, Assistant Operations Engineer
- *P. Huntley, Health Physics Coordinator
- *D. Mendezoff, Licensing Engineer
- *J. Reeside, Nuclear Safety Assurance
- *V. Spearman, Administrative Coordinator
- *B. Travis, Operating Engineer
- *T. Wall, Chemistry

Other licensee employees contacted included one technician, seven operators, three security force members, and one office worker.

NRC Resident Inspectors

- *W. T. Orders, Senior Resident Inspector
- R. Pierson, Resident Inspector

*Attended exit interview.

2. Exit Interview

The inspection scope and preliminary findings were summarized on August 3, 1984, with those persons indicated in paragraph 1 above. After regional review, inspection findings were discussed with licensee representatives via telephone on the day of issue of this report.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. 1.C.4 Control Room Access

This NUREG-0737 action item requires licensees to revise plant procedures to limit access to the control room to those individuals responsible for the direct operation of the plant, technical advisors, specified NRC personnel, and to establish a clear line of authority, responsibility, and succession in the control room.

The inspectors observed two methods of controlling control room access in use by the licensee.

The first method restricts access to the entire control room complex by the use of key cards and the procedures which govern their issue and use. The second method of access control applies to a specific area within the control room complex. This area is known as the "Surveillance Area" and is defined in the licensee's Operations Management Procedure (OMP) 1-3, Attachment 1 and their FSAR on Figure 13.5.1-1. The access control for the "Surveillance Area" appears in the licensee's Station Directive 3.1.4 "Conduct of Operations" which states that access to the area deemed "Surveillance Area" shall not be permitted by non-licensed personnel, when fuel is in either reactor, without permission having been given to enter such area by the on-duty licensed "operator at the controls" or the senior licensed unit supervisor. In addition to this procedure requirement, the licensee has installed a chain barrier to clearly define the boundary of the "Surveillance Area". During visits to the control room, the inspectors observed the chain boundary to be in place on only one occasion. Interviews conducted with shift personnel indicated that this chain is routinely down because it is considered a nuisance.

Shift personnel and licensee management indicated to the inspectors that the granting of permission for access into the "Surveillance Area" is considered bothersome. A Nuclear Control Operator further stated that there had been an occasion about two weeks prior to this inspection when a group of engineers had entered the "Surveillance Area", apparently without approval, and had positioned themselves between the operator and his control boards. The operator had to take action to direct the engineers out of the "Surveillance Area".

On July 31, 1984, the inspectors observed a non-licensed employee enter the surveillance area without permission. It was also observed by the inspectors that the chain barrier was down.

On August 6, 1984, the NRC Senior Resident Inspector observed that the chain barrier was in place; however, it had been relocated such that the "Surveillance Area" was redefined to be smaller than defined by plant procedures and the FSAR.

Interviews conducted with licensee Shift Supervisors indicated that on occasion, during unplanned events, personnel have entered the control room complex and gathered behind the radiation monitors, loose parts monitors, and nuclear instrument cabinets to the extent that the noise level generated by these personnel could distract the supervisor from his command of plant operations. The inspectors observed that although access to the control room complex is controlled by card keys; no screening is performed to clearly limit access to an "as need" basis in the control room complex during an unplanned event.

The inspectors expressed concern to licensee management that personnel cleared for control room access, but not required for plant operation or not requested to be present by the Shift Supervisor, could congregate in the control room during an unplanned event such that the operating crew could be distracted.

The inspection team informed licensee management that both the observed unauthorized entry into the "Surveillance Area" on July 31, 1984, and the redefinition of that area on August 4, 1984 was contrary to McGuire Station Directive 3.1.4, and therefore, contrary to McGuire Technical Specification 6.8.1 which states that written procedures shall be established, implemented, and maintained to implement the requirements of NUREG-0737 (Violation 50-369/84-24-01, 50-370/84-21-01).

6. 1.C.3 Shift Supervisor Responsibilities

This NUREG-0737 action item requires licensees to issue a corporate management directive that clearly establishes the command duties of the shift supervisor and emphasizes the primary management responsibility for safe operation of the plant. This item also requires licensees to revise plant procedures to clearly define the duties, responsibilities, and authority of the shift supervisor and the control room operators.

The aforementioned action item was, in part, incorporated in McGuire Technical Specification 6.1.2 which states that the Supervisor (or during his absence from the control room, a designated individual) shall be responsible for the control room command function. A management directive to this effect, signed by the Manager of Nuclear Production shall be reissued to all station personnel on an annual basis.

The inspectors reviewed the latest reissuance of this letter which was dated July 3, 1984. The inspectors noted that this letter was addressed to "All Nuclear Production Personnel" which is not inclusive of all station personnel. The inspectors informed licensee management that "all station personnel" also includes contract and vendor personnel working at the station.

The inspectors further observed that this annual letter is posted on bulletin boards; however, the inspector could find no requirement for station personnel to periodically read the information contained on these boards. Of seven station operations personnel interviewed, three were aware of the presence of this letter on the bulletin board.

The inspectors expressed concern that the information regarding the shift supervisor's responsibilities may not be adequately disseminated to all plant personnel. Licensee management indicated that the posting of this letter on bulletin boards was an adequate means of information dissemination. Licensee management was informed by the inspection team that since the letter was not addressed to; and, therefore, not applicable to all

station personnel, the letter did not meet the requirements of McGuire TS 6.1.2 and is considered a violation of that Technical Specification (Violation 50-369/84-24-02, 50-370/84-21-02).

7. 1.C.2 Shift Relief and Turnover

This NUREG-0737 item requires licensees to revise plant procedures for shift relief and turnover to require signed checklists and logs to assure that the operating staff (including auxiliary operators and maintenance personnel) possess adequate knowledge of critical plant parameter status, system status, availability, and alignment.

The inspectors noted that originally this NUREG-0737 action item was met by the licensee through Station Directive 3.1.9 "Relief of Duties of Plant Operation." The acceptability of this station directive to meet the aforementioned action item appears in Revision 4 of the McGuire Nuclear Station Units 1 and 2 Safety Evaluation Report (SER).

The inspectors compared the current revision (Revision 11) of the aforementioned station directive to the original station directive described in the licensee's SER. The inspectors observed that the station directive had been revised to eliminate certain original requirements. These deletions are:

- a. The original station directives required the Duty Engineer to review completed shift turnover checklists. This review is no longer specified.

Licensee management indicated that these reviews are being performed, although the reviews are no longer procedurally required.

- b. The original directive required the Nuclear Control Operator (NCO) to complete a turnover checklist if the unit computer was unavailable. The current directive revision states that in the event that the computer is unavailable, the NCO turnover checklist may be used. Licensee management indicated that NCO's do complete a turnover checklist whenever the computer is unavailable.
- c. The original directive and as iterated in the SER stated that completed turnover checklists will be maintained for six years. The current directive revision had deleted this retention requirement. Licensee management indicated that completed turnover checklists are currently being disposed of. The inspectors informed licensee management that failure to maintain turnover checklist for six years is considered a deviation from a commitment to the NRC, (DEV 50-369/84-24-03, 50-370/84-21-03).

In addition to the procedural review, the inspectors conducted interviews with licensed operators regarding the conduct of shift and turnovers.

These interviews indicated that on occasion, an "On Call" Duty Engineer holding a SRO license has relieved the Shift Supervisor. This relief is not documented in operating logs. It was determined that no plant procedure governs the conduct of this relief. Station Directive 3.1.4 "Conduct of Operations" simply states that the Shift Supervisor can only be relieved by another Shift Supervisor or by a member of management that holds a current SRO license. Licensee management indicated that the Station Directive 3.1.9 "Relief of Duties of Plant Operation" is considered applicable to the initial shift turnover. The inspectors expressed concern that an individual, although licensed, can assume the duties of the shift supervisor without having been a routine member of the shift or not having participated in the initial shift turnover, and without specific guidance that assures the relief has adequate plant cognizance.

The inspectors informed licensee management that Revision 11 of Station Directive 3.1.9 does not meet the intent of NUREG-0737 action item 1.C.2 and is considered inadequate because:

- aa. The completion of a NCO turnover checklist is procedurally presented as an option rather than required when the plant computers is unavailable.
- bb. Station Directive 3.1.9 does not address the conduct of interim shift turnovers including the completion of turnover checklists to assure that the operating staff possesses adequate knowledge of critical plant parameters status, system status, availability, and alignment.

For these reasons of inadequacy, Station Directive 3.1.9, Revision 11, is in violation of McGuire Technical Specification 6.8.1 which states that written procedures shall be established, implemented and maintained to implement the requirements of NUREG-0737. (This is another example of Violation 50-369/84-24-01, 50-370/84-21-01.)

8. 1.A.1.3 Shift Manning

This NUREG-0737 item requires, in part, that licensees of operating plants and applicants for operating licenses shall include in their administrative procedures (required by licensee conditions) provisions governing required shift staffing and movement of key individuals about the plant. These provisions are required to assure that qualified plant personnel are readily available to man the operational shifts in the event of an abnormal or emergency situation.

This action item also requires that these administrative procedures set forth a policy which requires development of working schedules which avoid the use of overtime, to the extent practicable, for the plant staff who perform safety-related functions (e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, I&C technicians and key maintenance personnel).

The aforementioned NUREG-0737 item was, in part, incorporated into McGuire Technical Specification 6.2.2.f which states, in part, that administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., licensed senior operators, licensed operators, health physicist, auxiliary operators, and key maintenance personnel.

This Technical Specification further states that:

- a. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time;
- b. An individual should not be permitted to work more than 16 hours in any 24-hour period, no more than 24 hours in any 48-hour period, no more than 72 hours in any 7-day period, all excluding shift turnover time;
- c. A break of at least 8 hours should be allowed between work periods, including shift turnover time; and
- d. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Additionally, this Technical Specification requires that any deviation from the above guidelines shall be authorized by the Station Manager or his deputy, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the Station Manager or his designee to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

The inspectors reviewed Revision 0 to Operations Management Procedure 1-7 dated April 10, 1984 which currently implements the aforementioned requirements. The inspectors noted that this procedure solely addresses shift personnel or the operations personnel who are not routinely assigned to an operating shift but who temporarily fill a position on shift. The procedure does not specifically address health physicists or key maintenance personnel (e.g., Instrument Technicians and Mechanics). The inspectors were informed by licensee management that the overtime for maintenance personnel and health physicists who are not assigned on shift is controlled by Management Procedure Number 8901-0008-MC-1, "Authorization of Work Outside the Normal Work Schedule." This procedure requires that hourly personnel cannot work greater than 100 hours in any consecutive two week period and that the Station Manager must approve any deviation from this 100 hour limit.

The inspectors expressed concern that procedurally (8901-0008-MC-1) health physicists or key maintenance personnel could work overtime within the limits of the aforementioned Management Procedure but exceed the Technical Specification limits.

Additionally, the inspectors noted that neither of the aforementioned procedures include controls such that individual overtime is reviewed monthly by the Station Manager or his designee to assure that excessive hours have not been assigned.

The inspectors informed licensee management that the licensee's administrative procedures do not adequately limit working hours as required by Technical Specification 6.2.2.f and NUREG-0737 Action Item 1.A.1.3; and is, therefore, another example of violation of McGuire Technical Specification 6.8.1 which states that written procedures shall be established, implemented and maintained to implement the requirements of NUREG-0737 (Violation 50-369/84-24-01, 50-370/84-21-01).

Regarding crew composition, 10 CFR 50.54(m)(2) requires that by January 1, 1984; licensees of nuclear power units shall have a minimum operating staff to include two senior reactor operators and three reactor operators for nuclear power plants with one control room for two units and one unit in a mode other than cold shutdown or refueling. The aforementioned regulatory staffing requirements had been incorporated earlier in the McGuire Units 1 and 2 Technical Specification 6.2.2(a). The inspectors found no violations or deviations associated with crew composition, however, the inspectors did observe that the licensee's Final Safety Analysis Report (FSAR), Section 13.1.2.3 requires only one SRO for single unit operation which is not consistent with the aforementioned rule or Technical Specification. Licensee management indicated that this section of FSAR was being updated and would be filed with the NRC as part of the original FSAR update required by 10 CFR 50.71.

McGuire Station Directive 3.1.4, Revision 14, dated April 9, 1984, states that a licensed operator may be assigned to the reactor building deck to observe core alterations. It further states that a Senior Reactor Operator who has no other responsibilities will be assigned to fuel handling and core alterations and he or another licensed operator (Reactor Operator or Senior Reactor Operator) must be on the reactor building operating floor to observe core alterations.

This procedure, therefore, allows a Reactor Operator to directly observe core alterations in lieu of a licensed Senior Reactor Operator. 10 CFR 50.54(m)(2)(IV), however, states that each licensee shall have present during alteration of the core of a nuclear power unit (including fuel loading or transfer), a person holding a senior operator license or a senior operator license limited to fuel handling to directly supervise the activity and, during this time, the licensee shall not assign other duties to this person.

A letter from Mr. James P. O'Reilly, Regional Administrator, U. S. Nuclear Regulatory Commission, Region II to Mr. William O. Parker, Sr., Duke Power Company, Vice President of the Steam Production dated December 1, 1980, states "We ... find the refueling operations as described to be in

conformance with regulatory requirements. The key element is the requirement to have at least one RO on the refueling bridge. The RO is manipulating the fuel handling mechanism or is directly supervising the qualified unlicensed individual in the operation of the mechanism. Such operation is in conformance with 10 CFR 50.54."

The inspectors had no further questions.

9. 1.A.1.2 Shift Supervisor Administrative Duties

This NUREG-0737 item requires licensees to review the administrative duties of the Shift Supervisor and delegate functions that detract from, or are subordinate to, the management responsibility for assuring safe operation of the plant to other personnel not on duty in the control room.

With regard to the aforementioned NUREG-0737 item, the inspectors reviewed McGuire Station Directive 3.1.4 "Conduct of Operations" which states that the Assistant Shift Supervisor will provide administrative assistance on shift to assist in time tickets, scheduling days off, and other associated duties. The aforementioned Station Directive further states that the Assistant Shift Supervisor on duty shall oversee operations associated with his assigned unit, and in this position while on duty, fulfills the onsite requirements for the licensed senior operator.

Considering that the licensee routinely has three Assistant Shift Supervisors in the control room at one time, the station directive does not specifically preclude the assignment of administrative duties to an Assistant Shift Supervisor who is fulfilling the 10 CFR 50 and technical specifications requirements for on-duty shift personnel. Therefore, it is procedurally possible for administrative duties to be assigned to duty control room personnel.

Licensee Management stated that it is their practice to delegate administrative duties to an Assistant Shift Supervisor who is on shift but whose presence is not required by regulations or technical specifications. Additionally, the licensee is taking action to provide each shift with shift clerks who will be relieving on-shift operating personnel of selected administrative duties. Licensee management committed to the inspection team that the aforementioned clerks will be functioning on shift by August 31, 1984.

The inspectors informed licensee management that Station Directive 3.1.4 was inadequate since it does not preclude Assistant Shift Supervisors (on duty personnel in the control room) from being burdened with administrative duties. The inadequacy of this procedure is a further example of a violation of TS 6.8.1 (Violation 50-369/84-24-01, 50-370/84-21-01).

10. 1.C.6 Verifying Correct Performance of Operating Activities

This NUREG-0737 action item requires that licensees' procedures be reviewed and revised, as necessary, to assure that an effective system of verifying

the correct performance of operating activities is provided as a means of reducing human errors and improving the quality of normal operations. This will reduce the frequency of occurrence of situations that could result in or contribute to accidents. Such a verification system may include automatic system status monitoring, human verification of operations and maintenance activities independent of the people performing the activity or both.

McGuire Nuclear Station, SER Units 1 and 2, Supplement 6 states that before 1% power is exceeded (Unit 2), the licensee shall provide adequate procedures to verify the correct performance of the licensee's operating activities and that these procedures shall be maintained by the licensee. This requirement was considered met, as stated in the SER based on a June 18, 1982 letter from Mr. William O. Parker, Jr., Duke Power Vice President of Steam Production to Mr. Harold R. Denton, Director, Office of Nuclear Reactor Regulation.

This letter states that:

- a. At McGuire Nuclear Station, the designation "safety-related" is applied to all systems important to safety.
 - b. Operating and periodic test procedures that require valve movement in safety-related systems have been reviewed and revised as necessary to provide assurance that these valves are returned to their correct position. These procedures required verification of the operability of a redundant system prior to the removal of any safety-related systems from service, verification of the operability of all safety-related systems when they are returned to service, and notification of and action by the Shift Supervisors and reactor operators whenever any safety-related system is removed from or returned to service. The removal from service of portions of safety-related systems (for example, pumps, filters, fans, etc.) are treated in a like manner.
- c. Formal checklists are used to provide assurance that all valves in these safety-related systems are properly aligned. These procedures also require independent verification of proper valve alignment.
- d. A removal and restoration procedure governs the repositioning of valves in safety-related systems following maintenance activities or other non-normal activities which require valve movement. This procedure also governs the removal and restoration of portions of safety-related systems (for example, pumps, filters, fans, etc.). A formal checklist provides assurance that all safety-related valves are properly aligned following the activities. This procedure also requires independent verification of proper valve alignment.
- e. Notification of and action by the Shift Supervisor and reactor operators whenever any safety-related system is removed from or returned to service is accomplished by the use of the operating and periodic test procedure checklists, red tags and the red tag logbook,

white tags and the white tag logbook, out of service stickers, and the 1.47 bypass panel. Log entries denoting the removal and restoration are made in the Reactor Operator's Log. All of the above documents are reviewed during shift turnovers.

- (1) The inspectors reviewed Revision 3 to Station Directive 3.3.0, Determination of Safety-Related or Control Designated Structures, Systems and Components, dated July 23, 1982, which was originally issued July 12, 1976 and determined that, as the aforementioned letter stated, the designation "safety-related" is applied to all systems important to safety.

The inspectors also reviewed the licensee's Station Directive 4.2.2 "Independent Verification Requirements" dated December 6, 1983. Section 5.3, of this procedure states that personnel performing independent verification must be independently and individually responsible for determining component status. The inspectors noted that the current Operations Management Procedure 1-6, Revision 3, dated June 26, 1984, which superseded Station Directive 4.2.2, conflicts with the prior Station Directive regarding the concept of "independent" since Section 7.2 of the OMP states that when independent verification is required for equipment that is removed from service, the two persons performing the task shall work together and when the equipment is returned to service or when performing a valve checklists, the persons may work together.

Additionally, Station Directive 4.2.2 stated that two qualified individuals can accomplish independent verification by using a single remote indication. OMP 1-6 now states that independent verification shall be accomplished by direct observation of the action or observation of a remote indication. Licensee management was informed that the aforementioned procedural means of accomplishing independent verification are contrary to IE Information Notice No. 84-51, "Independent Verification" dated June 26, 1984, in that:

Independent verification should be independent with respect to personnel, i.e., two appropriately qualified individuals, operating independently, should verify that equipment has been properly returned to service. Both verifications are to be implemented by procedure and documented by the initials or signature of the two individuals performing the alignment and verification.

In certain instances, it may be possible to accomplish one verification from observing control room instruments, annunciators, valve position indicators, etc. This is acceptable as long as the control room indication is a positive one and is directly observed and documented.

Regarding the qualifications of those who perform independent verification, OMP 1-6 Section 7.1 states that a qualified person is one who holds a current license on the applicable unit or has been qualified in accordance with the Non-NRC Licensed Personnel Training Program; however, the person designated to perform the second verification will only have to be qualified by completing OMP 1-8, "Valve and Breaker Position Verification and Operation." OMP 1-8 describes the means by which valve positions and breaker positions can be determined. It also describes the operation of various valve and breakers.

The Non-NRC Licensed Personnel training program is described in Station Directive 3.1.37, "Qualification of Non-NRC Licensed Personnel" which requires the individual to have completed a specific task list; however, the Superintendent of Operations may designate persons as qualified for the operation of certain equipment and/or the performance of certain procedures, without having completed this task list. The inspectors expressed concern to licensee management that the two qualified personnel are not of equal qualification and since, by plant procedures, they may work together on system lineups, it could be possible for one individual to influence the other into accepting an improper lineup.

IE Information Notice No. 84-51 further states that clearly, all components that provide a safety function should be independently verified when alignment changes have been made in a mode where the system is required. Similarly, the alignments of safety systems and individual components relating to safety, made in preparation for entering a mode in which the systems or components are required, must be independently verified. Following a plant outage where maintenance was performed, all safety system lineups should be performed using independent verification before entering the mode where that equipment is required to be operable.

The inspectors observed that the licensee does not independently verify all components that provide a safety function when alignment changes have been made in a mode where the system is required. Additionally, the licensee does not perform an independent verification of all safety system lineups before entering the mode where that equipment is required to be operable following a plant outage where maintenance was performed. The inspectors noted that the licensee relies on the last completed full system lineup which in some instances had been performed years earlier and their removal and restoration procedures (partial lineups) to insure operability of safety systems when escalating modes from an outage condition.

- (2) The inspectors reviewed selected completed control room copies of licensee operating procedures and Operation Management Procedure 1-2, "Use of Procedures," Revision 1, dated June 4, 1984. The

inspectors noted that OMP 1-2 allows a supervisor with a SRO license to make a determination to "N/A" a step in a procedure. This determination is documented on the procedure copy by the supervisor initiating the "N/A". Procedure steps or sections that are not performed due to unused options do not require an "N/A"; however, the reason for the non-performance option must be documented on a "Completed Procedure Process Form" attached to the completed procedure.

A review of OP/2/A/6200/04, "Residual Heat Removal System" indicated that Enclosure 4.5., page 3 of 4, steps 2.2.3 through 2.2.9 were not performed. Since these steps represent an unused option, the supervisor, according to OMP 1-2, should have left them blank and documented the reason on the Completed Procedure Process Form; instead the steps were identified as "N/A" with no reason given for not completing this section of the procedure.

The aforementioned comment also applies to a review of OP/2/A/6250/02, "Auxiliary Feedwater System" steps 2.5.1 through 2.5.4. This procedure was last completed on July 7, 1984.

- (3) When an operating procedure is completed, OMP 1-2 requires that an Operations Supervisor, normally a Shift Supervisor or Assistant Supervisor, will review the completed procedure and will be responsible for approval of completed OPs as indicated by signing Part 6 "Procedure Completion Approved" on the Completed Procedure Process Record form.

The inspectors noted that the completed procedure OP/2/A/6200/06, "Safety Injection" completed November 3, 1983, did not have the requisite Part 6 signature.

The inspectors further noted that OMP 1-2 allows the Unit Coordinator or Duty Engineer to request that initials on a Valve Checklist or initials in a procedure body of a Completed Working Copy be transferred to an updated issue of the Working Copy Procedure. Procedurally, the following stipulations apply to the transfer of initials:

The transfer of initials must be requested by the Unit Coordinator or Duty Engineer.

Any licensed operator can transfer initials.

Only the initials of the person making the transfer need to be on the new Working Copy.

The person making the transfer can initial both the Valve Checklist and the Independent Verification Valve Checklist of a procedure.

The old completed Working Copy of the procedure will be routed to the Unit Coordinator or his designee.

Any discrepancy found between the old Completed Working Copy procedure and the new Working Copy shall be resolved by the Shift Supervisor or Unit Supervisor.

The new Completed Working Copy shall have a note on the Completed Procedure Process Form under the "Remarks" section stating that all initials on the procedure have been transferred from an old Completed Working Copy.

Contrary to the above, the inspectors observed that Enclosure 4.5 "Valve Checklist" for procedure OP/1/A/6350/02, "Diesel Generator" was incomplete in that the position of valves IFD-140, 141, 144, and 145 had not been identified. Although these valves were initialed as being checked, licensee management indicated that possibly due to a transcription error the position indication had been lost. Additionally, step 2.7 of the OP/1/A/6350/02, which procedurally required independent verification had been left blank without explanation. The aforementioned discrepancies had not been found, resolved, or documented in accordance with OMP 1-2.

The procedural violations delineated in the text of this section represent four additional examples of violation of the McGuire Technical Specification 6.8.1 which requires that written procedures required to implement the requirements of NUREG-0737 shall be established, implemented, and maintained. (Violation 50-369/84-24-01, 50-370/84-21-01.)

- (4) The inspectors observed that the licensee has specifically identified those valves, breakers, components, and procedures to be independently verified. A review of this list by the inspectors indicated that most vent and drain valves had been eliminated from independent verification. Licensee Management indicated that any misalignment of these valves would be indicated by associated system level and/or pressure drops, high sump levels, increased radiation monitor readings, etc.. The inspectors expressed concern that misalignment of a vent and drain valve in the Reactor Coolant System, an ECCS, or ESF system could result in the licensee exceeding a technical specification limiting condition of operation, an unnecessary challenge to safety systems, or personnel contamination or injury. The inspectors informed licensee management that their current independent verification program does not meet the intent of NUREG-0737 Action Item 1.C.6 specifically in light of subsequent NRC guidance provided in IE Information Notice No. 84-51. The inspectors informed licensee management that this issue remains open as an Inspector Followup Item (IFI 50-369/84-24-04, 50-370/84-21-04).

- (5) During the review of licensee operating procedures concerning independent verification, the inspection team requested the Duke Power Corporate Nuclear Safety Review Board (NSRB) review of selected revised operating procedures as required by McGuire Technical Specification 6.8. A representative from NSRB contacted the inspection team and informed them that although the station Master Files indicated that the procedures had been forwarded on December 29, 1983, to the NSRB for review, the procedure revisions had never been received or reviewed. The following is a list of the aforementioned procedures:

OP/0/A/6450/06	Chgs. Rev. 14
OP/1/A/6200/09	Chgs. Rev. 22
OP/2/A/6150/02A	Chgs. Rev. 1
OP/1/A/6200/10	Chgs. Rev. 29
OP/2/A/6200/10	Chgs. Rev. 9
OP/2/A/6200/04	Chgs. Rev. 9
OP/1/A/6200/04	Chgs. Rev. 44
OP/1/A/6250/02	Chgs. Rev. 19
OP/2/A/6250/02	Chgs. Rev. 1
OP/1/A/6250/03A	Chgs. Rev. 10
OP/2/A/6250/03A	Chgs. Rev. 1
OP/2/A/6150/01	Chgs. Rev. 11
OP/0/A/6350/01A	Chgs. Rev. 8
OP/2/A/6350/02	Chgs. Rev. 7
OP/1/A/6350/02	Chgs. Rev. 14
OP/2/A/6200/01	Chgs. Rev. 10
OP/1/A/6200/01	Chgs. Rev. 43
OP/1/A/6400/02A	Chgs. Rev. 38

The inspector informed licensee management that the aforementioned event represented a violation of McGuire Technical Specification 6.5.2.8.J. which states that the NSRB shall review reports of activities performed under the provisions of Specification 6.5.1.1. Specification 6.5.1.1 states that each procedure and program required by Specification 6.8 and other procedures which affect nuclear safety, and changes thereto, shall be prepared by a qualified individual/organization. Each such procedure, and changes thereto, shall be reviewed by an individual/group other than the individual/group which prepared the procedure, or changes thereto, but who may be from the same organization as the individual/group which prepared the procedure, or changes thereto. (Violation 50-369/84-24-05, 50-370/84-21-05.)

11. I.A.1.1 Shift Technical Advisor

This NUREG 0737 Action Item requires each licensee shall provide an on-shift technical advisor to the shift supervisor. The Shift Technical Advisor (STA) may serve more than one unit at a multi-unit site if qualified to perform the advisor function for the various units.

The STA shall have a bachelor's degree or equivalent in a scientific or engineering discipline and have received specific training in the response and analysis of the plant for transients and accidents. The STA shall also receive training in plant design and layout, including the capabilities of instrumentation and controls in the control room. The licensee shall assign normal duties to the STAs that pertain to the engineering aspects of assuring safe operations of the plant, including the review and evaluation of operating experience.

The inspectors selectively reviewed the training provided the licensee's STA and found that training to be adequate.

The inspection team reviewed McGuire Station Directive 3.1.31, Revision 3, dated June 10, 1983. This Station Directive states that the licensee's STAs:

- a. Should be a high school graduate with two (2) years technical school or equivalent experience.
- b. Shall have a minimum of two (2) years nuclear power plant experience accompanied by an overall knowledge of the plant. At least one (1) year shall be at the station at which the position is to be filled.
- c. Shall hold a Senior Reactor Operators License or shall have a Bachelor's degree in engineering or a related physical science.
- d. Shall have a working knowledge of steam and water properties.

The inspectors stated that although McGuire Safety Evaluation Report Units 1 and 2, Supplement 5, dated April 1981 stated that the qualifications of the STA's as described by the licensee are acceptable; the aforementioned NUREG-0737 item requires that STA's shall have a bachelor's degree or equivalent.

Licensee management indicated that presently some STA's are not degreed. In a letter to Mr. William O. Parker, Sr., Vice President, Steam Production, Duke Power Company from Mr. John F. Stoley, Project Manager, Operating Reactor Branch #4, Division of Licensing, U. S. Nuclear Regulatory Commission, dated July 9, 1982; regarding Duke Power's implementation of NUREG-0737 Item 1.A.1.1 at their Oconee Nuclear Station, Mr. Stoley states "we found that your STA program includes the training of some candidates who do not hold a bachelor's degree. We realize that you have selected candidates who have considerable nuclear power plant operations experience and who hold a current SRO license. Further, it is evident that sufficient training has been provided to meet the General Technical Education requirement. We do consider this extra experience and SRO license for the STA to be advantageous to plant safety.

It was our intent, though, to have STAs with a degree or the equivalent of a degree. For the interim, while NRC determines the future role of the STA in conjunction with upgraded operator qualifications, your STA selections are acceptable and meet the intent of the training requirements."

Subsequently, Duke Power Company has committed to provide STA's who have a bachelor's degree or equivalent in a scientific or engineering discipline by September 1985, at the Oconee Nuclear Station.

Discussions with licensee management indicated that no such commitment has been solicited regarding Duke Power Company's McGuire Nuclear Station.

The inspector informed licensee management that this issue will be considered an Inspector Follow-up Item (IFI 50-369/84-24-06, and 50-370/84-21-06).