



UNITED STATES
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REGION II
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Report Nos.: 50-250/95-17 and 50-251/95-17

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33102

Docket Nos.: 50-250 and 50-251

License Nos.: DPR-31 and DPR-41

Facility Name: Turkey Point Plant Units 3 and 4

Inspection Conducted: November 6-17, 1995

Inspector: *R. Moore*
R. Moore

11/29/95
Date signed

Approved by: *Charles Alast*
C. Casto, Chief
Engineering Branch
Division of Reactor Safety

12/7/95
Date Signed

SUMMARY

Scope:

This routine, announced inspection was conducted in the areas of procurement engineering, focussing on material upgrades and item substitutions.

Results:

In the areas inspected, a non-cited violation was identified for failure to follow procedures to maintain QA records.

The procurement procedures did not fully compensate for organization and process evolutions experienced since 1993, resulting in ambiguous designation of responsibilities and activities. Although this impacted the effectiveness of the procurement process, no examples were identified in which unqualified equipment was installed in safety related applications.

These program deficiencies were identified in previous licensee QA audits yet were not effectively resolved, as demonstrated by similar findings in a recently completed comprehensive audit. The licensee assigned a management task force to review the procurement process.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *P. Banaszak, Technical Department Manager
- S. Baum, Quality Control Inspector
- R. Earl, Quality Control Supervisor
- *M. Huba, Procurement Supervisor
- *R. Hestermen, Maintenance Manager
- *R. Hovey, Vice President
- *J. Knorr, Regulation and Compliance Specialist
- *G. Kuhn, Procurement Engineering Supervisor
- *R. Kundalkar, Engineering Manager
- *R. Rose, Nuclear Materials Management Manager
- *R. Symes, Quality Assurance Manager, Juno Beach
- *G. Warriner, Quality Assurance Supervisor
- *E. Weinkam, Licensing Manager
- C. Wilhelm, Quality Control Lead Inspector

Other licensee employees contacted during this inspection included technicians, engineers, and administrative personnel.

NRC Employees

- *T. Johnson, Senior Resident Inspector
- *B. Desai, Resident Inspector
- *K. Landis, R II, Branch Chief, Division of Reactor Protection

*Attended exit interview.

Acronyms and abbreviations are identified in paragraph 5.0.

2.0 Background

The procurement of safety related items at Turkey Point is a multi-function interdepartmental process. Procurement Engineering (PE) establishes the technical and quality requirements for the purchased item which are documented in a technical evaluation. Nuclear Material Management (NMM) incorporates these requirements into purchase documentation transmitted to the supplier. Quality Control (QC) receipt inspection verifies the acceptance criteria established by PE when the material is received on site.

Organization and process evolutions since 1993 have introduced challenges to the procurement process at Turkey Point. The in-line Quality Assurance (QA) review of safety related procurement was discontinued in March, 1993. The independent review was assumed by technical reviewers in PE. The technical reviewers were transferred to NMM in late 1993.

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The procurement procedures were changed in February, 1994, to delete an intermediate tier of QA program implementing procedures. In 1994, PE converted to an electronic documentation system, Passport. In 1995, NMM converted to the Passport system.

This inspection reviewed the licensee's safety related procurement activities related to commercial grade dedication (CGD) and item equivalency evaluations (IEE) for item substitutions. Additionally, reviewed were PE training and qualification, and QA monitoring of the procurement process. The following provided regulatory guidance for this inspection:

Regulatory Guide 1.123, QA Requirements for Control of Items and Services for Nuclear Power Plants

ANSI N45.2.13-1976, QA Requirements for Control of Items and Services for Nuclear Power Plants

NRC Generic Letter 91-05, Licensee Commercial Grade Procurement and Dedication Programs

FPL Topical Quality Assurance Report (FPLTQAR 1-76A)

3.0 Procurement Engineering

Technical and quality requirements for a CGD or IEE of a safety related items were documented in technical evaluations developed by PE. The inspector reviewed the training and certification requirements for procurement engineers, discussed with the engineers the basis for technical requirements specified in the CGD and IEE documents, and reviewed the procedures used by PE for this activity.

Certification requirements for the procurement engineers were established in the Nuclear Engineering Certification Guide for Procurement Engineers. The certification included position specific training in procurement documentation, CGD, IEE, and continuing training in 10 CFR 50.59 safety evaluations, technical standards and the licensee's TQAR program. The training documentation indicated that the eight PE engineers were appropriately certified for their technical procurement functions.

The inspector discussed technical evaluations, for the purchase orders listed in paragraph 3.3, with the engineers to assess their familiarity with the implementing procedures and determination of fit, form, and function for the associated purchased item. In general, the engineers provided adequate justification in the documentation for acceptability of an item. The inspector noted two evaluations in which applicable item parameters were not clearly addressed in the documentation. Procurement technical evaluation 037254 justified a shaft shear key material substitute but did not specifically reference the comparative

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shear strength of the original and replacement materials. An evaluation for a circuit breaker substitute, evaluation 039167, did not address the impact or applicability of a time delay change for the overcurrent trip in specific amperage ranges. Discussions with the responsible engineers indicated that the parameters were evaluated but were not clearly documented. The inspector concluded that the engineers were familiar with implementing procedures and demonstrated adequate capability to perform their technical function.

The following procedures delineated the PE responsibilities in the procurement process and provided guidance for this activity.

QI 4-PTN-1, Procurement Control, dated January 10, 1995

ENG-QI 4.0, Procurement Support Activities, revision 0

ENG-QI 4.2, Procurement Engineering Control, revision 0

ENG-QI 4.4, Procurement Classifications , revision 0

ENG-QI 4.7, Procurement Requisitions, revision 1

The inspector noted that technical evaluations received an independent review from a procurement engineer not involved with the development of the original evaluation. Discussions with the licensee indicated that this review was the "independent technical and quality review of procurement documents" referenced in the TQAR and the licensee's letter to the NRC dated January 28, 1993 (FPL Memo L-93-19) which requested the discontinuation of the in-line QA review of safety related procurement documents. The PE procedures did not clearly establish this second technical review as the review replacing the QA in-line review.

3.1 Nuclear Materials Management

The NMM group provided the administrative function of implementing the PE established technical and quality requirements into purchase output documentation transmitted to the supplier. There were six purchasing agents in NMM, three of which functioned as technical reviewers, NMM/TRs. The NMM/TRs performed an initial technical screening of a purchase requisition to determine if an existing technical evaluation was applicable. Purchasing agents also acted as quality reviewers to provide an independent review of the purchase order.

Guidance for NMM activities was provided by QI 4-PTN-1. The inspector noted that the procedure was unclear in several areas. The procedure did not clearly define the functions and limitations of the purchasing agent, NMM/TR, and quality reviewers. As discussed in the previous paragraph, defining who performs the independent review referenced in the licensee letter and what constitutes this review was not clear. The licensee's initial response to this question during the inspection was

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that the review was performed by the NMM group. The licensee later stated that the review was performed by PE. In cases where an existing procurement technical evaluation is determined by NMM/TR to be applicable, the original technical evaluation independent review is defined as the review replacing the in-line QA review even though PE does not review that purchase requisition or purchase order. The licensee recognized there were procedure discrepancies and a revision was in draft during this inspection. Procedure deficiencies were identified as a finding in the recent licensee QA audit of procurement.

There was no training documentation to support NMM/TR qualifications to perform their technical screening function. It was noted that two of the three NMM/TRs previously performed this function within PE. The third was an experienced purchase agent. Training appeared to be accomplished by on-the-job training without specific performance criteria established. The inspector reviewed a sample of purchase orders processed by NMM/TR using existing technical evaluations. The referenced technical evaluations provided appropriate technical and quality requirements for those purchases reviewed.

The inspector noted several examples of technical issues which were identified by deficiency reports (DRs) and inappropriately resolved by NMM/TRs. Procedure QI 4-PTN-1 assigns the resolution of technical issues to PE. The QC receipt inspection procedure, Technique Sheet 7.1, states that NMM will resolve DRs which do not affect the physical, technical or engineering characteristic of an item. A conflict in specified shelf life for a piping coupling was identified in DR D0034611. Resistors which did not meet the original acceptance criteria were identified on DR R94-4292. DR 95-D0718 identified a safety related pressure gage which did not meet the original acceptance criteria. In each of these examples, NMM provided technical resolution without the concurrence of PE. The DRs were returned to PE for concurrence by QC.

Another example of NMM staff exceeding their functional responsibilities was identified in CR 95-178. This item identified a purchase agent performing technical and quality functions to recover and accept a valve diaphragm which was designated as storm damaged. The item was further identified as non-cited violation 50-250,251/95-10-01. These examples demonstrate that the licensee's procedures and training did not adequately define the functions of the NMM purchase agents and NMM/TRs. The issue of NMM staff exceeding their functional responsibilities and deficient procedures was identified as a finding in the recent QA audit (QAS-NMM-95-1).

3.2 QC Receipt Inspection

The inspector reviewed the receipt inspection documentation for the CGDs and IEEs listed in paragraph 3.3. Receipt inspection guidance was provided by PTN Quality Department Technique Sheet (TS) 7.1, Receipt Inspection of Materials, Parts and Components, revision 11. The

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procedure provided detailed guidance for the receipt inspection activities. The QC receipt inspectors were certified through a certification program based on ANSI/ASME N45.2.6.

Review of the receipt inspection documentation demonstrated that the QC inspectors were diligent in the application and verification of the established acceptance criteria specified in the PE technical evaluations. Discrepancies in material or documentation were identified by a DR and not accepted until the discrepancy was resolved. The major causes for the 470 receipt inspection DRs written in 1995 were purchase order error (189), wrong part or part number (68), and incorrect certification of compliance (51). The DRs indicated the QC receipt staff provided assurance that unqualified equipment was not received for installation in safety related applications. The inspector concluded that QC receipt inspection was a strength in the safety related procurement process at Turkey Point.

3.3 CGD and IEE Samples.

The following CGD documentation was reviewed to verify that the safety function of the item was identified and appropriate acceptance criteria were specified. The associated receipt inspection documentation was reviewed to determine if the acceptance criteria were verified. No examples were identified in which unqualified equipment was installed in safety related applications.

<u>Procurement Eval. No.</u>	<u>Item</u>
036670	Shaft and impeller assembly
036669	Shaft and impeller assembly
033418	Fuse Block
037057	Hex head bolt
035336	ASTM A-395 Bonnet
037482	Switgear charging motor brush
035228	Printed Circuit Assembly Card
036435	Printed Circuit Card
036867	Circuit Breaker
034221	Pulsation Dampener
031002	Pneumatic Speed Control Governor
031105	Switch Mechanism
036224	150 HP motor
034421	Disc nut
036360	Power Driven Potentiometer
035525	MSIV Piston Rod Assembly Seal
038690	Shaft
037804	Actuator spring
033018	Union reducer
033739	1 1/2 inch lift check valve
038689	Relief Valve

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The CGD documentation on the above items appropriately identified the safety function of the item and specified the acceptance criteria. The receipt inspection documentation verified the specified criteria for item receipt.

The following IEE procurement evaluations were reviewed:

037021	036938	036318
037258	035287	034068
037760	037840	036704
038903	034320	037036
037015	037652	037254
037194	036045	

The inspector concluded that the item substitutes were appropriately evaluated and the critical characteristics identified and addressed.

The following POs were for purchase orders of CGD items which referenced existing procurement technical evaluations as determined by NMM/TR screeners. Purchase Order No.: 11409, 10873, 09395, 09752, 10110, 09856, 10682, 11029, 11868. These were for items such as bearings, hoses, o-rings, resistors, capacitors, and potentiometers. The inspector verified that the referenced procurement evaluations were applicable to the purchased item.

In the procurement documentation reviewed, the inspector identified two examples in which the documentation was not complete. The procurement documentation for EDG lift check valves on PO B94677-90416 did not include the work order which documented the required hydrostatic test. The test was performed on a minor work order which was not maintained as a QA record. Procedure O-ADM-701, Control of Work Activities, dated November 27, 1994, requires that safety related work be documented on a work order and maintained as a QA record. The test was documented on a QC inspector note pad. The documentation on PO C94654-90779 for a EDG Air Start Relief Valve which specified the seismic parameters for valve qualification could not be located. The technical evaluation specified the parameters and the vender certification stated that the PO requirements were met, however the PO attachment which included the parameters could not be located. Procedure QI 4-PTN-1 required that procurement documentation be maintained as a QA record. These examples of failure to follow procedure are identified as Violation 50-250,251/95-17-01. This item meets the criteria of Section VII B. (2) of the Enforcement Policy for a non-cited violation.

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3.4 QA Oversight

The inspector reviewed the QA oversight of safety related procurement activities at Turkey Point. The following Audits were reviewed:

QAS-NMM-93-1	June 29, 1993
QAS-NMM-94-1P	October 28, 1994
QAS-QAD-95-1	March 17, 1995
QAS-NMM-95-1	November 22, 1995
QAS-PMON-95-4	June 20, 1995

The NMM 93-1 audit reviewed procurement activities of the NMM group. One finding stated that the department lacked a documented continuing technical and quality assurance training program. The inspector noted during the inspection that NMM continued to lack this training program. Audit NMM 94-1P reviewed procurement documentation quality following the discontinuation of the QA in-line review. This audit identified that the implementation of program requirements from the deleted Quality Procedures to the Quality Instructions (QIs) was deficient. Additionally, this audit identified that the independent Procurement Engineering technical and quality review which replaced the in-line QA review was not being properly implemented. The inspector noted that the recent QA audit, NMM 95-1, identified deficient procedures in the current procurement process. Also the current implementation of the technical and quality reviews was ambiguous.

Audit PMON 95-4 reviewed the implementation of the electronic Passport documentation system and noted difficulties in determining current applicable engineering procurement requirements. The transition from a hard copy documentation system to an electronic system was the source of numerous DRs written by QC. These difficulties were attributable to inconsistent procedures and training between the interdependent procurement departments. The inspector noted that a reduction in DRs in this area in the last quarter of 1995 indicated improvement. Audit QAD 95-1 focussed on commercial grade dedication activity. The audit noted the effectiveness of the QC receipt inspection staff in identification and resolution of discrepancies. Additionally identified was a weakness in procurement documentation. Deficient procurement documentation was the subject of a non-cited violation in this inspection.

The NMM 95-1 audit recently completed was the only comprehensive audit of the procurement process. This audit included the activities at Turkey Point, St. Lucie, and Juno Beach. The audit conclusion was that the requirements of the QA program as described in the FPL Topical QA report were not adequately addressed by procedures and that existing procedures were not adequately implemented. A finding stated that the documentation of the current processes was lagging the implementation of those processes. Other findings were related to deficient quality reviews of procurement documents, technical evaluations, and records. As a result of the audit findings, the licensee initiated a management

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task force chaired by a vice president to review the FPL procurement process. The task force activities were scheduled for completion by the end of 1995.

The inspector noted that the findings in the recent audit were generally repetitions of findings from previous audits indicating a limited effectiveness in resolving QA audit findings. A major contributor to the findings was inconsistent procedures and training on program changes resulting from the organizational and process evolutions. The inspector noted that the audit findings were limited to program deficiencies; there were no examples identified by the audits in which unqualified equipment was installed in the plant.

4.0. Exit Meeting

The inspection scope and results were summarized on November 17, 1995 with those individuals indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection finding below. There were no dissenting comments received from the licensee. Proprietary information is not contained in this report.

NCV 50-250,251/95-17-01, Failure to Follow Procedures for Maintenance of QA Records

5.0 Acronyms and Abbreviations

ANSI.	American Nuclear Standards Institute
CGD	Commercial Grade Dedication
DR	Deficiency Report
EDG	Emergency Diesel Generator
FPL	Florida Power and Light
IEE	Item Equivalency Evaluation
NMM	Nuclear Material Management
NMM/TR	NMM/Technical Reviewer
PE	Procurement Engineer(ing)
PO	Purchase Order
PR	Purchase Requisition
QA	Quality Assurance
QC	Quality Control
QI	Quality Instruction
TQAR	Topical Quality Assurance Program
TS	Technique Sheet

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