

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	Docket Nos. 50-313
)	50-368
ARKANSAS POWER & LIGHT COMPANY)	
)	
(Arkansas Nuclear One, Units)	License Nos. DPR-51, NPF-6
1 and 2))	EA 84-66

LICENSEE'S RESPONSE TO
NOTICE OF VIOLATION

I. INTRODUCTION

Pursuant to 10CFR §2.201, Arkansas Power and Light Company ("Licensee") hereby responds to the Notice of Violation ("NOV") issued on July 25, 1984, in the captioned enforcement action. Set forth below is statement (1) admitting the alleged violations and (2) outlining the prompt and extensive corrective actions Licensee has undertaken in light of the alleged violations.

II. ADMISSION OF ALLEGED VIOLATIONS

The NOV alleges that the Licensee accepted fastener certifications from Cardinal Industrial Products ("Cardinal") and Southern Bolt & Fastener ("Southern Bolt") which did not comply with certain documentation requirements of the applicable purchase orders. The NOV further alleges that acceptance of these certifications violated 10CFR Part 50, Appendix B, Criterion VII and Paragraphs 5.0 and 6.1.4 of Licensee's Procedure No.

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1033.01. Criterion VII requires measures to assure that purchased materials conform to procurement documents. Procedure No. 1033.01 requires the Licensee's quality control staff to verify that certain classes of materials and associated documentation conform to procurement document requirements.

Licensee admits that it accepted fastener certifications from Cardinal and Southern Bolt which did not comply with documentation requirements on the applicable purchase orders. Licensee further admits that doing so constituted a violation of Criterion VII and Procedure No. 1033.01.

III. CORRECTIVE ACTION

Prior to the issuance by NRC of the NOV, Licensee had commenced prompt and extensive corrective actions. Those corrective actions were aimed both at resolving the specific violations identified by NRC and improving the effectiveness of Licensee's overall QA program.

Corrective Actions Related to Alleged Violations - The Notice of Violation identifies three purchase orders as to which Licensee's quality control inspections at the contractor site, and/or subsequent review of documentation for received materials, did not assure conformance to procurement requirements, viz., P. O. # 73555, P. O. # 75400, and P. O. #93800. The first two of these purchase orders were for, respectively, primary manway studs and nuts, and thermal shield special bolts from Cardinal. P.O. # 93800 was for service water valve replacement fasteners from Southern Bolt.

When Licensee became aware of documentation deficiencies in connection with the materials purchased from Cardinal, it immediately commenced a special audit at Cardinal's facility. That audit took place on November 2-4, 1983, and was intended to verify that Cardinal could provide traceability and accountability of materials supplied to Licensee on P.O. # 73555 and # 75400. Documentation reviewed during the audit included customer production records, actual material test reports, tensile and impact test reports, heat treatment certificates, non-destructive examination records and nonconformance reports associated with each of the purchase orders.

As a result of this audit, deficiencies were found in connection with P.O. # 73555 (studs and nuts) in the areas of production control, material identification, and nonconformance control. These deficiencies were similar to those discovered by NRC when it audited Cardinal in October of 1983.

In addition, the Licensee commenced independent testing of all studs purchased under P. O. # 73555 to verify conformance to required specifications and removed from service and rejected all nuts associated with this P.O. Tests were run on samples from each of the three heat codes for stud materials purchased under P. O. # 73555. The tests were designed to assess compliance with material specification and ASME code requirements for tensile, yield, hardness, Charpy impact and chemical properties. These test results met the acceptance criteria of the material specification and ASME code.

Licensee's inquiry regarding P. O. # 75400 (thermal shield bolts) revealed a somewhat different result from the conclusions reached by NRC in the I&E Report on which this enforcement action was based. Such report stated that certified material test results ("CMTR") did not address cobalt content and that the results of the stress rupture test did not meet the requirements of SA-453 material specification.* While the CMTRs did not address cobalt content, Cardinal had nevertheless conducted a cobalt test. The results of the test were not reflected on the CMTRs because the cobalt value was so low that Cardinal's test lab did not formally document them. Cardinal has since sent Licensee this test report.

More importantly, contrary to the implication of the inspection report, there is no requirement that a stress rupture test per SA-453 be performed on the thermal shield bolts. This test is not required for 660A material designed for a service temperature of 800°F or lower. The design temperature for these bolts is 550°F. Therefore, a stress rupture test was not required, nor was it specified for the thermal shield bolts purchased in P. O. # 75400.

In any event, as a result of the November audit, Licensee placed procurement restrictions on Cardinal. The effect of placing such restrictions on Cardinal was to assure that future procurements include additional quality controls such as increased source inspections or surveillance to assure that future deficiencies do not occur. In addition,

*I&E Report 50-313/83-35, 50-368/83-35; February 17, 1984 at 6-7.

QA must approve each order placed with Cardinal. This approval will usually be accompanied by additional quality controls of the type noted above. These restrictions remain in place although Cardinal has since obtained ASME certification.

The Licensee also took prompt corrective action when it became aware of documentation deficiencies concerning P. O. # 93800, which involved service water valve replacement fasteners from Southern Bolt. These replacements were to have met the requirements of ASME Section III, Class 3. When the Licensee discovered this requirement was not satisfied, Licensee placed procurement restrictions on Southern Bolt, limiting it to supplying only non-ASME materials.

Lastly, with respect to the materials already accepted under P.O. # 93800 which did not satisfy quality program requirements, the Licensee elected to qualify the material to ASME Code Case N-242-1. Qualification on this basis is an alternative to qualification on the basis of compliance by the supplier with P.O. # 93800.

At bottom, in all instances where documentation deficiencies were discovered, Licensee promptly placed procurement restrictions on the involved supplier. In addition, within eight weeks after the AP&L special audit of Cardinal, Licensee dispositioned all AP&L materials identified as being associated with the three purchase orders of concern to NRC by testing, requalification, or other means. In doing so Licensee documented the fact that there were no safety concerns associated with the use of

bolting materia's from Cardinal or Southern Bolt. Lastly, Licensee resolved whatever documentation deficiencies were identified in connection with these purchase orders.

Generic Corrective Actions - Although Licensee does not believe that the aileged violations reflect a programmatic breakdown of its procurement and receipt inspection activities, it has nevertheless instituted a number of significant generic actions to improve overall this aspect of its QA program. Those actions are described below.

First, the Licensee evaluated all vendors from which it procured materials to ASME Section III requirements in order to assure that these vendors held an ASME Code certificate. As a result of this evaluation, the Licensee identified three vendors from which it procured materials to ASME Section III requirements but which did not hold a Code certificate. These vendors were Cardinal, Southern Bolt, and Standard Press Steel. As to these companies, the Licensee initiated a review of vendor-supplied documentation and the material received.

ASME Section III procurements from Cardinal were limited to purchases through P. O. # 73555, # 75400, and # 73794. The results of Licensee's investigation in connection with P. O. # 73555 and # 75400 are discussed above. No specific discrepancies were identified in Licensee's audit in connection with P. O. # 73794.

All purchase orders pertaining to ASME Section III purchases from Southern Bolt were reviewed for documentation required by ASME Section III. Information was missing in a number of CMTRs involving heat treatment information, hardness values after heat treatment, and impact tests. Where such information was not readily available from the vendor, discrepancies were documented using Nonconformance Reports (NCR). In all cases, these NCRs were subsequently closed.

Only one ASME Section III procurement was made from Standard Press Steel, P.O. # 81149. Subsequent to Licensees March 16, 1984, letter to J. R. Streeter, Chief of Reactor Project Branch #2 of Region IV, a discrepancy was found in one CMTR involving missing information regarding chemical analysis and heat treatment conditions. This information was later obtained from the vendor. This additional discrepancy was discovered by Licensee during a subsequent and more detailed review of P.O. # 81149.

Second, the Licensee revised in December, 1983, its QVL to restrict purchases from Cardinal, Southern Bolt, and Standard Press Steel. At the current time, the QVL includes restrictions on both Cardinal and Southern Bolt. Although Cardinal has since received an ASME Certification, as discussed above, restrictions remain in place requiring separate QA approval prior to the purchase of ASME Section III materials. Standard Press Steel expired from the QVL on April 6, 1984. As a result, no ASME Section III purchases from it are authorized.

In addition, the QVL had been previously revised in mid-1983 to encompass information derived from NRC vendor inspection reports and I&E

Bulletins. This information includes a brief description of problems identified (by NRC or other licensees) with particular vendors and any applicable restrictions or instructions concerning procurement from such vendors imposed as a result of the identification of these problems.

Third, the Licensee in March 1984, augmented its existing QC Staff with two contract personnel who have expertise in ASME Code requirements. These additional personnel were selected to aid the existing QC staff in its review of procurement documentation and in receipt inspection activities.

Fourth, the Licensee has committed to participate on ASME survey teams to assure that utility concerns are adequately addressed during Code surveys. An ASME survey team consists of two ASME representatives, an inspector from the National Board of Boiler Pressure Inspectors, a utility representative, a state representative, and an authorized inspection agency representative. The survey team first performs a detailed review of the auditee's QA manual in order to assure that adequate controls are identified in the manual such that ASME quality program requirements (NCA 3800 or NCA 4000) are satisfied. A program audit by the team members is then performed to assure satisfactory implementation of the program.

As a utility representative on the ASME Survey Team, Licensee will be involved with all aspects of Code surveys, and it will have a vote equal to any other survey team member. As such, Licensee will be in the position of making sure that utility concerns are reflected when a decision is made to accept or reject an auditee's program. In addition, by participating in Code surveys, Licensee will be apprised of the latest ASME positions

regarding what constitutes an acceptable quality program. This will allow Licensee more effectively to keep the QA/QC aspect of its procurement program, including vendor qualification requirements, as current as possible.

One ASME survey has been completed to date and an additional survey is to be scheduled by December 1984. Licensee has advised ASME of its availability to participate in additional surveys.

Fifth, the Licensee has scheduled increased source surveillance activities at suppliers' facilities prior to shipment of selected materials. In addition, the Licensee will be increasing the number of vendor site surveys, notwithstanding the fact that such vendors may have been surveyed by ASME or others. The actual number of source surveillances and vendor surveys will vary depending on the number and complexity of purchase orders issued as well as the number of QVL additions. Nevertheless, the goal of the Licensee is to increase source surveillance activity by at least twenty-five percent and vendor site surveys by at least fifty percent over 1983 levels. As of August 15, 1984, QA performed 16 vendor surveys and Licensee anticipates that an additional eight to ten vendor surveys will be completed by the end of the year. In addition, Licensee currently has 12 purchase orders outstanding which will require source surveillance.

Sixth, Licensee has completed a training program to increase the familiarity and expertise of its personnel relative to ASME Code requirements. The training was provided by Technical Seminars Incorporated. It consisted of a four-day course and included such topics as the

requirements of the ASME Code regarding QA inspection and testing and the procurement of pressure boundary materials, parts, and components. The training course was completed on August 21. About 100 of Licensee's employees attended the course, including representatives from QA, QC, Engineering (both from ANO and Corporate Headquarters), Materials Management, Purchasing, and Maintenance.

Seventh, a QA subcommittee of the Middle South Utilities Nuclear Oversight Committee had been established prior to this Enforcement Action. The subcommittee comprises the QA managers of each of the Middle South operating companies. Its purpose is to address generic quality concerns. Licensee's experience with Cardinal, Southern Bolt and Standard Press Steel was reviewed in February 1984 by the QA subcommittee. It recommended to the Nuclear Oversight Committee that an independent testing lab be selected to perform physical and chemical testing of randomly selected warehouse stock from all Middle South operating utilities.

Eighth, Licensee has established on an interim basis its own program of independent testing. A contract with an independent testing laboratory was established and procedural guidelines for sample selection were issued by May 15, 1984. This program involves the random selection of materials (bolting, pipe, fittings, etc.) with vendor supplied material test reports. These items are then subjected to laboratory analysis and testing to verify the validity of the vendor's certification program. This program will remain in effect until the Nuclear Oversight Committee acts on the recommendation of the QA subcommittee to establish such a program for all Middle South Utilities.

Ninth, Licensee has informed vendors on his qualified vendor list that their products will be subject to independent testing. It has done so by prominently stating on every purchase order, as follows:

"QA Documentation Required. Materials Furnished under the Terms of this Purchase Document are Subject to Confirmatory Test and Analysis after Receipt by AP&L."

Licensee began including this notice on all purchase orders to QVL listed vendors on April 15, 1984, and will continue to do so indefinitely.

Tenth, Licensee informed the Institute for Nuclear Power Operations ("INPO") of this matter and provided it with a copy of its audit report on Cardinal. Licensee also requested that INPO pursue possible generic actions to prevent similar deficiencies from occurring in the future.

Eleventh, Licensee initiated an independent review of its overall procurement and receipt inspection program. Its objective was to evaluate AP&L's procurement and receipt inspection program and recommend improvements, if needed. That report has been completed and transmitted to Licensee. It is currently being evaluated and the recommendations set forth therein considered. Licensee will advise NRC of future actions regarding this report.

IV. CONCLUSION

Licensee admits that the violations as alleged by NRC occurred but notes that no significant safety concern resulted. Moreover, Licensee immediately instituted corrective action as set forth above. Licensee submits that such action was prompt and extensive.

August 24, 1984.