

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE DIRECTOR, OFFICE OF INSPECTION AND ENFORCEMENT DOCKETED
USNRC

In the Matter of)
UNION ELECTRIC COMPANY)
(Callaway Plant, Unit 1))

Docket No. 50-483
(10 C.F.R. § 2.206)

'85 JUN -7 A10:19

OFFICE OF SECRETARY
REGULATING & SERVICE
BRANCH

AFFIDAVIT OF DONALD F. SCHNELL

County of Callaway)
State of Missouri) ss.

Donald F. Schnell, being duly sworn according to law, deposes and says as follows:

1. My name is Donald F. Schnell. My business address is 1901 Gratiot Street, St. Louis, Missouri. I am Vice President, Nuclear, of Union Electric Company. As Vice President, Nuclear, I am responsible for the design, construction, and operation of the Callaway Plant. This responsibility includes developing the quality assurance program, formulating policy, and authorizing and assuring program implementation; directing activities which support the engineering, licensing, construction, testing, and operation of the Callaway Plant; and coordinating support activities performed by others who are not under my direct administrative

control. I have corporate responsibility for the construction, operation, and physical control of Callaway Plant.

2. The purpose of this affidavit is to respond to those issues raised in the "Show Cause Petition Requesting Suspension or Revocation of Operating License for Union Electric Company's Callaway Nuclear Power Plant, Unit One", which Petitioners Missouri Coalition for the Environment and Kay Drey have filed with the NRC. The affidavit describes the events leading up to Union Electric Company's determination that some QC inspector certifications were questionable. The affidavit also describes the actions that Union Electric Company took in response to this determination. I either have personal knowledge of the matters set forth herein or believe them to be true and correct on the basis of information provided to me by personnel employed in my organization.

3. The Callaway Plant is located in Callaway County, Missouri, and is owned and operated by Union Electric Company (UE). UE received a low-power operating license for the Callaway Plant on June 11, 1984, and a full-power license on October 18, 1984.

4. Quality assurance at the Callaway Plant has been accomplished through the application of two distinct programs -- the construction Quality Assurance (QA) program and the operating QA program. The construction QA program covered construction and preoperational testing (startup) and was

subject to UE oversight and auditing. The construction Quality Control (QC) activities were performed by the plant constructor, Daniel International Corporation (DIC). The preoperational testing program was directed by Union Electric personnel. Operations QC personnel were only associated with the construction QA program relative to preventative maintenance type activities to support startup. The present operating QA program (OQAP), conducted entirely by UE, was applied to systems as they were turned over to UE Nuclear Operations (UENO). Under the OQAP, the QC Department is part of UENO, while the QA Department is autonomous. Equipment performance and postmaintenance testing are not conducted by UEQC, but are conducted by UE operations personnel qualified to ANSI/ANS 3.1 and, if performed by licensed personnel, to 10 C.F.R. Part 55. Material testing is performed by UEQC under the OQAP only in the civil and welding areas in support of operational activities, and is minimal.

5. The construction QA program was implemented from 1974 to 1984. Under the construction QA program, the qualifications of DIC Quality Control (QC) personnel were certified in accordance with ANSI/ASME N45.2. 1973 (Qualifications of Inspection, Examination and Test Personnel for Nuclear Power Plants), and following revision of that standard, were recertified in accordance with ANSI/ASME N45.2.6-1978. DIC's certifications were generally narrow and task-oriented (i.e., they covered specific tasks within a discipline which an

individual was qualified to inspect). The DIC certification program was audited by DIC, by the NRC, by the Authorized Nuclear Inspector (ANI), and by UE, all of whom found it satisfactory.

6. In certifying QC inspectors under the OQAP, UE chose to use discipline-oriented certifications, versus task-oriented certifications. This is customary for an operations QC program which employs fewer personnel who consequently oversee more diverse inspection tasks than is the case in a construction program. UE also adopted the ANSI/ASME N45.2.6-1978 standard for qualifying QC personnel under the OQAP, in accordance with UE's commitment to Regulatory Guide 1.58.

7. The ANSI standard recommends levels of education and periods of "related" experience as criteria for qualification. The ANSI standard also provides that previous performance or satisfactory completion of proficiency tests are factors which may demonstrate an individual's capability (in lieu of the education and experience criteria). Neither the OQAP nor QC procedures further defined the ANSI standard's education and experience criteria. UE's OQAP and QC procedures did, however, clarify the ANSI standard's demonstrated-proficiency alternative. The clarification provided that in instances where education and experience recommendations of ANSI N45.2.6 were not met, documented results of written examinations and evaluations of actual work proficiency might be used to

demonstrate that an individual possessed comparable or equivalent competence.

8. Initial QC activities under the OQAP commenced in 1981. In March of 1981, the first three QC inspectors were certified under the OQAP as being qualified to conduct material receipt inspections. During the period from July through December, 1981, four more QC inspectors were certified for mechanical, electrical, and material receipt inspections under the OQAP. In addition, two of the QC inspectors who had been certified in March, 1981, received a total of five additional certifications. During the period from October 1981 to July 1982, QC inspectors certified under the OQAP performed a limited number of inspection activities relating to UE startup maintenance. These activities were performed utilizing procedures approved by the UE startup organization under the UE construction QA program. These initial activities remained quite limited until early 1983, when safety-related systems began to be released for operation. Concerted OQAP QC activity began in May 1983, although the OQAP was not fully implemented until January 1, 1984. From early 1983 to mid-1984, the QC department grew from about 12 persons to about 70 persons. Following release of the plant for full-power operation in October, 1984, the number of QC personnel was reduced to about 36, and today the QC department employs 21 people.

9. QA audited the QQAP QC certification program in 1981 and surveilled the program in 1982. On both occasions, deficiencies in certification documentation were discovered and corrected. These same deficiencies have not recurred (although QA determined in 1985 that additional programmatic controls were necessary to eliminate the possibility of recurrence). When the QQAP was fully implemented in January, 1984, the audit schedule for the plant operations phase was established. An audit which addressed QC inspector non-destructive examination (NDE) qualification was conducted in July, 1984. No deficiencies in NDE certifications were identified.

10. At about the same time, the rapid growth in the operations QC department (noted in Paragraph 8) began to engender some problems. As a result of this growth, a number of inspectors were temporarily upgraded to supervisory roles. When in late 1984 QC manpower began to be reduced, the temporarily upgraded inspectors reverted to non-supervisory roles. Some personnel involved found it difficult to accommodate to these changes in staffing and responsibility.

11. Interdepartmental communications were also difficult during the period of rapid growth. On a number of occasions the temporarily upgraded QC inspectors interacted directly with other departments and influenced policy at the interfaces without the concurrence of QC supervision. In some cases this interaction resulted in conflicting information and confused

direction. In order to improve consistency in communication, QC supervision issued a memorandum on March 10, 1984, asking that all problems related to QC be reported to QC supervision and requiring that all correspondence addressed outside the QC department be signed by QC supervision.

12. In December, 1984, the Assistant Manager, Support Services held meetings with a number of QC personnel to provide each the opportunity to air their concerns. Some of the concerns expressed were that QC supervisors were not involving the inspector in the decision-making process, that communication between inspectors and supervision needed improvement, that inspectors were not being kept informed, and that departmental personality problems existed. Subsequent meetings were held between QC supervision and the Superintendent, Compliance (to whom QC supervision reports). Both the Assistant Manager, Support Services, and the Superintendent, Compliance, began working to further define and resolve the various concerns, define various QC program enhancements, and to enhance communications between QC inspectors and QC supervision.

13. Subsequently, on January 25, 1985, a QC inspector brought to QA for the first time a concern related to the present QC certification issue. That inspector complained that a certain QC level III inspector was not qualified for certification. Within two days, QA began its effort to

address the matter, and on February 7, 1985, QA commenced a formal surveillance.

14. As part of this effort, QA reviewed against current OQAP requirements the certification documentation of weld inspection and NDE QC personnel. QA determined that these QC personnel were qualified in accordance with applicable procedure and standard requirements. QA also reviewed against current OQAP requirements the certification documentation of all then-employed (thirteen) receipt, mechanical, electrical, and civil certified UEQC inspectors. QA noted a lack of program criteria to define what constituted acceptable "related" experience and determined that the absence of such criteria constituted a programmatic deficiency. QA therefore formulated its own criteria, the bases for which were similar to published guidance in American Society for Nondestructive Testing, SNT-TC-1A "Personnel Qualification and Certification in Nondestructive Testing" (1975 and 1980). Applying these criteria, QA determined that the documentation was insufficient to support fourteen certifications involving nine inspectors.

15. Three of these fourteen certifications were based on proficiency evaluations, which QA also reviewed. However, QA could not determine from the documentation whether the proficiency evaluations comported with UE's clarification to the ANSI standard's demonstrated-proficiency alternative.

16. QA then interviewed the inspectors with questionable certifications. QA determined from the interviews that four of the certifications could be supported by additional documentation. That left seven inspectors with ten certifications either not meeting the education and experience requirements set forth in the ANSI standard or not having documented proficiency demonstrations and written examinations. All the inspectors who were interviewed, however, stated that they had never performed an inspection for which they did not feel qualified. They also stated that they would not have performed an inspection for which they did not feel qualified even if they were certified to perform that inspection.

17. The first action taken by QC management as a result of the QA surveillances was the prompt decertification of the seven inspectors in those ten certification areas. The four certifications which QA had determined could be supported by additional documentation were so validated. We have determined that the decertified inspectors are recertifiable in limited areas. The inspectors have not been recertified in limited areas because the program is discipline rather than task oriented.

18. QC management then conducted its own investigation to assess the situation and establish complete corrective action. Through review of records, QC identified 85 present and former QC personnel who might have performed reviews or

inspections under the OQAP, 66 of whom were former DIC QC inspectors who had been recertified under the OQAP program. (QA's initial surveillance had reviewed the certifications of presently-employed QC inspectors.) Utilizing acceptance criteria similar to those formulated by QA, QC reviewed the records and certifications of the 85 individuals. As a result of the investigation, QC identified 40 questionable certifications out of a total of 247 and confirmed the validity of the other 207. QC determined that 11 of the questionable certifications involved cases where the certified inspector had not performed any tasks covered by the certification. The remaining 29 questionable certifications involved 22 inspectors, which included inspectors previously identified by QA. As a result of this review, one currently-employed inspector was decertified in two additional disciplines.

19. Fourteen of the 22 inspectors with questionable OQAP certifications were former DIC inspectors whose prior construction QC certifications had been limited to specific tasks. As a result of UE's discipline-oriented approach and the latitude in the ANSI standard's "related experience" criterion, these inspectors had been recertified under the OQAP as being qualified to inspect any task within a discipline. For example, one QC inspector had been previously certified by DIC to conduct mechanical inspections in the areas of instrumentation and pipe, but had been recertified

under the OQAP to perform any mechanical inspection. The OQAP certifications were overbroad; the prior DIC certifications were not. All but one of the questionable certifications had been issued after QA's 1981 audit and 1982 surveillance; and two-thirds of the questionable certifications had been issued after May 1983.

20. QC also conducted a review of all work-authorizing documents generated since the start of the OQAP (about 10,000 documents in all). Of these, QC identified approximately 770 Work Requests, 175 Startup Maintenance Authorizations, and 500 Preventive Maintenance Task Sheets, that involved the 22 QC inspectors with questionable certifications.


21. QC's investigation was subsequently evaluated by QA. QA found the investigation to have been thorough. A Quality Assurance/Engineering Team was then established to provide an independent review of the work activities performed by the QC inspectors with questionable certifications. The team consisted of 2 QA engineers and 2 plant engineers. Ten different plant engineers were utilized at various times to comprise the plant engineering portion of the four-man team. Each member of the four-man team reviewed every Work Request and Startup Maintenance Authorization identified by QC as involving an inspector with a questionable certification. In addition, the team members reviewed a sample of 53 Preventive Maintenance Task Sheets (considered sufficient because of the redundant

and routine nature of the work performed). The documents were dispositioned by unanimous agreement of the team members.

22. The scope of the review included evaluation of the actual work performed by the craft, as well as the inspection and material testing activities performed by the QC inspectors, including (1) preparation of the Hold/Witness/Monitoring Point (HWMP) Notifications, (2) approval of the Maintenance Inspection Checklists (MIC), and (3) field inspections. Preestablished review guidelines were used by the team to facilitate the evaluation process. The team concluded that the majority of the work performed was within the normal skills of the craft and QC inspectors, and required minimal or no instructions. In all the remaining cases where enhanced skills were required (for example, complex component disassembly/ reassembly, such as pump rebuilding), the team by unanimous agreement determined that adequate instructions were provided to both the craft and the QC inspectors by the procedures and work documents. This review demonstrated that there was no adverse effect on plant hardware. While some activities were not examined further because of safety insignificance, subsequent testing, or other program controls on the work, the review found no instance where a QC inspector performed a test or inspection for which he was unqualified. To provide additional confidence, however, 8 work requests involving enhanced skills were chosen, and the quality of the work performed was

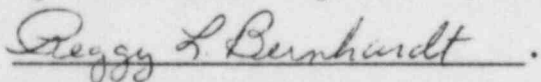
field-verified to be satisfactory by a QA engineer, a certified QC inspector, and the Callaway resident NRC inspector.

23. The root causes of the questionable certifications were also addressed. UE's QC certification procedures were revised to provide guidance concerning what "related experience" may be counted in determining whether the ANSI standard's criteria are met. The QC procedures were also revised to better describe the documentation requirements for certification documentation, including proficiency demonstration results, and additional QC program enhancements are presently being developed.


Donald F. Schnell
Vice President, Nuclear
Union Electric Company

Subscribed and sworn before me this 5th day of June, 1985.

My Commission expires *September 9, 1988*



Notary Public
County of Callaway
State of Missouri

June 6, 1985

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NUCLEAR REGULATORY COMMISSION

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In the Matter of)
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CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Response to Show Cause Petition of Missouri Coalition for the Environment and Kay Drey" and "Affidavit of Donald F. Schnell" were served this 6th day of June, 1985, by deposit in the U.S. mail, first class, postage prepaid, or where indicated by an asterisk by hand-delivery, upon the following:

* Mr. James M. Taylor, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

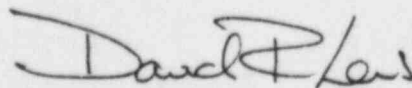
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David R. Lewis

UOSCQ 84-43

March 10, 1984

| | | |
|------------------|---------------|---------------|
| To: S.L. Bode | J.S. Diluvio | J.A. Smith |
| R.A. Barnes | R.L. Brummet | H.L. Holman |
| D.W. Peters | V.P. Portell | K.M. Robson |
| J.M. Speek | J.L. Pearson | R.D. Swank |
| D.S. Turley | J.G. Garrigan | M.J. Belcher |
| W.R. Vandeloecht | C.A. Wudtke | R.L. Pflueger |
| J.A. Ullman | P.L. Herring | R.L. Dudley |
| T.W. Ridder | T.E. Gaines | N.L. Brewer |
| C.P. Laurie | W.D. Battle | J.D. Guynn |
| B.D. Yockey | R.L. Nave | L.M. Zahara |

Subject: Effective Communication

In past weeks, there have been numerous instances demonstrating a lack of effective communication within the Q.C. Department. In addition, there have been instances where communication out of the department has been less than effective. On some occasions, there have been two or three parallel paths of communication in which sometimes different resolutions were reached. This is not only confusing, but counter productive.

In my letter UOSCQ 84-23, I stated that "All memorandums, letters and other correspondence with groups, departments or individuals other than Q.C. must be signed by me or L.M. Zahara, and should be initialed by each of the supervisory personnel through which they report to Mr. Zahara". We must have strict adherence to this policy to eliminate future communication problems.

I would like to take the opportunity to state, once again, that it is my policy, as well as that of U.E. management, to maintain an open door for communication directly with Q.C. supervisors, as well Sr. Station Management personnel. To this end, I ask that you bring problems directly to your next line of supervision (i.e. R.L. Nave or L.M. Zahara as appropriate). If a satisfactory solution cannot be reached at that level, then bring it to the direct attention of the next supervisory level. Our aim is to solve problems through communication, not create them. I would also like to say that my door is always open if you think you need to come directly to me because of the nature of the problem. If a resolution cannot be reached at my level, I will arrange for your meeting with the next level of management to persue the problem.

Persuit of Quality Related Problems: From time to time, a quality related problem may not be resolved in a way that is immediately acceptable to you as an inspector. In those cases, you are obligated to bring those concerns to your supervisor. When it has reached my level, you have fulfilled your procedural requirement as a Q.C. Inspector. You should never feel that you have the full weight of Quality on your shoulders. Ultimately, Quality decisions may be made at my level or higher. You should have confidence that management is concerned and competent to pursue the issues that you have raised.

In addition, to those points already stressed, I would like to add the following requirement. On at least a daily basis, your In Basket must be completely gone through and emptied. In some cases, material has been put in an unintentional state of indefinite hold after being placed in an individual's in basket.

We have come a long way in the past 6 months, but we still have a long way to go. Keep up the good work.


T. L. Shaw

TLS/jp

cc: P.T. Appleby
J.E. Davis
Z01UOSCQ
G57.72



NUCLEAR FUNCTION DIRECTIVE

TITLE: Differing Professional Opinions Resulting
in Nuclear Safety and Quality Concerns

Page 1 of 2

By Direction of

A handwritten signature in cursive script, reading "Donald F. Schnell".
Donald F. Schnell

Date

5/21/85

Vice President - Nuclear

Objectives:

This directive defines the responsibilities and requirements for establishing a method by which Nuclear Function or other support Function employees may notify their management and obtain resolution of a professional difference of opinion. This professional difference of opinion may result from a nuclear safety or quality concern involving either complex technical issues, differing interpretations of various regulatory requirements, or other issues which have not been adequately addressed by other programs. In addition, this directive establishes an alternate and independent method of bringing safety and quality concerns to management's attention if the employee believes his or her concern is not properly addressed or resolved.

Responsibilities:

It is the responsibility of each Union Electric Company employee to bring to management's attention any professional difference of opinion resulting in a nuclear safety or quality concern. It is Union Electric Policy that this process will not have any negative impact on the individual presenting the concerns.

Nuclear Function Department Managers shall be responsible for implementing common procedural requirements prescribing the method an employee may use to bring a professional difference of opinion resulting in a safety or quality concern to management's attention for resolution. This procedure shall include:

The process by which an employee may request a reevaluation by his or her supervisor to determine if an issue is or is not a safety or quality concern.

The process by which an unresolved safety or quality concern is escalated to a professional difference of opinion and up

through the chain of command; i.e., if the employee's supervisor cannot resolve the concern, it shall be addressed to the responsible assistant manager (or superintendent) level as a professional difference of opinion. If the issue cannot be resolved at this level, the manager shall be responsible for final resolution. All professional differences of opinion resolved at the assistant manager or manager level shall be reviewed by the NSRB within 60 days of the resolution.

Provisions for providing each employee an opportunity, following discussion of the employee's annual performance appraisal, to identify safety or quality concerns.

Provisions for providing each employee an opportunity at termination to identify any safety or quality concerns with appropriate feedback to the ex-employee.

Provisions describing the employee's option to bring the concern to the QA Department, generally to the Supervising Engineer level, when the employee believes the concern has not been adequately addressed or is not being addressed in a timely manner. The QA Department shall make an independent evaluation of the concern and the circumstances involved and provide the employee with feedback on the results of their evaluation.

Provisions which provide distribution of submitted professional differences of opinion and their documented resolutions to appropriate management personnel and the QA Department.