

March 25, 1985

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Director, Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Show Cause Petition Requesting Suspension or Revocation of Operating License for Union Electric Company's Callaway Nuclear Power Plant, Unit One.

I. Introduction

Come now the Missouri Coalition for the Environment and Kay Drey ("Petitioners") to petition the Director of Nuclear Reactor Regulation, and the Director, Office of Inspection and Enforcement ("Director") of the U.S. Nuclear Regulatory Commission, pursuant to 10 CFR § 2.206 to serve upon the Union Electric Company ("UE") an order to show cause why the operating license for the UE Callaway Nuclear Power Plant, Unit One ("Callaway Plant") should not be suspended, pending a full investigation by the Nuclear Regulatory Commission ("NRC") of the violations of law described herein, or revoked, and why such other actions as requested in this Petition should not be taken.

II. Description of Petitioner

Missouri Coalition for the Environment is a non-profit corporation dedicated in part to ensuring proper safety control and environmental protection in the generation of nuclear power and is the successor in interest to an intervenor in the proceedings for issuance of an operating license at the Callaway Plant. Kay Drey is a rate payer of UE and a Missouri citizen concerned with proper protection of public health and safety with regard to the generation of nuclear power.

III. Authority

Title 10 of the Code of Federal Regulations, § 2.206(a), establishes the right of the public to petition the Director to institute a proceeding pursuant to 10 CFR § 2.202(a) to modify, suspend, or revoke a license or for other relief. Such a petition must set forth the factual basis for the petition and the relief requested. The Director may, pursuant to 10 CFR § 2.202(a) institute such a proceeding by serving upon the licensee an order to show cause.

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IV. Summary

UE has permitted at least twenty two unqualified inspectors, including personnel responsible for supervising safety inspections, to undertake testing and inspections that UE, the NRC, and the public rely upon to insure safe operation of the Callaway Plant. Inspectors without proper training and expertise have for at least four years tested and inspected every portion of the plant including the reactor building, assuring management, regulators and the public that electrical systems, civil work, mechanical systems and materials are in conformity with prescribed designs for operation and maintenance of the plant. The disqualification of these inspectors raises serious questions as to the adequacy of the inspection process and the actual safety of the plant. In addition, the failure of UE management to identify the problem for such an extensive period, despite complaints from the inspectors themselves, reveals violations of UE's legal obligation to monitor safety inspections continually at the plant and to provide inspectors with direct access to levels of management sufficient to assure prompt reaction to safety violations.

V. Facts

1. UE operates the Callaway Plant pursuant to a facility operating license granted by the NRC in October of 1984 (License No. NPF-39). Construction of the plant was completed in 1984 under a construction permit granted by the NRC in April, 1976.
2. UE is required by law to institute and maintain a quality assurance program ("QAP") at the Callaway Plant, during both construction and operational phases. The QAP is designed to assure that every aspect of the design, construction, operation and maintenance of the plant meets the standards set by the NRC to protect the health and safety of the public. The foundation of the QAP is the quality control program ("QCP") which involves safety inspections and testing of the physical characteristics of materials, structures, components and systems throughout the Callaway Plant.
3. NRC regulations and UE policy mandate quality control ("QC") personnel be certified as meeting specific training, educational and technical standards in order to insure competent and accurate safety inspections and testing.
4. Since at least 1981 and until recent weeks, during both construction and operational phases of the Callaway Plant, UE has, by its own admission permitted an undetermined number of its QC inspectors, including several individuals in supervisory capacities, to conduct inspections and testing for which they were unqualified by NRC requirements, UE policy, and industry standards. (The facts relied upon herein, unless otherwise noted, are derived from Exhibits "A" and "B" attached hereto, being copyrighted stories in the Columbia Daily Tribune for Thursday, March 7, 1985, page 1 and Friday, March 8, 1985, page 1 and Exhibit "C", an article from the St. Louis Post Dispatch dated March 26, 1985.) Published articles originally indicated that UE officials had illegally certified at least seven of thirteen QC inspectors to undertake inspections for which they were not qualified; only in the recent weeks has UE reportedly decertified these inspectors to

conduct inspections in specific areas. UE is internally reviewing the qualifications of some fifty to sixty other quality control personnel employed by Daniel International Company, UE's contractor at the plant and other subcontractors, in order to determine whether these inspectors were properly qualified in accordance with regulations. As of the date of submission of this Petition, the number of unqualified inspectors has expanded from seven to twenty-two. The disqualification of the QC inspectors cast doubt upon the validity of least 12,000 work inspections conducted throughout the plant, including those undertaken within the reactor building. All of the quality control inspectors described above undertook inspections in one or more areas for which they were not properly certified including mechanical, civil, electrical, and materials divisions.

5. The NRC relies heavily upon the accuracy of the safety inspections and testing reports issued by UE's Quality Assurance ("QA") including QC personnel, in order to assure proper functioning of the Callaway Plant and adequate protection of the public health and safety. In addition, the NRC has relied substantially upon such reports in previously rejecting allegations of safety violations at the Callaway Plant. (See e.g., Report #50-483/84-45(DRP).
6. QC inspectors repeatedly and over a long period registered complaints to assistant QC supervisors about unqualified inspectors and supervisors, but no action was taken by UE. Inspectors then took their complaints directly to the QA department in December of 1984 but the QA department did not order an audit of the problems for nearly two months thereafter.
7. According to UE officials, supervisors and assistant supervisors in the QC group need not be certified to conduct inspections although they routinely review QC inspections and technical questions of QC inspectors. Reports indicate that despite such lack of training, QC inspectors were ordered by an assistant QC supervisor not to seek technical advice and information from other QA personnel.
8. UE's QA department has itself determined that UE has violated company policies and NRC regulations regarding qualification of at least twenty two QC inspectors, including inspectors with supervisor capacity, and has moved to suspend these individuals from performing inspections in areas for which they were not certified. UE has reportedly undertaken an audit of over 12,000 work orders dating from 1981 to review the extent to which its thirteen QC inspectors and some sixty inspectors of Daniel International Company and its subcontractors have conducted inspections for which they were not qualified.

VI. Conclusions of Law

1. The license under which UE operates the Callaway plant (Facility Operating License #NPF-30) is conditioned upon UE's continued compliance with the NRC's quality assurance regulations for nuclear power plants. 10 CFR §§ 50.54(a)(1); 50.55(f)(1) 10 CFR § 50, Appendix B.

2. NRC regulations require that the QAP, including QCP "provide for the indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained". 10 CFR § 50, Appendix B(I)
3. The NRC defines "suitable proficiency" for QA, including QC, personnel as the attaining of the level of training and technical expertise as defined by ANSI standards. See, NRC, "Qualifications of Nuclear Power Plant and Inspection, Examination, and Testing Personnel", Regulatory Guide 1.58 (revised 1980). UE inspectors and inspectors of Daniel International Company and its subcontractors do not meet the qualification requirements established by the industry and adopted by the NRC. In addition, UE violated its own established policies by failing to meet the standards set out above. See UE Snupps-C/Final Safety Analysis Report 17.2-9 (REV. 7/3/84)
4. Due to UE's violation of regulations concerning proper qualification of personnel, there exists an alarming possibility of extensive violations by UE of the quality assurance regulations and design and operation criteria including safety standards: 1) to ensure conformance of materials and systems to specifications; 2) to ensure accurate inspection of materials and systems; 3) to identify and correct defective material and equipment; 4) to document testing and inspections. See 10 CFR § 50 Appendix B subsections I - XVIII; 10 CFR § 50, Appendix A. The extent of such violations and the risk to public health and safety will not be known until proper investigation is undertaken by the NRC.
5. NRC regulations require that "persons and organizations performing quality assurance functions have sufficient authority and organizational freedom to identify quality problems; to initiate recommend or provide solutions and to verify implementation of solutions." Furthermore, the regulations require that "irrespective of organizational structure, the individuals assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this appendix are being performed shall have direct access to such levels of management as may be necessary to perform this function". 10 CFR § 50, Appendix B (I) (1984). Despite numerous complaints to supervisors by QC inspectors concerning inadequate training of QC personnel, management was either unaware of or wholly ignored these complaints for an extended period. Indeed, a memo issued by QC's supervisor in March of 1984 reveals that the QC management had instituted procedures to discourage access to higher levels of management. An audit of the problem was undertaken by the QA department only after disgruntled QC personnel brought the matter directly to the QA department. These facts reveal that UE's QAP does not meet the requirements of providing sufficient organizational freedom or direct access to insure proper identification and solution of safety problems.
6. UE is required to verify on an ongoing basis that its QAP is functioning effectively in accordance with NRC regulations. 10 CFR § 50, Appendix B (I) (b). As a means of such verification, UE is required to undertake a "comprehensive system of planned and periodic audits ... to

verify compliance with all aspects of the quality assurance program". 10 CFR § 50, Appendix B (XVIII). UE's inability for at least four years to identify the lack of qualification of QC's personnel in accordance with NRC regulations and guidelines as well as with UE policy reflects severe deficiencies in the verification and auditing programs of UE, and a violation of UE's legal obligations to verify proper functioning of the QAP.

7. UE is required by NRC regulations: a) to insure the "structures, systems and components important to safety are tested to quality standards commensurate with the importance of the safety functions to be performed", and b) to establish a QAP "in order to provide adequate assurance that these structures, systems and components will satisfactorily perform their safety functions". 10 CFR §50, Appendix A By allowing unqualified QC personnel undertake critical safety inspections and testing for such an extensive period, UE has violated these important safety obligations.
8. The NRC may revoke, suspend or modify in whole or part UE's operating license for UE's failure to comply with the conditions of its construction permit or operating license, or for the revelation of any fact, report, inspection or otherwise that would warrant refusal to grant a license upon original application, or for any violation of law, regulation or order of commission .42 USC § 2236; 10 CFR § 50.100 (1984).


VII. Remedies

Petitioners respectfully request the Director pursuant to 10 CFR § 2.202 (a), to order UE to show cause why its operating license #NPF-30 for the Callaway Plant should not be suspended pending a full investigation by the NRC or revoked: (a) for failure to comply with quality assurance regulations and guidelines regarding proper training of QA personnel, as described above; (b) for failure to comply with NRC regulations requiring UE to continually verify that its QAP is functioning effectively and in accordance with NRC regulations, as outlined above; (c) for failure to comply with NRC regulations requiring UE to institute and maintain a QAP that provides adequate freedom to identify QA problems and to initiate and implement solutions; and (d) for failure to comply with regulations which require direct access by QA personnel to levels of management necessary to effectively provide quality assurance at the plant.

Further, the Petitioners request that, pursuant to the proceedings instituted under 10 CRF § 2.202(a), the NRC: 1) undertake an independent investigation of all QA, including QC, personnel during the construction and operational phases of the Callaway Plant to determine whether such personnel have met and continue to meet the prescribed qualifications for their level of responsibility; 2) institute an audit of all testing and inspections undertaken by unqualified QC personnel; 3) conduct an independent inspection of all work inspected by unqualified personnel or reviewed by unqualified personnel; 4) implement such other actions and remedies that the commission deems appropriate in this instance.

WHEREFOR the Petitioners pray for an order granting the request for relief set forth above.

Respectively submitted:

A handwritten signature in cursive script, appearing to read "Alan S. Nemes", is written over a horizontal line.

Alan S. Nemes
Attorney for the Petitioners
7541 Parkdale
St. Louis, Missouri 63105

Dated this 27th day of March, 1985

UE targets unqualified plant inspectors

The Callaway County nuclear power plant, with the Missouri River in the distance.
David Rees photo

(C) 1985 Columbia Daily Tribune

Union Electric Co. has allowed unqualified inspectors for more than three years to help ensure the safety of its Callaway County nuclear power plant. The utility recently suspended seven inspectors from numerous duties after an internal investigation revealed shortcomings in their training, education or experience.

The discovery has raised company officials' doubts about the plant's safe operation, leading them to begin revamping the quality control inspection system.

Concerns won't be resolved until the utility completes a massive review of inspectors' work dating back to 1981, company officials said yesterday. The review is expected to take at least three more weeks.

"We're interested in seeing if there are any safety problems," said company spokesman Mike Cleary, "and in correcting them if they exist."

The St. Louis utility is reviewing work by 50 to 60 more inspectors employed by a contractor who helped build the plant near Fulton. Union Electric wants to ensure that inspectors had adequate skills and certification.

A recent company audit, prompted by internal complaints, uncovered deficiencies with seven of 13 utility inspectors. As a result, the utility began studying about 12,000 work orders this week to determine whether unqualified men conducted faulty inspections, hundreds of which were done in key safety-related systems. "We need to review those records to find out what they actually did," said James Gearhart, the Union Electric employee who supervised the audit.

The Nuclear Regulatory Commission has not moved to alter plant operations in the wake of the findings. Bruce Little, commission inspector at Callaway, said he will review some utility work orders. So far, the utility has reported no evidence that the unqualified inspectors compromised safety, Little said.

The agency's regional office in Chicago, responsible for overseeing Callaway's operation, has alerted its top division chiefs and the five commissioners in Washington, D.C. Little said the utility might have violated NRC rules.

Bob Pollard, a staff member of the Union of Concerned Scientists in Washington and a former commission worker, said regulators should shut down the plant until the utility completes its reviews.

Lambasting the federal agency's inaction, Pollard said: "That's exactly what the difficulty is over at the NRC. Instead of proof that a plant is safe, they operate on the absence of proof that it is dangerous."

The \$3 billion Callaway plant — completed at more than five times

Concern surfaces about quality, safety assurances at Callaway.

its original price estimate — supplies 1,150 megawatts for about 1 million Union Electric customers in St. Louis and dozens of Mid-Missouri communities, such as Ashland and Moberly. After eight years of construction, the plant, which is 35 miles from Columbia, started operating in December.

Any citizen may petition the NRC to halt the plant's operation until the safety review is finished. Unscheduled shutdowns, the company has estimated, would cost the utility about \$750,000 a day.

Doubts about inspections strike at the heart of the plant's quality assurance program, Pollard said. "The paper process is the only way they have to assure public safety."

Robert Powers, the plant's assistant quality assurance manager, said interviews with disqualified inspectors revealed that when they encountered work outside their areas of expertise, they passed the job along to qualified men.

"We don't have any concern about the plant's construction," he added, noting that the inspectors did all their work during what is considered the plant's operational phase, since midyear 1981.

One worker, who requested anonymity for fear of superiors' reprisals, said he found certification papers on his desk a few months ago allowing him to do inspections for which he lacked complete training. He and other workers said managers wanted to improve efficiency by using multicertified inspectors.

"I was afraid...I might get asked to do something I had no experience in," the worker said this week, "and at that point, I would have had to say, 'Get somebody else in here who knows what they're doing.'"

Other workers said they never recall seeing or hearing of an inspector who proceeded with an inspection for which he wasn't qualified. In such instances, the workers said, the inspector always turned to someone qualified. But the employees noted that the inspectors in question — and their work — have caused alarm about the quality control program. A final ruling about safety can come only when reviews are finished, the workers agreed.

Two utility divisions are the key players: the quality control branch, which inspects maintenance work and repairs to make sure they meet strict safety regulations; and Powers' quality assurance wing, which reports only to corporate headquarters and functions to ensure that members of the quality control staff perform correctly.

In late January, the quality assurance office received complaints from inspectors who questioned the credentials and abilities of other quality control inspectors and two division supervisors. Powers said his auditors began investigating the next day. Among the findings outlined in a Feb. 22 audit report and

four reques

• One of assistant supervisor lacked necessary and electric oversaw.

• The missing certification control staff three occasional company inspectors.

One person mentioned being called to perform duties



four requests for corrective action:

- One of three quality control assistant supervisors, Vernon Portell, lacked necessary experience in civil and electrical inspections, fields he oversaw.

- The man responsible for approving certification of inspectors, quality control supervisor Terry Shaw, on three occasions since Oct. 22 violated company rules for certifying inspectors.

One person that Shaw recommended be certified for two technical duties was Portell. Last week,

Callaway plant manager Steve Miltenberger suspended Portell's dual certification. He retains his supervisory position, Cleary said, but he has been barred from further civil or electrical inspections.

- Most of the 13 men had authority for inspections in more than one of the four technical categories — totaling 28 certifications among them — but half of those certifications were found questionable. In some cases, the men did not meet criteria accepted within the industry. In others, Union Electric had ignored

its own rules by exempting some men from the criteria without documenting why.

After finishing their report, auditors whittled the list of unqualified inspectors to seven by verifying technical prowess with documents or in interviews with the other inspectors.

- On five procedural points, quality control managers dodged Union Electric's own written policies for proper certification of the inspectors charged with ensuring Callaway's safe operation.

Regulatory commission inspector Little said sidestepping company policy violates federal rules. When granted licenses to build and operate Callaway, Union Electric pledged to uphold NRC regulations as well as company policies, Little noted.

On Tuesday, Cleary said, "We do not believe we have committed any violations." But Union Electric, Little stressed, knows the rules.

Until the utility and Little complete their reviews of the certification problem, Little said, the problems are considered "potential violations" that could lead to disciplinary action or fines by the commission.

In addition to suggesting that the certifications be pulled from the seven inspectors until their qualifications are established, the audit proposed several other steps for improving the certification process.

In response, Powers said, a group of inspectors, managers and quality assurance workers will recommend specific changes to match or exceed the prevailing industry standards for certification.

Powers said the review of maintenance work orders would show whether some plant systems need reinspection. Until the review is finished, Cleary added, Union Electric has contracted to hire two more inspectors to meet the workload. Cleary said the men average two inspections a day.

In explaining the origin of the certification problem, Powers said some inspectors had been hired by Union Electric from contractor Daniel International Co. Then, company managers gave them new certifications based on overly broad interpretations of industry standards, Powers said. The standards say officials may take related experience into consideration in certifying inspectors.

Said one inspector: "They abused the term 'related experience.' The bottom line is we have a lousy management situation."

Two plant workers close to the problem said managers had hoped to save money by using inspectors for multiple duties instead of hiring more employees.

Powers denied cost savings as a motive. "We felt there were some program weaknesses and perhaps some judgments that shouldn't have been made. I consider any violation of the program as a significant concern."

This story was compiled and written by Tribune reporters Christoph Sechenyi and Dolores Whiskeyman and editor Paul Roberts.

Yearlong workers' rift revealed in UE safety assurance problems

By CHRISTOPH SZECHENYI
of the Tribune's staff

Friction between inspectors and their supervisors at the Callaway County nuclear power plant had surfaced nearly a year before Union Electric Co. started investigating its deteriorating quality control system, an internal memo reveals.

Company documents show that on March 10, 1984, quality control supervisor Terry Shaw ordered inspectors under him to take technical problems to him or to an assistant supervisor before approaching other department managers.

"In past weeks, there have been numerous instances demonstrating a lack of effective communication within the quality control department," Shaw wrote in the memo to 30 people, many of whom were inspectors. "Our aim is to solve problems through communication, not create them."

But some inspectors said this week that they repeatedly got no action from Shaw when voicing concerns about supervisors who were unqualified to make technical decisions for ensuring safety. In addition, the utility confirmed today that inspectors took their concerns to Shaw's boss in early December, nearly two months before the utility started an audit of problems.

Several inspectors said they did not trust some supervisors because they lacked expertise in certain quality control areas. "On a day to day basis, you're going to have technical questions," said one informed source who requested anonymity. "Management wants us to go to them for answers, yet how can they discuss these problems when they're not technically qualified?"

One assistant supervisor, Vernon Portell, recently lost certification for two types of inspections at the \$3 billion plant near Fulton. Reacting to the finished audit, dated Feb. 22, plant manager Steve Miltenberger suspended Portell's certification. Portell, however, retains his supervisory role.

"A supervisor does not have to be certified at any level in any discipline," said Robert Powers, assistant manager of the division that oversees the effectiveness of

Shaw's inspectors. "I would expect a supervisor to be competent in inspection philosophy."

Several inspectors said such a management attitude and supervisors' shortage of expertise spurred inspectors' complaints to Powers' office, which did the audit. It outlined inadequate training, education and experience among seven of 13 inspectors — including Portell and assistant supervisor L.M. Zahara — and sparked suspension of some of their duties.

Following the audit's suggestion, the company suspended inspectors from some tasks until their qualifications are established. Union Electric is also reviewing some 12,000 work orders to determine whether disqualified men did inspections that could jeopardize the plant's safety.

The St. Louis utility is also reviewing the credentials and work of 50 to 60 more inspectors employed by a firm that helped build the plant, which started generating electricity in December.

The Nuclear Regulatory Commission's inspector at Callaway is also planning to review some work orders.

Yesterday, the Fulton Sun quoted plant spokesman Mike Cleary as saying that "we have a good system here for recourse...I'm not sure why the inspectors didn't go up the quality control chain of command."

But today, Cleary admitted that statement was untrue. He said he had been unaware of the inspectors' efforts when he talked to the Fulton newspaper.

He conceded that seven or eight inspectors had taken their concerns in early December to Paul Appleby, an assistant plant manager who oversees quality control operations.

Cleary said the inspectors' concerns "were being taken seriously." After the interviews, Cleary said, Appleby put together a plan for corrective action. Cleary said he didn't know what changes Appleby had proposed.

Inspectors said this week that they grew impatient with Appleby's efforts, and so they asked Powers' quality assurance office to investigate. Powers noted that inspectors have the right under company policy to complain to his division.

Auditors concluded managers had broken written company rules in several instances by certifying some inspectors. The inspectors check electrical, mechanical, civil and material work throughout the plant, including systems in the reactor building and other key components.

THE WEATHER

Fair tonight with a low in the upper 30s. Mostly sunny tomorrow. High around 60.

UE Identifies Unqualified Inspectors

FULTON, Mo. (AP) — Union Electric Co. has identified 22 quality-control inspectors who lack qualifications to ensure the safe operation of its Callaway County Nuclear Power Plant, according to a Nuclear Regulatory Commission official.

Earlier this month, the utility concluded that seven quality-control inspectors lacked sufficient training or experience. As a result, Union Electric suspended the men from doing certain jobs.

Last week, 15 other inspectors were added to the list, said Bruce Little, an NRC official based at the power plant, 35 miles east of Columbia.

Acting on an internal tip from an inspector, Little said, utility engineers and auditors began investigating the backgrounds of inspectors last month. Little said the utility had identified about 250 inspections performed by the unqualified inspectors during the past three years.

But a special Union Electric task force has found that the 22 inspectors were qualified to do 230 of the 250 jobs that had been reviewed as of Friday, Little said. The task force has found no evidence of deficiencies in the plant's hardware, he said.

The St. Louis-based utility is reviewing about 12,000 work orders, Little said. He said his agency would wait for Union Electric to complete its study before considering regulatory action.

Mike Cleary, a Union Electric spokesman, said utility officials had declined to comment on their investigation of the inspectors' work. He confirmed that the 22 inspectors lacked certain work credentials.