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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light Co. 05000251  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light Co. 05000335  
 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co.  
 AUTH. NAME: UHRIG, R.E. AUTHOR AFFILIATION: Florida Power & Light Co.  
 RECIP. NAME: EISENHUT, D.G. RECIPIENT AFFILIATION: Division of Licensing

SUBJECT: Responds to NRC preliminary evaluation of response to IE Bulletin 79-10B, "Environ. Qualification of Class IE Equipment." Systematic rejection of work on IE Bulletins 79-01, 79-01B & suppls found disturbing.

DISTRIBUTION CODE: A048S COPIES RECEIVED: LTR 3 ENCL 0 SIZE: 3  
 TITLE: Equipment Qualification (OR & PRE-OL)

## NOTES:

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the company's financial health and for providing reliable information to stakeholders.

2. The second part of the document outlines the specific procedures for recording transactions. It details the steps involved in the accounting process, from identifying a transaction to recording it in the appropriate ledger.

3. The third part of the document discusses the importance of reconciling accounts. It explains how regular reconciliation helps to identify and correct errors, ensuring that the company's financial records are accurate and up-to-date.

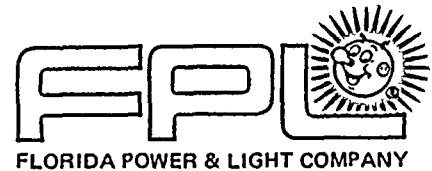
4. The fourth part of the document discusses the importance of maintaining proper documentation. It explains that all transactions should be supported by valid evidence, such as invoices, receipts, and contracts, to ensure the integrity of the financial records.

5. The fifth part of the document discusses the importance of regular audits. It explains that audits help to verify the accuracy of the financial records and provide an independent assessment of the company's financial performance.

6. The sixth part of the document discusses the importance of maintaining proper internal controls. It explains that internal controls are designed to prevent and detect errors and fraud, ensuring the reliability of the financial information.

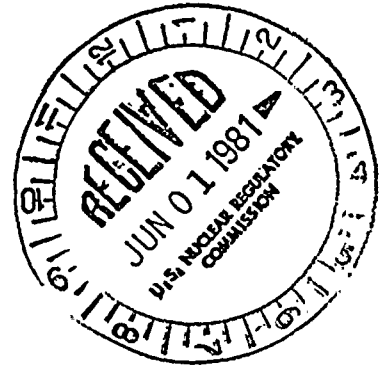
7. The seventh part of the document discusses the importance of maintaining proper communication. It explains that clear communication is essential for ensuring that all employees understand the company's financial policies and procedures.

8. The eighth part of the document discusses the importance of maintaining proper security. It explains that financial records are sensitive information and must be protected from unauthorized access and disclosure.



May 28, 1981  
L-81-230

Office of Nuclear Reactor Regulation  
Attention: Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555



Dear Mr. Eisenhut:

Re: Turkey Point Units 3 & 4 and St. Lucie Unit 1  
Docket No. 50-250, 50-251, and 50-335  
Environmental Qualification of Electrical Equipment

We have received the preliminary evaluation of our response to I&E Bulletin 79-01B for Turkey Point Units 3 & 4 and St. Lucie Unit 1. Florida Power & Light Company, together with our architect engineers, have spent considerable time, effort, and money researching and evaluating the environmental qualification information requested by I&E Bulletin 79-01, 79-01B and the supplements to 79-01B. We find the systematic rejection of that work for non-technical reasons disturbing.

We found the majority of the equipment evaluated against the D.O.R. guidelines to be acceptable by test, analysis or a combination of both. We committed to replace or upgrade the installation of the equipment that could not be demonstrated to fully meet the guidelines. These actions are scheduled to be completed by the Commission's Memorandum Order date of June 1982, unless qualified equipment for these applications are not available.

Despite our efforts, the preliminary evaluation by the NRC has noted many deficiencies or unanswered questions. It is obvious that considerable effort is still required by both our staffs to complete the NRC review of our response, and the review of backup documentation in our files. If after reviewing our supporting documentation and analysis additional equipment is identified as having to be replaced or further tested, this delay will most likely cause us to be unable to meet the June of 1982 deadline.

Many of the current manufacturers of safety related equipment are quoting delivery dates that already go beyond June of 1982. Recently, at a meeting with members of the NRC's I&E and the NRR's Equipment Qualification Branch, a representative of a major instrumentation supplier stated that their quoted delivery dates were a minimum of 14 months. At this time, and based upon an analysis of the industry's needs, he and his competitors would need three to four years to deliver the required instruments to the industry.

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In an effort to overcome this problem Florida Power & Light Company, together with many other utilities, are involved in programs to qualify electrical and electronic equipment, but these programs take considerable time. Testing facilities are backlogged and qualification programs are very complex. The excessive conservatism of the test requirements test equipment to the edge of available technology. Issues such as artificial aging are complex and time consuming. A qualification program can take a year or more, just to demonstrate five to ten years of qualified life. These rigorous, time consuming, expensive programs are not necessarily resulting in a safer plant. Equipment ends up being designed around the test conditions instead of service conditions. Sacrifices in accuracy, servability and availability are made so that the equipment can pass a full test plan. This considerable effort is being undertaken despite our findings that the plant is safe to operate and the issue is one of backfitting new criteria.

We are also finding that manufacturers are having to be coaxed and cajoled to participate in these qualification programs. Many of the suppliers of quality equipment are leaving the nuclear business since it represents a small fraction of their business and the regulatory requirements make it unattractive to continue to deal in nuclear applications.

It is our position that more realistic guidelines need to be developed, and that the industry should be given sufficient time to meet the requirements.

In addition, the NRC position (Technical Specification 6.1.3.1) of all safety-related electrical equipment required by June 30, 1982 is unclear. We plan on implementing these requirements in the following manner:

- (a) For new equipment subject to I&E Bulletin 79-01B, whether for replacement of existing equipment or new application, we will apply the guidelines of NUREG 0588 category I, unless there are sound reasons to the contrary. These reasons could be incompatibility or unavailability of equipment.
- (b) Installed equipment we have evaluated against the "DOR Guidelines for Operating Plants" and found to be acceptable, will be maintained, including replacing parts as required, in accordance with the manufacturers instructions to maintain the qualification of this equipment.
- (c) For safety related equipment, not subject to a harsh environment, we are requiring testing and certification to our seismic requirements and are awaiting further industry guidance with respect to environmental qualification.

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$\mathbb{C}^n$  上のベクトル場  $X$  は、 $\mathbb{C}^n$  の任意の点  $p$  において、 $X_p$  は  $T_p\mathbb{C}^n$  の基底  $\{e_1, \dots, e_n\}$  を用いて、 $X_p = \sum_{i=1}^n X^i(p) e_i$  と表すことができる。ここで、 $X^i(p)$  は  $X$  の成分関数である。

同様に、 $\mathbb{C}^n$  上のベクトル場  $Y$  は、 $\mathbb{C}^n$  の任意の点  $p$  において、 $Y_p = \sum_{i=1}^n Y^i(p) e_i$  と表すことができる。ここで、 $Y^i(p)$  は  $Y$  の成分関数である。

ベクトル場  $X$  と  $Y$  の Lie 括弧  $[X, Y]$  は、 $\mathbb{C}^n$  の任意の点  $p$  において、 $[X, Y]_p = \sum_{i=1}^n ([X, Y]^i(p) e_i)$  と表すことができる。ここで、 $[X, Y]^i(p)$  は  $[X, Y]$  の成分関数である。

以上より、 $\mathbb{C}^n$  上のベクトル場  $X$  と  $Y$  の Lie 括弧  $[X, Y]$  は、 $\mathbb{C}^n$  の任意の点  $p$  において、 $[X, Y]_p = \sum_{i=1}^n ([X, Y]^i(p) e_i)$  と表すことができる。

Figure 1. The effect of the concentration of the  $\text{H}_2\text{O}_2$  solution on the amount of the released  $\text{H}_2\text{O}$  from the  $\text{H}_2\text{O}_2$ -loaded hydrogel. The amount of the released  $\text{H}_2\text{O}$  was measured by the weight difference of the hydrogel before and after the release. The concentration of the  $\text{H}_2\text{O}_2$  solution was 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 wt. %.

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It is our opinion that these guidelines, along with our procedures for controlling design and maintenance, provide a high level of confidence that the electrical equipment utilized in the plant meet the required environmental qualifications.

Yours very truly,



Robert E. Uhrig  
Vice President  
Advanced Systems and Technology

REU/JEM/ras

cc: Mr. James P. O'Reilly, Region II  
Harold F. Reis, Esquire

1. The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed in the order in which they appear in the list.

2. The second part of the document is a list of the names and addresses of the members of the committee who have been elected to the office of the chairperson. The names are listed in alphabetical order, and the addresses are listed in the order in which they appear in the list.

3. The third part of the document is a list of the names and addresses of the members of the committee who have been elected to the office of the secretary. The names are listed in alphabetical order, and the addresses are listed in the order in which they appear in the list.

4. The fourth part of the document is a list of the names and addresses of the members of the committee who have been elected to the office of the treasurer. The names are listed in alphabetical order, and the addresses are listed in the order in which they appear in the list.