

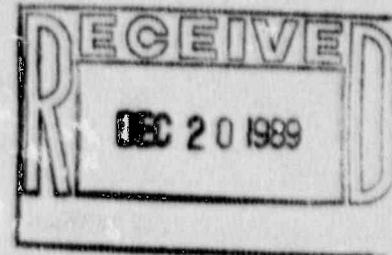


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T. G. Campbell  
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December 18, 1989

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U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76011

ATTN: Mr. Robert D. Martin  
Regional Administrator

Subject: Arkansas Nuclear One - Units 1 & 2  
Docket Nos. 50-313 and 50-368  
License Nos. DPR-51 and NPF-6  
Enforcement Conference on December 8, 1989  
Regarding Safety-Related Wiring Diagram  
Discrepancies, Five Specific LERs and  
AFW Pump Recirculation Flow

Dear Mr. Martin:

On December 8, 1989, members of my staff and I met with Mr. John Montgomery and other NRC staff members to discuss the following potential violations noted in NRC Inspection Reports 50/313 (368)/89-35, 50-313 (368)/89-22, and 50-313 (368)/89-40.

1. Service Water Pump Control Circuit Deficiencies.
2. Failure to take timely and appropriate corrective actions (4160 and 6900 Volt A.C. Switchgear Wiring).
3. Arkansas Nuclear One Unit Two Emergency Feedwater Pump Minimum Recirculation Flow.
4. Failure to maintain fiberglass sleeving for separation.

At your request we also discussed five specific Licensee Event Reports (LERs), analyzing the common elements and relationship to the potential violations.

Summarized in this letter is the information we provided during the conference, details pertaining to each of the specific violations and LERs. Additional material is provided to respond to questions posed during the conference.

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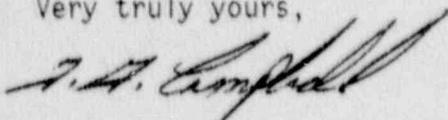
Arkansas Power & Light (AP&L) agrees that the potential violations occurred as described in the subject inspection reports; however, we urge that the Staff exercise its enforcement discretion and not take escalated enforcement action. We believe discretion is warranted in accordance with the criteria set forth in the NRC Enforcement policy designated to encourage Licensee identification and resolution of deficiencies. AP&L is aggressively pursuing the issues and extensive corrective actions have been taken; and additional actions are planned to correct the identified deficiencies. Our corrective actions are designed to assure similar violations do not occur in the future. The basis for this request and more detailed information is provided in attachments to this letter.

AP&L believes its response to these issues reflects a safety culture which places emphasis on self-identification of deficiencies and implementation of corrective actions which thoroughly address the root cause of the deficiency. This is exemplified in our presentation on Design Basis Configuration Control, Workload Management, review of significant open Condition Reports for adequacy of corrective actions, and efforts to improve timeliness and quality of Licensee Event Reports. Details of these actions are provided in the attachments. AP&L will continue to assess as part of our Work Load Management Plan its needs, and will ensure sufficient resources are allocated to accomplish the necessary activities in a timely manner. Significant resources have been expended in corrective actions to these issues and will continue to be expended until we are satisfied that the root cause for the deficiencies has been completely addressed as described in the attachments.

Attached is a synopsis of our presentation (Attachment 1) pertaining to these issues, including additional information relating to our perceived safety significance of the Service Water Pump issue and the response to a NRC question regarding the occurrence of Engineered Safeguards actuations on ANO-1. Included is a summary of our presentation and specific information pertaining to the subject Licensee Event Reports and the Potential Violations. Additional detailed information on each of the proposed violations, which was contained in our handout material that we provided at the meeting, is also included. Also attached is the Presentation Book used in our presentation (Attachment 2).

AP&L appreciates the opportunity to meet with you on these issues and to discuss our extensive and thorough corrective actions. If you have any further questions, please feel free to contact us.

Very truly yours,



T. G. Campbell

TGC/lw  
Attachments

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Summary of Discussions  
Arkansas Power & Light Enforcement Conference  
Regarding  
Safety Related Wiring Diagram Discrepancies  
Five Specific Licensee Event Reports  
And  
AFW Pump Recirculation Flow

- Section 1 - Introduction
- Section 2 - Licensee Event Reports
- Section 3 - Potential Violations

## SECTION 1

### INTRODUCTION

#### COMMON THREAD

Arkansas Power and Light (AP&L) agrees that the potential violations occurred as delineated in the subject Inspection Reports. Of primary concern was the identification of common threads and assurance that programs are in place to address these issues.

After analyzing the Licensee Event Reports and Potential Violations, AP&L has established the following common threads to these issues:

#### Potential Violations

- Involved Failure to Maintain Design Basis in Some Way
- Untimely Action was Taken
- Inadequate Corrective Actions

#### LERs

- AP&L Identified Issues
- Specific Corrective Actions Taken at Time
- Relate to Conditions Existing Prior to 1987

The root cause was a weakness in configuration control. Adequacy of corrective actions in both timeliness and completeness are contributing factors. Timeliness of reporting (in the case of LERs) is also of concern and will be addressed.

In evaluating the Licensee Event Reports and Potential Violations, AP&L has ensured that our ongoing programs address the common threads to the deficiencies that have perpetrated these events. AP&L's corrective actions to address the root causes of these deficiencies are discussed below:

#### AP&L CORRECTIVE ACTION

##### Configuration Control

Configuration Control at AP&L involves more than Engineering personnel. It is the responsibility of all groups and individuals. AP&L insists on the protection of the plant design by Maintenance, Operations, Engineering, Procurement, and all other organizations.

Our Design Configuration Documentation Project Action Plan, which is underway, will generate and organize complete documentation from which we will maintain the plant configuration as designed. The Action Plan includes a review of each safety significant system. An implementation schedule has been established and the project organization includes representatives from all facets of the plant. Input to this project includes Static Documents (such as Regulations, SERs, FSAR, correspondence and other licensing

documents) and Controlled Design Documents (such as SAR, Technical Specifications, calculations and evaluations). System Reviews and Safety System Functional Inspections will be used for verification with selected systems in the physical plant.

Additionally to achieve and maintain Configuration Control, AP&L initiated an Isometric Update Project, a Vendor Tech Manual Upgrade and Electrical Drawing Upgrade.

#### Workload Management Plan

AP&L has identified the various projects and activities required to improve the overall Nuclear Department operations. This includes plant material condition and performance expectations, such as timeliness of corrective actions. These betterment projects have been prioritized and categorized into program areas as part of the ANO Business Plan Development. Definition of routine work activities is currently underway.

The resources required for both routine and betterment activities are being documented. The ANO Business Plan will be used on an ongoing basis and updated as necessary to reflect current priorities and initiatives. This process will assist ANO in maintaining a focused management to assure we meet our goal of excellence.

#### Timeliness/Effectiveness of Corrective Actions

Already in progress is a review of all significant Open Condition Reports (approximately 240 in number) to examine the appropriateness of initiated actions, timeliness of actions, disposition of operability issues, and common threads requiring further actions. This is anticipated to be complete in the first quarter of 1990. The data derived from this effort may require additional time to implement.

#### Report Timeliness

To ensure reports are generated in a timely manner, AP&L will err to the conservative. An example is our initial call on the Emergency Feedwater Recirculation Condition. Rapid communications with the NRC will be of paramount importance, even in the event of low safety significance problems. Changes to our Licensee Event Report (LER) program have been made to enhance identification or discovery through reportability determination and submitting the reports to the NRC. Revisions to our Condition Reporting System include procedural controls to enhance our reportability determination. More details of these improvements are being supplied to you under separate cover in the supplemental response to Inspection Report 89-22.

#### Summary

In summary, AP&L has instituted programs and action plans to correct its deficiencies. Our long-term goal is the safe and efficient operation of our nuclear units. Utilization of our resources and augmentation, where necessary, will ensure that we achieve our goal of excellence.

## ENFORCEMENT DISCRETION

We believe discretion to not take escalated enforcement action is appropriate. However, should the Staff enact escalated enforcement action, we feel full mitigation of any proposed penalty, would be appropriate. As described in each of the subsequent sections in greater detail, the following considerations should be given to this action:

1. AP&L is continuing to actively pursue the issues. Extensive programs have been initiated to identify and resolve deficiencies such as those cited in the violation. The Design Configuration Documentation Project is designed to ensure AP&L has identified the elements of the plant's design basis and has methods in place to ensure they are maintained. It is the intent of our Workload Management Plan to allocate adequate resources to resolve issues and complete programs according to schedule. Actions have been taken and future actions are planned to ensure timeliness of reports and corrective actions.
2. Most of the specific discrepancies were self-identified. The specific discrepancy in the ANO-1 service water pump wiring configuration and its effects was identified by AP&L in response to an NRC inquiry of the panel wiring. AP&L already had a wiring/drawing project well underway to identify such deficiencies and had purchased a Computer Aided Drawing System and allocated resources for this project. AP&L identified the deficient fiberglass sleeving on ANO-2 as part of its Comprehensive Evaluation of a similar finding by an NRC inspector on ANO-1. The other discrepancies leading to the Licensee Event Reports and potential violations were identified by AP&L through our Corrective Action Program.
3. AP&L's corrective actions for the identified deficiencies have been extensive. For example, verification of proper wiring will include all safety-related electrical panels and cabinets. Any safety significant discrepancies will be dispositioned prior to unit startup from the outage in which it is identified. Our long-term plan includes appropriate inspections and resolutions of discrepancies. Drawings will be updated for use by Engineering, Operations and Maintenance personnel. The specific corrective actions are discussed later under specific topic headings.
4. The actual safety significance of each issue was low. Either the event had a low relative probability of occurrence (as in the service water pump discrepancy) or the consequences were of minor significance.

## SECTION 2

### LICENSEE EVENT REPORTS

#### LER 2-85-28 SAFETY INJECTION TANK (SIT) CROSS CONNECT

On October 20, 1985, while reviewing the system operating procedure for the Safety Injection Tanks (SITs), AP&L identified that the procedure allowed cross-connecting of the SITs via the non-seismic piping of the nitrogen addition system to equalize tank pressure. A seismic event could render more than one SIT inoperable. The plant operating procedure was promptly revised to prohibit cross-connection of any of the SITs. The most credible failure mechanism would have been a failure of the non-seismic nitrogen piping during or following a seismic event. Due to the design of the RCS, a LOCA is not postulated to occur as the result of a seismic event and, therefore, the safety function of the SITs should not have been required under such conditions. In 1987, a comprehensive procedure upgrade program was implemented to identify the type of error which led to this procedural deficiency. Additionally, the Design Configuration Document Program (as it is developed) will identify procedural inadequacies.

#### LER 2-87-010 PLANT PROTECTIVE SYSTEM (PPS) PANELS

On May 22, 1987, during a Quality Assurance surveillance, AP&L identified that after the performance of surveillance testing, Instrumentation and Controls maintenance personnel tightened only two of the fourteen fasteners which secure each of the four Plant Protection System (PPS) power supply panels to the frames of the main cabinets. Also, some of the fasteners were missing. The power supply panels are held in place by a full length hinge on one side and fourteen screws on the other side and bottom. Since only two of fourteen screws were tightened per panel, the seismic qualification of the panels was jeopardized. The cause of this event was personnel error in that the technicians did not consider the seismic qualification of the equipment when electing not to tighten all the screws. The significance of this event is considered minimal based on the fail-safe design of the PPS. The existing panel screws were tightened and the missing screws were replaced. Based on the assumption that the PPS cabinets were not seismically qualified as found, power supply output voltage fluctuations or failure could occur during a seismic event. Due to the fail-safe design of the PPS on loss of power, it is reasonable to assume that RPS/ESFAS trip signals would have been generated during a seismic event, if required. However, if a worst case scenario assumption is made, all PPS power supplies would have to be considered inoperable. This inoperability could cause an inadvertent actuation of the ESFAS. A review of the ESFAS signals has shown that the combinations of Recirculation Actuation Signal (RAS) and Safety Injection Actuation Signal (SIAS) or Main Steam Isolation Signal (MSIS) would have the greatest potential for affecting normal plant operation in Mode 4 (Hot Shutdown) and Mode 5 (Cold Shutdown with the Shutdown Cooling System in operation, and 6 (Refueling) with the reactor vessel head on. The principle consideration would be the adequacy of the Low Temperature Overpressure Protection (LTOP) system in controlling the resulting pressure transient. It was verified that this system is adequate protection from

inadvertent overpressurization during low temperature and system solid conditions in the event of a multiple failure scenario involving spurious actuations and that the pressure transient would not exceed 110% of the design pressure of the shutdown cooling system. In addition, Abnormal Operation Procedure 2203.18, "Inadvertent Safety Injection Actuation," addresses operator actions in the event of simultaneous SIAS and RAS actuations. Based on the analysis above, the safety significance of this event is considered minimal.

#### LER 1-88-013 BREAKER WIRING ERROR

On September 24, 1988, during refueling outage 1R8, AP&L identified that a wire had been terminated incorrectly in a 4160 VAC vital power supply breaker which affected the automatic starting circuitry for High Pressure Injection (HPI) Pump P36B. P36B is a backup pump which can be aligned to receive power from either of two vital AC electrical busses. The wiring error affected an electrical interlock between the disconnect switch position and one of the main power supply breakers and created the possibility that the pump might not have started automatically as required on an Engineered Safeguards Actuation Signal. A review of the design change package which installed the electrical disconnect switch in December 1984 revealed the error was not introduced as a result of this design change and that proper circuit function existed at that time. Further reviews were unable to determine the event which caused the discrepancy. The wiring error was corrected and the circuit tested to verify proper operation. The discrepancy did not affect the capability to start the pump manually from the control room.

Based on a drawing review performed at that time, the incident appeared to be isolated. All discrepancies discovered were evaluated for safety significance. Nine resulted in Condition Reports and only one resulted in a reportable issue. In all cases, safety significance was dispositioned.

During normal plant operation, one of three Makeup/HPI pumps is lined up and in operation to provide reactor coolant pump seal water and normal RCS makeup. A second pump, powered from the redundant and independent vital bus, is lined up in an ES standby condition. If the P36A pump, which is powered from the A3 bus, was out of service and P36B was lined up to the A3 bus in standby, the possibility exists that the pump would not have automatically started had an ES actuation signal occurred. This could have prevented the injection of water into the RCS within the required time period assumed in the safety analysis for certain types of design basis events. Although a failure of the pumps to automatically start is considered safety significant, this would have occurred only under worst case conditions where a concurrent failure prevented the redundant HPI pump from automatically starting or injecting.

The significance of the potential failure of the pump to automatically start is also minimized by the fact that adequate indication and annunciation exists to ensure the operator would be made immediately aware if the pump had not started. Additionally, plant procedures require immediate verification of pump start on an ES actuation and give specific instructions relative to manual starting the HPI pumps upon their failure to start automatically. Since the manual start feature of the P36B pump was not

impaired by the wiring error, the operator could expeditiously place it in service if it failed to start automatically. Additionally, the length of time that P36B was aligned to the A3 bus was minimal, since P36A is usually available.

#### LER 1-89-05 SHUTDOWN MARGIN

On February 1, 1989, with the plant in cold shutdown, AP&L Reactor Engineering personnel determined that the "Reactivity Balance Calculation" procedure was inadequate in that it did not consider the control rod of greatest worth being withdrawn from the core when calculating required shutdown boron concentrations for Reactor Coolant System (RCS) temperatures below 275 degrees. Finding this error was the result of an extensive corrective action plan in response to another issue. The ANO-1 Safety Analysis Report (SAR) states in the design basis assumptions for a control rod ejection (CRE) accident that when the reactor is subcritical, the RCS boron concentration is maintained at a level that ensures that the reactor is at least one percent subcritical with the control rod of greatest worth fully withdrawn from the core. The procedural inadequacy has existed since 1976 and using it to calculate shutdown boron concentrations had resulted in shutdown margins less conservative than assumed in the SAR. The reactivity balance procedure has been revised to correct the deficiency.

For operating Cycles 5 through 9, this event was determined not to be safety significant. Although the required one percent subcritical shutdown margin could not have been maintained should a CRE accident actually occur, the reactor would have remained subcritical by a shutdown margin of approximately one-half percent or more for each cycle.

For operating Cycle 4, this event is considered safety significant because it could not be assured that the reactor would have remained subcritical if a CRE accident were to occur under worst case conditions with the plant in cold shutdown. However, the significance of the event is reduced by the fact that the probability of a CRE accident is greatly reduced with the plant in cold shutdown at reduced RCS pressure.

#### LER 2-89-004 AUTO TRANSFER

On March 1, 1989, Plant Operations personnel determined that the "Plant Startup" procedure was inadequate in that it allowed a condition prohibited by Technical Specifications. The High Pressure Safety Injection (HPSI) pumps inject borated water from the Refueling Water Tank (RWT) into the Reactor Coolant System (RCS) in the event of a Loss of Coolant Accident. When a low water level is reached in the RWT, a Recirculation Actuation Signal (RAS) automatically initiates transfer of the HPSI Pump suction to the containment sump. This transfer can also be achieved by depressing the manual RAS trip push buttons. During plant shutdown, the containment sump isolation valves for the HPSI pumps, which open on a RAS, are tagged shut when the unit enters Mode 5 (Cold Shutdown). During plant startup, however, these valves are not returned to an operable condition until just before the plant enters Mode 3. Technical Specifications require that the automatic transfer of pump suction to the containment sump be operable in Mode 4. Therefore, the procedure allowed entry into Mode 4 with the automatic

transfer function of HPSI Pump suction disabled. The "Plant Startup" procedure has been revised to direct that the containment sump isolation valves be returned to operable status prior to entering Mode 4.

The primary function of the HPSI system is to mitigate the consequences of a LOCA. If a LOCA were to occur during plant heatup, with an RCS temperature of 300 degrees and pressure of 430 psia, only one HPSI pump would normally be available and aligned for manual actuation. Therefore, one HPSI Pump would start and inject borated water into the RCS from the RWT at a maximum flow rate of approximately 825 gallons per minute. Even at this flow rate, and assuming a Technical Specifications low water level limit in the RWT (approximately 464,000 gallons), it would require in excess of 8 hours to pump the tank down to the low level RAS transfer point (approximately 30,000 gallons). It is extremely unlikely that HPSI system operation would be required for that length of time or that transfer of HPSI pump suction to the containment sump would be necessary. However, if a manual RAS were attempted, available instrumentation (i.e., HPSI flow, valve position indication) would give the plant operator immediate indication that the transfer was not successful, and prompt corrective actions could be initiated. Considering the above information and the reduced decay heat loads following a plant cooldown, the safety significance of this event is considered minimal.

## SUMMARY OF LERS

- The following common elements are found in each of these LERs:
  1. AP&L identified each issue.
  2. Specific corrective actions were taken at the time to address each issue.
  3. They all relate to conditions which existed prior to 1987.
  
- The following are common items which AP&L is addressing:
  1. Reporting timeliness.
  2. Enhanced corrective action that extends beyond the specific issue.
  3. Failure of our configuration control mechanisms.

## SECTION 3

### POTENTIAL VIOLATIONS

#### ANO-1 SERVICE WATER TECHNICAL SPECIFICATION

##### NRC Statement of Potential Violation

The staff stated in Inspection Report 50/313(368)/89-39 that a potential violation of Unit 1 Technical Specification 3.3.1(c) existed. Specifically, the staff stated that since initial startup of Unit 1 in 1974, the unit was operated with two of the three service water pumps not fully operable. The controls for pumps P4A and P4C contained an unidentified set of contacts (that were supposed to have been removed during startup testing) which could have prevented the pumps from restarting during certain accident conditions.

##### Summary of AP&L Position Regarding Potential Violation

AP&L acknowledged at the Enforcement Conference that the service water pump wiring could have prevented pumps P4A and P4C from operating under certain specific conditions, contrary to Technical Specification 3.3.1(c). However, the system would have functioned except under a relatively improbable sequence of events, which to date has not been experienced at ANO. Consequently, the safety significance of the event is considered minimal.

##### AP&L Responsive Actions

Upon discovery of this wiring error, AP&L began an extensive program to identify and correct wiring deficiencies. The initial Project Plan involved three phases of inspection and disposition of discrepancies of wiring in selected safety related cabinets in both units.

A long range plan has been initiated to inspect all safety-related cabinets and panels. (As part of this plan wiring discrepancies in both units will be dispositioned.) This has been described in previous correspondence (ICAN098910 dated September 26, 1989 and 0CAN118905 dated November 6, 1989).

##### NRC Staff Inquiry

During the conference the NRC Staff questioned whether any Engineered Safeguards actuations had occurred on ANO-1. Our research into Reportable Occurrence Reports, Reports of Abnormal Conditions and Condition Reports failed to identify any Engineered Safeguards features actuations that have occurred at power (when this scenario would be of concern) on ANO-1 (on-site loads supplied by the Unit Auxiliary Transformer). Additionally, some of our experienced plant personnel were questioned to determine if they had any knowledge of such an event and Transient Reports for the Reactor Coolant pumps seal failures in 1979 and 1980 were specifically examined. Based on this review, we concluded no Engineered Safeguards actuations have occurred on ANO-1 at power.

Regarding the realistic likelihood of the wiring discrepancy leading to a serious safety situation, AP&L has assessed the safety significance of the service water pump wiring error using risk assessment techniques. Best estimate methods were used in lieu of classical safety analysis assumptions to develop a more realistic qualitative evaluation of the probable effects of the discrepancy.

Our review of available data on precursors at ANO indicates that ANO-1 has never had an automatic safety injection while at power. Failures to complete fast transfer following unit trips have occurred. However, it is also important to note that over the years the swing service water pump has been treated as a high priority preventive and corrective maintenance component due to the importance of the service water system to unit safe operation at ANO-1. Therefore, given a specific probability of fast transfer failures (for whatever scenario postulated), the probability of recovery due to availability of the third pump is significant.

AP&L's assessment focused on the limiting worst case events requiring immediate initiation of service water (i.e., the large break LOCAs with the accompanying large cooling loads). First of all, our evaluation of the LOCA break spectrum indicates that as designed, the fast transfer should successfully occur before the slow transfer/service water pump lockout problem would be an issue. Nonetheless, given a conservative probability estimate for an entire spectrum of LOCAs ( $10 \text{ E-}03$ ), the most probable scenario which results in loss of service water function is double failure of both safety buses to complete a fast transfer. Using plant specific data for probability of fast transfer failures (based on four bus failures in 100 demands over the past 10 years) and allowance for recovery of service water (the third service water pump assumed to be available a conservative 80% of the period in question), the resulting probability of total loss of service water is less than the "screening criteria of  $10 \text{ E-}06$  required by the IPE Generic Letter 88-20. This suggests a low overall significance from a probability standpoint.

As discussed with NRC Region IV staff in a telephone conversation on this subject on 12/15/89 AP&L believes that this risk based approach to safety significance is a valid way to characterize the potential impact on plant safety for discrepancies such as the service water pump wiring error which have existed for a long period of time. We are in no way attempting to minimize the need to use non deterministic safety analysis type assumptions for classical single failure analysis to support future operation of ANO. AP&L's extensive corrective actions demonstrate our commitment to maintenance of defense in depth, inherent in such assumptions.

#### Classification of Proposed Violation

The potential violation involved only minimal safety significance. Accordingly, the classification of any violation proposed by the Staff should be minimal.

As described at the Enforcement Conference, the service water pumps would have performed their intended safety function except under a specific set of circumstances. The occurrence of these events, in the sequence and of the nature, has never arisen during plant operation. In addition, the third service water pump would have been generally available (except for routine

maintenance work) and is designed to provide 100% capacity of the Service Water System for accidental mitigation. Further, as discussed above the probability of rendering both trains of the Service Water System inoperable because of this event is small (less than the IPE screening criteria).

#### Application of Enforcement Discretion

Should the Staff decide to pursue a violation in this instance, AP&L believes the Staff should exercise enforcement discretion in accordance with the General Enforcement Policy, 10 CFR Part 2, Appendix C. In particular, in accordance with Appendix C, Section V.G.1, if a Level IV violation is considered, the Staff should refrain from taking enforcement action in the first instance. After the NRC Diagnostic Evaluation Team identified a panel wiring concern, AP&L performed a detailed inspection of the panels and in the process identified the specific condition. AP&L promptly reported its finding to the Staff, and kept the Staff apprised of its subsequent extensive corrective action. This was not reasonably preventable by corrective action undertaken in response to a previous violation issued by the NRC.

In the event a Level III violation would be proposed, the Staff should exercise its discretion not to impose a civil penalty. AP&L notes that this condition was identified by its personnel as a followup to a concern expressed by the NRC Diagnostic Evaluation Team. In any event, the condition was of the type to be examined in the Electrical Drawing Upgrade Program already underway, but not yet completed, at the time of discovery. Also, as already noted, the condition was promptly reported to the NRC and was not otherwise a condition of which AP&L had prior notice.

In these circumstances, the fundamental purpose of enforcement discretion allowed under either Section V.G.3. or V.G.4. of Appendix C would be served. The provisions of Appendix C allowing enforcement discretion was to encourage the exercise of licensee initiative to self-identify conditions. AP&L not only had a program underway to identify such conditions but undertook a comprehensive review in response to a concern expressed by the Diagnostic Evaluation Team. Taking enforcement action involving the imposition of a civil penalty in this circumstance would not further the intent of the Commission to encourage licensee initiatives to identify potential discrepancies at their facilities.

#### Application of Mitigation Factors

In the event the Staff nonetheless decides to propose a civil penalty, AP&L believes that mitigation of such penalty is appropriate. First, as noted, AP&L identified this condition as a result of its own comprehensive review of a concern expressed by the Diagnostic Evaluation Team. That review involved three phases of inspection and disposition of wiring discrepancies in selected safety-related cabinets in both units and provided reasonable assurance that potentially significant wiring discrepancies did not exist. A long range effort was also initiated to inspect all safety-related cabinets and panels for potential wiring discrepancies. Further, AP&L promptly reported this condition and continues to keep the Staff apprised of the results of its inspection. In summary, AP&L's corrective actions were prompt and extensive.

With respect to the two remaining applicable mitigation factors (prior notice and duration), AP&L notes that it had no prior notice of the potential for significant wiring discrepancies. To the extent previous questions had arisen concerning the accuracy of wiring drawings, AP&L had reasonable assurance of the absence of any significant discrepancies. Further, AP&L, as noted, had already planned to undertake a further review to encompass matters such as these conditions. Finally, AP&L corrected this condition immediately upon discovery.

In view of the above, AP&L submits that if enforcement action is taken, it should be limited both with respect to severity level, and if considered, any penalty that may be proposed should be reduced or eliminated based upon the exercise of enforcement discretion or appropriate mitigation factors.

## FIBERGLASS SLEEVING

### NRC Statement of Potential Violation

The Staff indicated in Inspection Report 89-39 that a potential violation existed with respect to the absence of fiberglass sleeving in accordance with installation drawings. Specifically, the Staff stated, that AP&L had failed to maintain fiberglass sleeving for separation in accordance with the installation drawings for ANO-Unit 1.

### Summary of AP&L Position Regarding Violation

As noted at the Enforcement Conference, AP&L acknowledges that the absence of fiberglass sleeves on the wiring in the Control Room Cabinets was inconsistent with a licensing commitment for ANO-2. This commitment did not exist, however, for ANO-1.

### AP&L Responsive Action

AP&L's corrective action was timely and thorough. After identifying which cabinets required fiberglass sleeving in ANO-2, the cabinets requiring the use of fiberglass sleeving were inspected during the recent 2R7 outage. Full compliance with separation requirements was established prior to restart from 2R7. Damaged and missing sleeving was corrected by either adding sleeving or achieving a 6 inch minimum separation. Additionally the preventive maintenance procedure has been revised to prevent future occurrences of inadequate fiberglass sleeving.

### Classification of Proposed Violation

This condition presents no safety significant condition. Thus, in the event the Staff seeks to propose a violation, its severity level should be no greater than a Severity Level IV. The fiberglass sleeving is designed to enhance separation between safety-related and non-safety-related wiring, and is not Appendix R related. Degraded fiberglass sleeving does not compromise circuit operability as the cable insulation is rated for 600 volts and the highest voltage present in the cabinets is significantly lower.

### Application of Enforcement Discretion

Should the staff determine to pursue a violation for failure to maintain fiberglass sleeving, AP&L feels that it would be appropriate to exercise enforcement discretion. AP&L identified this condition on ANO-2 as part of its comprehensive evaluation of a similar finding by a NRC inspector on ANO-1. AP&L's prompt and comprehensive corrective action has completely resolved the issue and compliance with separation requirements is assured. The applicable cabinets were identified during the 2R7 outage and all sleeving discrepancies resolved. This discrepancy was not reasonably preventable by any previous corrective action within the past two years. Further AP&L had no prior notice of the condition and the condition was not willful.

AP&L believes that each of the factors presented by Section V.G.1 of Appendix C warrant the exercise of enforcement discretion so as not to issue a penalty in the first instance. The condition is clearly one of minimal safety significance warranting no more than a Severity Level IV violation.

AP&L reported the condition to the NRC and corrective measures, including measures to prevent recurrence, were undertaken within a reasonable time.

#### Application of Mitigation Factors

In the event the NRC nonetheless decides to pursue this action as escalated action, AP&L believes that appropriate application of the mitigation factors under Appendix C should result in significant mitigation. As previously indicated AP&L identified this condition on ANO-2 as part of its comprehensive evaluation of a similar finding by the NRC on ANO-1. Following identification of the condition, AP&L submitted an appropriate report to the NRC. With respect to AP&L's corrective action, as discussed above, a prompt and comprehensive effort was undertaken following identification of this condition to address the specific condition and to provide assurance that it would not occur in the future.

With respect to the mitigation factors concerning past performance, AP&L reiterates that its past performance in the area of configuration control has been adequate and AP&L's voluntary undertaking of programs to enhance its level of assurance in this area (ongoing at the time this matter was identified) warrants significant credit under this factor.

As for prior notice, AP&L reiterates that it had no prior notice of this condition and there were no recent opportunities whereby this condition would have been noted. Finally, given that AP&L was unaware of this condition and there was clearly no reason for AP&L to have been aware of the condition, nor was there a recent opportunity to correct the condition or any greater safety significant because of its duration, the final factor concerning duration should not be applied to this condition.

## 4160, 6900 VOLT AC SWITCHGEAR DISCREPANCIES

### NRC Statement of Potential Violation

In Inspection Report 89-22, the NRC described a potential violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the NRC stated, as follows: AP&L failed to take timely and appropriate corrective action subsequent to AP&L's discovery of wiring errors in 4160 and 6900 VAC switchgear panels during Unit 1 and Unit 2 outages in 1988.

### Summary of AP&L Position Regarding Potential Violation

As indicated at the Enforcement Conference, AP&L concurs that prompt corrective action was not taken with respect to updating the drawings. During AP&L's detailed 4160 and 6900 VAC Switchgear inspections of ANO-1 in September 1988 and ANO-2 in March 1988, discrepancies were found and documented on marked up drawings. One potentially significant wiring error was discovered in ANO-1 that could have prevented automatic start of the High Pressure Injection Swing (standby) pump on an ESF actuation signal. This and other minor deficiencies (i.e., improper terminations, deficient crimps, etc.) were corrected prior to startup following the respective unit outage. The remaining deficiencies were promptly evaluated and were determined to have minimal safety significance requiring drawing updates only. Due to the lapse of time between identification and initiation of corrective action to correct the drawings, AP&L agrees that there was a failure on our part to take timely corrective action.

### AP&L Responsive Actions

The efforts by AP&L to address these conditions include incorporation of the findings in the ongoing Electrical Drawing Upgrade Program. Long-term AP&L actions included the addition of personnel in March 1989 to develop and implement an Electrical Drawing Upgrade Project. In July 1989 a Computer Aided Drawing System was purchased to update the 4160 and 6900 volt AC switchgear drawings and to update future drawings. Additional inspections were scheduled during the 2R7 refueling outage. Drawing discrepancies for the safety related switchgear will be corrected prior to December 31, 1989 for both ANO-1 and 2.

### Classification of Any Proposed Violation

As AP&L noted at the Enforcement Conference, the particular deficiencies which the Staff cited as giving rise to this potential violation were of minimal safety significance. All discrepancies were evaluated for safety significance at the time of discovery. Nine resulted in Condition Reports and only one resulted in a reportable issue. Further, AP&L is unaware of any condition presented by any combination of these minor discrepancies which presented a significant safety concern. Accordingly, AP&L submits that this particular condition does not warrant significant enforcement action and that no greater than a Severity Level IV violation should be imposed.

### Application of Enforcement Discretion

The Staff should exercise its enforcement discretion in this instance not to take enforcement action, in accordance with Section V.G.1. of Appendix C. First, the conditions presented here were self-identified by AP&L and were of minimal safety significance, warranting no greater than a Severity Level IV violation. Further, although AP&L may not have immediately corrected these particular conditions, we had undertaken to include them in the Electrical Drawing Update Program and have dispositioned each safety significant deficiency. Thus, corrective action was achieved in a reasonable time, considering the safety significance of the conditions.

### Application of Mitigation Factors

In the event the Staff nonetheless decides to propose escalated enforcement action related to this condition, AP&L believes that application of the appropriate mitigation factors would result in significant mitigation. First, AP&L identified each of these conditions and through our review efforts at the time of discovery reported the only reportable condition. Further, the corrective actions associated with these discrepancies have been extensive, and include significant efforts to provide assurance that no safety significant conditions exist.

With respect to the past performance and prior notice factors, as previously discussed with respect to the other conditions addressed, mitigation, and at least no escalation is warranted under these conditions. Specifically, AP&L has demonstrated reasonable performance in the past regarding such conditions and efforts underway in the last year to provide a comprehensive review of plant conditions to provide additional assurance that the systems may be operated safely. Further, there was no specific notice of such conditions prior to their discovery.

Finally, there was minimal added safety significance to this condition by virtue of the time between identification and specific corrective actions. AP&L had undertaken at the time of discovery an effort to screen these conditions to assure that any conditions with potential safety significance were promptly dispositioned. The remaining conditions were scheduled for correction in the course of the drawing upgrade project. Thus, no escalation is warranted under the duration criterion.

## EMERGENCY FEEDWATER SYSTEM MINIMUM RECIRCULATION FLOW

### NRC Statement of Potential Violation

This potential violation involves the failure to take timely and appropriate corrective action upon identification of low minimum recirculation flow for the ANO-2 Emergency Feedwater Pumps.

### Summary of AP&L Position Regarding Potential Violation

AP&L admits that final corrective action was not taken immediately upon identification that recirculation flow for the ANO-2 EFW pumps was below the value specified. Rather, based on independent parameters observed when low flow was initially identified, the instrumentation was assumed to be in error. Thus, AP&L's initial efforts were directed at ascertaining whether the condition truly represented a low flow condition or if the flow indication was in error. During this time, no operability concern regarding the pumps existed in that neither pump vibration readings were abnormal nor was pump overheating evident.

### AP&L Responsive Actions

When the low flow condition was confirmed, AP&L took prompt corrective action to resolve the low flow condition by verifying with the pump vendor that the actual flowrate was adequate to prevent pump damage. As a conservative measure the flow orifice was modified to increase the flow rate to add additional margin.

### Classification of Potential Violation

As confirmed by the pump vendor, the discovered flow rate was adequate to prevent pump damage. That flow rate was also sufficient for the pump to perform its safety function. Accordingly, this condition presented minimal actual safety significance and warrants no greater than a Severity Level IV violation.

### Application of Enforcement Discretion

For the same reasons set forth with respect to the switchgear wiring discrepancies, AP&L submits that the exercise of enforcement discretion would be appropriate with respect to this condition also.

### Application of Mitigation Factors

In the event the Staff nonetheless considers escalated enforcement action with respect to this condition, AP&L submits that significant mitigation should be allowed. First, AP&L did identify the condition and upon concluding the review which determined that a low flow condition existed, reported the matter to the NRC. Further, AP&L's corrective action upon identification of the low flow condition was prompt and extensive, going so far as to modify the flow orifice in the line to provide added margin.

Further, with respect to the prior notice factor, AP&L had no prior enforcement history with respect to such conditions nor was there prior notice of this low flow condition. Finally, AP&L submits that increasing the severity of this action is not warranted under the duration factor.

AP&L had no reason to have been previously aware of this condition, and did not confirm its existence until the point at which corrective action was taken. Further, because the condition presented no actual safety significance in the first instance, the time during which AP&L examined the matter does not create any added safety significance warranting escalation under this factor.

## SUMMARY OF POTENTIAL VIOLATIONS

AP&L believes that the above conditions do not represent multiple examples of any particular violation. Each condition involves separate factual situations and the specific potential violations involved are different. Accordingly, AP&L submits that escalation under the multiple example criterion would be inappropriate.

In any event, as discussed at the Enforcement Conference, AP&L acknowledges some common threads that warrant increased attention in certain areas. In many instances, AP&L had already commenced efforts prior to the identification of these conditions that would respond to those common threads. In addition, AP&L had increased its efforts in these areas, and pursued additional efforts to provide assurance that AP&L's overall effort will enhance the safety culture at ANO.

- The following common elements are found in each of these potential violations.
  1. Each involved a failure to maintain the design basis in some way.
  2. Untimely action was taken prior to identification of the violation.
  3. Inadequate corrective actions were taken prior to identification of the violation.

The potential violations can be summarized as follows:

- Violation of ANO-1 Service Water Technical Specification
  - System would have functioned except under unlikely sequence of events
  - Required a scenario that has not been experienced at ANO
  - Low potential safety significance
- 4160, 6900 Vac Switchgear Discrepancies
  - No additional operability issues were identified
  - Followup 2R7 timely inspections identified no safety significant issues
- EFW Minimum Recirculation Flow
  - Adequate minimum flow maintained
  - Pump operability not challenged
  - No safety significance

- Fiberglass Sleeving
  - Committed to install sleeving in C.R. cabinets during licensing
  - Circuit operability not compromised
  - Low safety significance

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