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September 10, 1982

ØCANØ982Ø6

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

Subject: Arkansas Nuclear One - Units 1 and 2  
Docket Nos. 50-313 and 50-368  
License Nos. DPR-51 and NPF-6  
Generic Letter 82-10  
Post TMI Requirements

Gentlemen:

Your letter of May 5, 1982, (ØCNAØ582Ø2) requested we provide the current status of certain NUREG-0737 items listed in the enclosure to your letter. The requested information is listed below for those items applicable to Arkansas Nuclear One - Units 1 and 2.

Item I.A.1.3.1 Overtime Limitations

Item I.A.1.3 establishes recommended limits on working hours for members of the plant staff performing safety related functions. These recommended limitations have been modified several times since originally issued. We are currently reviewing our administrative procedures to assure compliance with the latest version of these requirements as set forth in Generic Letter 82-12 dated June 15, 1982, (ØCNAØ68215). Should modifications to these procedures be required, such modifications will be completed by October 1, 1982.

We have noted an inconsistency in your correspondence relative to Technical Specification requirements for this item. Generic Letter 82-12 states, in part:

"Our letter of February 8, 1982, requested that you take action as necessary to revise the administrative section of your technical specifications to assure that your plant administrative procedures follow the revised working hour guidelines...."

Our review of Generic Letter 82-02 dated February 8, 1982, (ØCNAØ282Ø9) indicates this is incorrect. Generic Letter 82-02 explicitly stated it

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was provided for information only and contained the following statement relative to Technical Specifications:

"As part of the implementation of this policy statement we are revising Regulatory Guide 1.33 and NUREG 0737 (Item I.A.1.3) to reflect this policy. In addition, we will be requesting all licensees to revise the administrative section of their technical specifications...."

We note that Generic Letter 82-10 does not contain a reference to Technical Specifications and that Regulatory Guide 1.33 has yet to be issued. (This was originally scheduled for March 1982). Therefore, we do not plan to propose Technical Specifications by October 1, 1982. Should Technical Specifications be deemed appropriate for this item we assume this will be addressed in conjunction with other NUREG 0737 Technical Specifications.

#### Item I.A.1.3.2 Minimum Shift Crew

Item I.A.1.3 specifies minimum staffing levels for operations personnel. The status of this item was discussed in detail in AP&L's letter dated November 30, 1981, (ØCAN1181Ø8). This letter stated that AP&L would not be able to meet the requirement for two Senior Reactor Operators (SROs) on shift by July 1, 1982, as required by Item I.A.1.3 of NUREG 0737, but instead proposed to add the second SRO on each shift as they became available after achieving a six-shift rotation, with a goal of meeting the two SROs per shift requirement by July 1, 1983. The justification for this delay was outlined in our November 30, 1981, letter.

#### Item I.C.1 Revise Emergency Procedures

The revision of emergency operating procedures for ANO-1 and ANO-2 is currently in progress. ANO-1 will enter its fifth refueling outage in November 1982. Implementation of revised emergency procedures is expected to be completed during this upcoming outage. ANO-2 began its second refueling outage in August 1982. Implementation of revised emergency procedures is planned prior to completion of the third refueling outage. This is consistent with the schedule recommended by Generic Letter 82-10 of the first refueling outage after October 1, 1982.

#### Item II.D.1.2 Relief and Safety Valve Test Programs

Item II.D.1.2 required the submittal of test data supporting the functionality of safety and relief valves. AP&L's letters dated July 28, 1982, (1CANØ78211 and 2CANØ78211) addressed this item for ANO-1 and ANO-2 respectively. These submittals referenced applicable test results from the EPRI Relief and Safety Valve Test Program. As described in our letters one item remains to be completed. As stated in our letters, we plan to submit the discharge piping load analysis in November 1982.

Item II.D.1.3 PORV & Block Valve Test Program

This item was completed, for ANO-1, in conjunction with Item II.D.1.2 discussed above. ANO-2 is not equipped with a PORV. The appropriate reports for ANO-1 were referenced in our letter dated July 28, 1982, (1CAN078211).

Item II.K.3.30 & 31 Small Break LOCA Analysis

Item II.K.3.31 requires that one year following staff approval of revised Small Break LOCA models, licensees verify compliance to 10 CFR 50.46 using the revised models. The staff has yet to approve the revised models required by Item II.K.3.30.

Item III.A.1.2 Staffing Levels for Emergency Situations

This item is addressed by AP&L's response to NRC's March 8, 1982, Emergency Preparedness Report (0CNA038209). This information is repeated below for your convenience.

Generic letter 81-10 dated February 18, 1981, (0CNA028117) concerning post-TMI requirements for the Emergency Operations Facility requested all licensees to fully comply with table II.A.1.2-1 (Table B-1 of NUREG-0654 Revision 1) by July 1, 1982. AP&L responded to this request in a return letter to Mr. Darrell G. Eisenhut dated April 3, 1981, (GR-0481-04). In this response AP&L stated the following:

"We have reviewed the manning requirements of Table III.A.1.2-1 and feel that we can meet the implementation schedule with minor exceptions. We do not feel that the required staffing level can be reached by September 1, 1981. We will comply with the staffing requirements by July 1, 1982. In the interim period, after September 1, 1981, any deficiencies will be capable of being filled by augmentation within a reasonable amount of time. In general, we feel that the requirement for augmentation within 30 minutes is both unreasonable and unnecessary. Although such a short response time may be achieved in many cases, it is not possible to assure this response time in every instance. The augmentation specified at 30 minutes will be made as soon as possible and at least within one hour.

During the period from September 1, 1981, until July 1, 1982, the backshift in plant health physics coverage will be provided by the Waste Control Operators. Although this has been our normal practice, it was recently identified as a significant weakness in our health physics program during a special appraisal by an NRC Radiological Appraisal Team. The results of this inspection are discussed in a letter dated February 23, 1981, from K. V. Seyfrit to William Cavanaugh, III. Our response to this letter, dated March 17, 1981, indicates our disagreement with this finding. By our

commitment to the staffing levels of Table III.A.1.2-1, we have committed to provide a separate health physics technician on each shift by July 1, 1982. This technician will be qualified to ANSI N18.1. In the interim we will continue to utilize the Waste Control Operator for this function on backshifts, with the capability for augmentation (after September 1, 1981) as discussed above. We feel that this should adequately resolve the concerns of the Radiological Appraisal Team and meet the requirements of item II.A.1.2."<sup>1</sup>

This commitment was later modified by AP&L in our letter to Mr. Eisenhut dated November 30, 1981, (ØCAN1181Ø8). This letter stated that AP&L would not be able to meet the requirement for two Senior Reactor Operators (SROs) on shift by July 1, 1982, as required by Item I.A.1.3 of NUREG 0737, but instead proposed to add the second SRO on each shift as they became available after achieving a six-shift rotation, with a goal of meeting the two SROs per shift requirement by July 1, 1983. The justification for this delay was outlined in our November 30, 1981, letter.

Finally, in AP&L's letter to Mr. Eisenhut dated June 7, 1982, (ØCANØ682Ø2) we stated the following:

"In anticipation of the July 1, 1982, schedule for increased shift staffing, AP&L began hiring and training the required additional personnel in late 1981. These efforts have been successful and we now have sufficient personnel to provide the required shift manning.

Before this shift work could be implemented for personnel other than operators, however, modifications to the contract between AP&L and the International Brotherhood of Electrical Workers (IBEW) were required.

The IBEW contract expired on June 1, 1982. Negotiations on a new contract began in March 1982 and AP&L has proposed the necessary provisions which would allow routine shift work by union members other than operators. These negotiations were recessed by the IBEW on June 1, 1982, prior to resolution of the remaining items. Although the provision for shift work is not an item of contention, it is an integral part of the new contract. The union has agreed to resume negotiations on July 19, 1982. Since negotiations will not resume prior to July 1, 1982, it is no longer possible to meet our previous commitment.

<sup>1</sup>NOTE: The referenced health physics technician will be qualified to the 1971 version of ANSI N18.1, consistent with the ANO-1 and 2 Technical Specifications.

As discussed above, AP&L has expended considerable effort to comply with the recommended shift staffing levels of Item III A.1.2 and is continuing in our efforts to reach a settlement of the union negotiations. We plan to implement the recommended shift staffing within four weeks of successful completion of these negotiations. Although a schedule cannot be predicted with any certainty, we expect this will result in a delay of only a few months beyond the original schedule. In the interim, all non-union positions included in Item III.A.1.2 will be added and any deficiencies will be filled by augmentation within one hour as discussed in our November 30, 1981, letter."

The union negotiations referenced in our June 7, 1982, letter were completed on August 10, 1982. The shift manning, with the exception of the two SROs as described in the above referenced correspondence and first-aid coverage, was implemented by September 7, 1982. The first-aid coverage will be provided by shift maintenance personnel following training of these individuals. This training is presently scheduled to be completed by December 31, 1982. An amendment to Table 10 of the ANO Emergency Plan reflecting the shift manning as described in our correspondence will be forwarded to the NRC.

Revisions to procedure 1903.010 for calling out additional emergency response personnel were implemented on October 22, 1981. This procedure, as revised, provides adequate assurance of prompt response time under normal circumstances. However, compliance with the 30 and 60 minute response times cannot be assured under all possible conditions. For example, ANO is located in an area of the country which occasionally receives ice and snow storms. Under these circumstances and other conditions in which communications and/or transportation are adversely affected the response personnel cannot be expected to respond within the limited time frames specified in NUREG 0654 Table B-1.

#### Item III.A.1.2 Upgrade Emergency Facilities

##### Technical Support Center (TSC)

The On-site Technical Support Center (primary) for Arkansas Nuclear One is located in the south end of the third floor of the Administration Building. The TSC will function to provide plant management and technical support to plant operations personnel during emergency conditions. Since the On-site TSC does not meet the radiological habitability recommended in NUREG 0696, a Secondary TSC is provided in the habitable portion of the Emergency Control Center located approximately 0.65 miles northeast of ANO. The Onsite and Secondary TSCs are presently equipped with upgraded emergency communications which provide dedicated communications lines between the Control Rooms, TSCs and the ECC. Each of these facilities also has access to an ANO base station radio. The Onsite and Secondary TSC concept was presented to the NRC in AP&L's letter to Mr. Darrell G. Eisenhut dated January 17, 1980. This concept was approved by the NRC in Mr. Eisenhut's letter back to AP&L dated April 15, 1980.



Operational Support Center (OSC)

The OSC is the ANO Administration Building. ANO support personnel will function out of this facility unless evacuated.

Emergency Control Center (ECC)

The ECC for Arkansas Nuclear One is located approximately 0.65 miles northeast of ANO on a hill overlooking the facility. When the entire Emergency Response Organization is activated and relocated to the ECC, the ECC shall serve as both a response center and a media center. For a long term accident the response portion of the ECC [which has a protection factor of approximately 5 as detailed in AP&L's letter to Mr. K. V. Seyfrit dated September 18, 1981, (ØCAN0981Ø6)] shall serve as the primary location for coordination between AP&L, State, Local and Federal agencies. In addition, this portion of the ECC shall also serve as the central coordination point for AP&L offsite radiological monitoring and as the primary location for coordinating both technical and non-technical support activities of support personnel. The media portion of the ECC which is not designed to be radiologically habitable shall be utilized for joint press conferences.

For an accident condition which would require the evacuation of the ANO Administration Building, the ECC shall also serve as a backup TSC and OSC.

The ECC, like the TSC, was designed specifically for emergency use. Under emergency conditions emergency phone and radio communications are available to ERO personnel in this facility.

The Onsite TSC, OSC and ECC, as presently equipped, were utilized in AP&L's May 19, 1982, Emergency Plan Exercise. This Exercise was evaluated by the NRC's Division of Emergency Preparedness. With the exception of the plant data display systems, for which we plan to utilize the Safety Parameters Display System (SPDS) and a real time dose projection system, the Emergency Response Facilities for ANO are functional at this time. In AP&L's letter to Mr. Darrell G. Eisenhut dated June 1, 1981, (ØCANØ681Ø1) a description of the TSC instrumentation and displays was provided. Those descriptions pertained to the SPDS and the real time dose projection system which at this time are not operational. Like the real time dose assessment capability (Item III.A.2.2), AP&L began the task of developing an SPDS early in 1980 before the guidance pertaining to the development was finalized by the NRC. This effort was begun at that time to meet the original scheduled completion date for the SPDS of January 1, 1981, as presented in NUREG 0578. It was also AP&L's intention at that time for the SPDS to supply the needed plant parameters to the TSCs. Therefore the completion schedule was also affected by these facility's schedules.

Like the dose assessment capability, the SPDS consists of state-of-the-art computer hardware and software. The SPDS for ANO-1 and 2 is a unique design being developed completely by AP&L. To date AP&L has expended more than \$3 million and approximately 6000 man hours in the development of this system. AP&L's original completion schedule of

January 1, 1981, was slipped to October 1, 1982, with the issuance of subsequent NRC correspondence related to emergency response facilities. It now appears AP&L will be unable to have the SPDS functional by October 1, 1982, for the following reasons:

- (1) A plant shutdown is required to interface the computer system to the plant instrument loops,
- (2) Software development for the data displays has progressed slower than originally scheduled,
- (3) Cable delivery has been delayed beyond the original delivery dates which could preclude tie-ins into instrument loops during the ANO-2 refueling outage.

It is our understanding from reading SECY-82-111 that the NRC will be working with licensees on an independent basis to develop implementing plans and schedules for the implementation of the Emergency Response Facilities, SPDS and other Emergency Planning related items. Based on SECY-82-111's recommendation, a mutually acceptable schedule for the completion of the SPDS (which will serve as the plant data display in the TSCs) will be coordinated with the NRC staff upon their request.

In the interim, until the SPDS is functional (with training and procedures developed and implemented), the Emergency Response Facilities will continue to be available with their emergency communication equipment and status boards such that plant status can be assessed at these facilities.

#### Item III.A.2.2 Meteorological Data

This item is addressed by AP&L's response to NRC's March 8, 1982, Emergency Preparedness Appraisal Report (ECNA038209). This information is repeated below for your convenience.

Following the issuance of NUREG 0654 Rev. 0 in January 1980, AP&L earnestly began the task of obtaining real time computerized dose calculation and assessment capability. In the process of procuring this capability, AP&L quickly learned such computer hardware and software technology was not readily available. Through contacts with numerous vendors of nuclear instrumentation one vendor was found who was willing to assemble the required computer hardware and software necessary to carry out the complex computer modeling. AP&L contracted with the vendor in August 1980, to supply a Gaseous Effluent Radiation Monitoring System (GERMS) capable of incorporating real time meteorological data to perform dose calculations and assessment.

It was AP&L's intent (at the time the contract for the system was secured) to have the dose assessment capability operational by January 1, 1981. AP&L later changed this target date to July 1, 1982, consistent with Revision 1 to NUREG 0654 and later to October 1, 1982, per the

recommended schedule provided by NRC Generic letter 82-10. These deviations from our original schedule were necessitated due to delays in hardware and software delivery and software development problems incurred by the equipment vendor.

The GERMS system was installed in the spring of 1982 and is composed of two major elements, Eberline radiation monitors (SPINGs) and the GERMS computer system. The SPING monitors measure stack releases and accomplish the radiation monitoring requirements detailed in NUREG 0737 Item II.F.1. The GERMS computer system is not required to fulfill the requirement of Item II.F.1 but will be used for dose assessment modeling, in accordance with the requirements of NUREG 0654, and the generation of reports.

AP&L and the GERMS vendor began the process of start-up testing and debugging following the arrival of the needed equipment at ANO. As with any new state-of-the-art computer system it was anticipated that some problems would be encountered. However, after initial start-up testing began, more problems than initially anticipated were uncovered in the debugging process. Thus far AP&L has encountered numerous errors in essential data transfer programs, not all of which have been resolved to date. In light of the time involved with the debugging process it is not known at this time when the last of these major problems will be resolved. Since additional integrated testing of the system is dependent on correct operation of these transfer programs, it no longer seems possible that AP&L can have the system operational by October 1, 1982. AP&L will not declare the system operational before adequate procedures and training have been developed and implemented.

Realizing that we could not have the computerized dose assessment system operable by October 1, 1982, AP&L's Mr. Dale James, Mr. Alan Smith and Mr. James Shea contacted Mr. Barry Zalzman (NRC staff Meteorologist and responsible individual for the review of ANO Meteorological Emergency Planning items) by telephone on August 26, 1982. In this phone conversation with Mr. Zalzman, Mr. James and Mr. Smith relayed the above information and explained AP&L's concern of not having the system operable by October 1, 1982. Mr. Zalzman indicated that his group was trying to tie the dose assessment requirements of NUREG 0654 and their due dates to the requirements and due dates for emergency response facilities (Mr. Zalzman had relayed this information to us in earlier conversations and in fact was successful to a certain extent in that in Generic letter 82-10 the meteorological requirements of NUREG 0737 item III.A.2.2 now have the same recommended schedule as upgraded Emergency Support Facility item III.A.1.2 of NUREG 0737). The requirements of NUREG 0737 item III.A.2.2 are the same as those in NUREG 0654 Appendix 2. Based on this integration of requirements, Mr. Zalzman referred us to SECY-82-111 which was approved by the Commission for implementation on June 21, 1982. This document points out that many of the requirements and due dates for the different emergency response facilities and equipment would probably not be met by many licensees. In recognition of this fact and the difficulty of implementing generic deadlines, the staff proposes that plant-specific schedules be established which take into account the unique status of each plant. The following sequence for developing implementation schedules was proposed by the staff:



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When the basic requirements for emergency response capabilities and facilities are finalized, they should be transmitted to licensees by a generic letter from NRR, promulgated to NRC staff, and incorporated as regulatory requirements (e.g., in the Standard Review Plan or by regulation or Order, as appropriate). The letter to licensees should request that licensees submit a proposed schedule for completing actions to comply with the basic requirements. Each licensee's proposed schedules would then be reviewed by the assigned NRC Project Manager, who would discuss the subject with the licensee and mutually agree on schedules and completion dates. The implementation dates would then be formalized into an enforceable document.

Based on our conversation with Mr. Zalcmian and the recommendations of SECY-82-111, a mutually acceptable schedule for the completion of GERMS will be developed with the NRC staff upon their request.

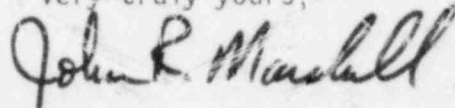
Item III.D.3.4 Control Room Habitability

As stated in our letter dated December 31, 1980, (ØC/N123Ø17) it is AP&L's position that no modifications of the ANO 1 or 2 control rooms are required by Item III.D.3.4 since the current design meets the subject requirements.

Conclusion

The above information provides the current status of those items as requested by the enclosure to your letter. AP&L has made a concerted effort to meet the recommended schedules, however, in those instances where our proposed schedule is beyond the recommended schedule, we feel that adequate justification has been provided by this response and referenced correspondence.

Very truly yours,



John R. Marshall  
Manager, Licensing

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