



**Entergy
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U. S. Nuclear Regulatory Commission
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Subject: Arkansas Nuclear One - Units 1 and 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Update On Historical Commitments

Gentlemen:

Entergy Operations, Inc. is providing an update on the progress of the Historical Review Project (HRP) in reviewing past NRC correspondence for commitments at Arkansas Nuclear One (ANO). Correspondence from the Operating License date of each unit to the present has been reviewed. The status of commitments identified by the HRP has been verified, or actions have been issued to obtain verification of commitment status. During this effort, certain commitments have been identified for which ANO's docketed position should be clarified or changed. Additionally, the need to continue compliance with certain commitments has been superseded by modified NRC regulations or alternate ANO controls. Enclosed is a summary of 11 such items resolved since the last update.

Guidelines are in place to assure changes to commitments identified during the HRP are considered for any safety significant implications. The commitment changes identified in this report were reviewed against the guidelines and were not considered to have any safety significant implications. No action is being requested from the NRC on any items from this report.

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Should you have any questions, please contact me at (501) 964-8601.

Very truly yours,



for Dwight C. Mims
Director, Licensing

DCM/kjm

Attachment

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Commitment for Surveillance on Bolt Tightness of Magne-Blast Circuit Breakers

Directorate of Regulatory Operations (DRO) Bulletin 74-9, dated August 5, 1974, described a deficiency in General Electric (GE) 4KV Magne-Blast circuit breakers involving loose bolts on the breaker assembly which could cause the switch to fail to operate. As requested by this bulletin, ANO responded regarding the long-term verification program planned to ensure bolt tightness. Letter ICAN107406, dated October 1, 1974, stated:

We propose to perform a surveillance once every refueling period of bolt tightness of these switch assemblies. As these breakers were operated many more times during start-up than they would be during normal plant operation, we feel that checking these bolts during this surveillance should prevent this type of failure from occurring.

There have been no failures recorded at ANO of breaker auxiliary switches due to loose holding bolts on the switch. In addition, industry experience does not indicate abnormal occurrences of deficiencies in Magne-Blast breakers due to bolt tightness. This is consistent with internal GE information which states that if properly torqued at installation, bolt tightness will be good for the normal life of the equipment.

The surveillance committed to in 1974 has not proven to be necessary in view of industry experience, vendor recommendations, and 20 years of maintenance history at ANO. The checking of nuts, bolts, cotter pins, and terminal connections for tightness is considered to be a good maintenance practice and, as such, is already part of ANO periodic breaker preventative maintenance procedures. For the above reasons, the commitment for an additional surveillance to specifically check Magne-Blast bolts for tightness every refueling outage is being rescinded.

Commitment to Consult the Instrument and Controls Supervisor Prior to Draining the Core Flood Tanks

Abnormal Occurrence Report 50-313/74-8A was submitted to the NRC on July 16, 1975, as a follow-up report on the cause and corrective actions resulting from a low level in the ANO-1 core flood tank. Investigation determined that the low level was the result of level transmitter drift due to leakage of reference leg fluid. The leakage was repaired at the time and in order to prevent reoccurrence of the event, ANO committed to the following:

Procedures will remain in effect that, before the core flood tanks are drained, the Instrument and Controls Supervisor will be consulted concerning the need to check the reference legs.

Since the time of the above commitment, Design Change Package 83-1154 modified the transmitter arrangement being used for the core flood tanks from a "wet" reference leg to

a "dry" reference leg. This corrected the problems associated with drift in tank level due to loss of reference leg fluid. Therefore, there is no longer a need to consult with Instrument and Controls Supervisor prior to draining the core flood tanks, and the commitment is being rescinded.

Commitment Concerning Failure to Perform Required Response Tests on Nuclear Chicago Counters

In Inspection Report 50-313/77-04, the NRC identified that response checks for the Nuclear Chicago counters were not performed on January 17, 20, 25, and 27, 1977, as required by procedure. In response, letter 1-037-18, dated March 29, 1977, committed ANO to the following actions to avoid recurrence:

The data sheet used to record the response test, background and efficiency determination... has been pre-dated for each date of the month. This should ensure that checks are made each day. In addition, separate data sheets are now used for the air particulate standard and the smear standard....

The above commitment was intended to enhance compliance with procedural controls, and it has been refined over the years as more effective controls were identified. Current procedures contain the requirements for response checks and operation of the equipment now in use at ANO, Tennelec LB5100 Series III counters. In addition, performance of routine daily tasks, such as response checks when applicable, is currently documented on a separate checklist containing daily routines. This serves as a second check for supervisory personnel to ensure that daily checks are made as scheduled. This type of checklist is a more direct cue to perform daily response checks than pre-dating the data sheets. It is also apparent on the checklist which type of response check (e.g., air particulate or smear) has been performed, making it unnecessary to proceduralize separate data sheets to assure that each type of check is completed. The commitment from Inspection Report 50-313/77-04 is no longer useful to enhance procedural compliance; therefore, it is being rescinded.

Commitment to Provide Standing Order on Conducting Valve/Breaker Line-ups

In Inspection Report 313/79-11, dated July 12, 1979, an infraction was identified concerning discrepancies on the completed valve/breaker alignment checklists. The inspector was concerned that the existing valve/breaker line-ups gave inadequate assurance of proper system alignment; therefore, he requested that the licensee complete the required corrective action prior to plant start-up. The corrective actions taken were documented in the inspection report and no other response to the infraction was required. Because the corrective actions resolved the infraction, these actions are considered to be commitments.

The corrective actions taken consisted of the issuance of Standing Order Number 3, "Valve Line-ups", on June 11, 1979. This standing order gave guidance on the desired method of conducting valve/breaker line-ups. A Master Valve/Breaker Line-up book was established which was maintained in the Control Room and contained the most recent valve/breaker line-up sheets for each system, documenting any exceptions. Specific instructions on initialing and dating the valve line-up sheets were included as well.

Since that time, the process of performing valve/breaker line-ups prior to restart has evolved to the current process required by procedure 1015.001, "Conduct of Operations". The Master Valve/Breaker Line-up book is no longer necessary as the valve line-ups become part of the start-up package and exceptions are resolved before heat-up. (This was also discussed in our letter of March 19, 1993, OCAN039303.) Instructions for initialing and dating the forms are currently included in 1015.001; however, these instructions are now different from the specific instructions documented in the inspection report.

Because the commitment has been superseded by the current process and is no longer necessary to prevent recurrence of the discrepancies noted in the infraction, the commitment is being rescinded.

**Commitment to Verify Radiological Postings Daily,
Exclusive of Weekends and Holidays**

In Violation 50-368/8011-02, ANO was cited for failure to post an area of the ANO-2 Auxiliary Building as a radiation area that exceeded the guidelines from 10CFR20.202(b)(2). ANO responded to the violation in letter 1-089-19, 2-080-18, dated August 27, 1980, with the following commitment:

Correct posting will be verified daily by Health Physics, exclusive of weekends and holidays. Correct posting of radiation areas has been maintained since July 7, 1980.

Radiological posting philosophies have been significantly enhanced at ANO since 1980. The entrances to the Radiologically-Controlled Area (RCA) are no longer posted as a contaminated area with individual radiation areas inside. Instead, the RCA entrances are posted as radiation areas with-low dose waiting areas and no-loitering areas posted within the overall radiation area. High Radiation Areas are posted separately within the RCA and door controls established when required. In addition, ANO currently uses an area coverage concept for Health Physics (HP) which allows for one or more HP technicians to be responsible for an assigned area within the RCA. This allows a dedicated individual to provide job coverage for their elevation, maintain postings in the area, and continuously monitor the area for radiological and non-radiological hazards.

Current postings provide more information as to the hazards present in the area and are more professionally maintained due to the area coverage philosophy. High Radiation Area postings are currently verified daily and periodic inspections of other postings still occur at regular intervals. These verifications, however, are now done as part of the overall radiation protection process. With the changes in radiation protection practices and philosophy, a commitment to verify individual radiation area postings daily is no longer necessary to prevent recurrence of the violation and is being rescinded.

Commitments Concerning Laundry Processing at ANO

In Inspection Report 50-313; 368/80-15, ANO was cited for violation of procedures in that laundry with a fixed contamination level of greater than 0.1 millirem/hour was not segregated for use in highly contaminated areas only. In response to this violation (313; 368/8015-01), letter 1-090-23, 2-090-31; dated September 25, 1980, contained the following commitments:

...Radiation Protection Procedure 1602.27 has been revised to establish a control objective for laundry personnel at 2,000 counts per minute for Anti-C [Anti-Contamination] clothing and a normal limit that contamination levels should not exceed 3,000 counts per minute. The revised procedure 1602.27 also addresses the segregation and separate storage and handling of Anti-C clothing with fixed contamination levels between 3,000 and 10,000 counts per minute. ...Anti-C clothing storage areas are designated as Radiation Areas and access to these areas is controlled by Health Physics. Radiation surveys of the Anti-C clothing storage areas are performed by Health Physics on a routine basis.

During the time period of this violation, ANO processed anti-contamination clothing onsite using two washing machines and commercial-type dryers. The laundry was processed by contract laborers and monitored by Health Physics with hand-held friskers. ANO owned the Anti-Cs and they were discarded when torn or no longer usable due to contamination.

Laundry operations are no longer conducted at ANO due to the increasing cost of maintenance on the equipment and the need for improved efficiency. Interstate Nuclear Services (INS) currently processes Entergy's Anti-Cs (ANO laundry included) at their facility in Vicksburg, Mississippi. INS monitors the laundry for contamination levels and "hot particles" to Entergy standards. ANO spot checks the garments returned to site for conformance to Entergy standards using a conveyor monitor. Since the current system was implemented, the rejection rate on clothing has been less than 1 percent.

The commitments made in response to Violation 313;368/8015-01 are no longer applicable due to the significant changes in the processing of ANO laundry. Current control methods have proven to be more efficient, therefore, it is unlikely that ANO will return to in-house laundry processing and hand monitoring of Anti-Cs. ANO

conservatively posts areas greater than 2.5 millirem/hour at 30 centimeters as Radiation Areas. Clothing processed under the current system should not require posting; although, all clothing is stored in radiologically-controlled areas at present. For the reasons outlined above, ANO is rescinding the commitments in response to Violation 313; 368/8015-01.

Commitment for Mechanism to Insure Out-of-Tolerance Indications on Reactor Trip Breakers Are Reviewed by Engineering and Quality Assurance

On January 20, 1984, Deviation 313/8334-02 was issued to ANO-1 for failure to comply with commitments from a Safety Evaluation Report (SER) dated April 5, 1983, relative to improving procedures for reactor trip breaker (RTB) maintenance. In response to this deviation, OCAN038406, dated March 20, 1984, committed to the following:

To prevent recurrence, the restoration and close out sections for both Unit 1 and Unit 2 breaker PM procedures have been changed to assure the records are provided to Engineering and Quality Assurance (Quality Control).

..The mechanism is now in place to insure [sic] that out of tolerance indications are provided to Engineering and Quality Assurance (represented by ANO Quality Control Dept.) personnel for review.

The ANO Plant Safety Committee reviewed the commitment in August 1984. At this point it was determined that the intent of the commitment was an independent review of discrepancies to identify those that warrant analytical attention, and that analysis and trending could best be accomplished by the Plant Performance Group. Accurate trending of data has been maintained at ANO, either by the Plant Performance Group, or later, by the Relay Group Supervisor. (As stated in OCAN039303, dated March 19, 1993, ANO considers changes in the group or procedure which implements a commitment to be an administrative change that would not be reported to the NRC.)

The Relay Group Supervisor reviewed trend data from January 1986 to the present and out-of-tolerance data was further reviewed by the Relay Engineer to determine effects on operability. No operability concerns due to out-of-tolerance adjustments were found for the 10-year period studied. In the intervening years improved maintenance methods, procedure enhancements to address operability concerns, and the advent of the condition reporting system were proven to be sufficient to assure breaker performance. This conclusion is consistent with Generic Letter 83-28, Supplement 1, issued October 7, 1992, which states that:

.. In light of this [industry reported] RTB operating experience, the staff has concluded that actions already completed pursuant to GL 83-28, have been effective in improving RTB reliability to open and that further actions to address end-of-life degradation in breaker reliability are not justified. Furthermore, since issuing GL 83-28, the NRC has promulgated the requirements for reducing the risk

from ATWS events in 10 CFR 50.62. The modifications associated with this regulation further reduce the risk resulting from failure of RTBs.

For these reasons, ANO does not consider a formal trending program for RTBs to be necessary at this time, and the commitment for Engineering and Quality Assurance to review the trend data is being rescinded.

Commitment to Increase the Frequency of Volume Control Tank Level Transmitter Reference Leg Verifications

Licensee Event Report (LER) 50-368/82-012/03X-1 was submitted May 25, 1984, in order to update the cause description and corrective actions of a 1982 LER. In the subject event, charging pump 2P-36A (a positive displacement pump) was declared inoperable due to a cracked cylinder head resulting from pump starvation and subsequent shock loading of the cylinder wall. Follow-up investigation determined the root cause of the event to be leakage from the common Volume Control Tank (VCT) reference leg for both level transmitters which resulted in loss of VCT level and pump starvation. To prevent recurrence of the event, ANO stated that "The VCT level transmitter surveillance frequency has been increased to provide more frequent checks of the reference leg condition."

Design Change Package (DCP) 88-2088 installed tubing and fitting modifications which separated the common reference leg for the VCT level transmitters and provided a separate seal pot for each reference leg. The separate reference leg and seal pot for each transmitter resolves the potential for a loss of reference leg fluid to result in false indication of VCT level from both transmitters. This DCP was summarized in letter OCAN079004, dated July 23, 1990; the 10CFR50.59 Summary for 1989. With the installation of separate reference legs, the surveillance for checking the fluid level in the common reference leg is no longer a necessary corrective action, and the commitment is being rescinded.

Commitment to Maintain the Key to the Operations Key Locker on the Person of the Shift Supervisor

During Inspection 50-313;368/87-31 held September 21-25, 1987, ANO was cited for failure to adequately control the key to the ANO-2 Operations key locker. In response to this violation, 50-368/8731-01, ANO committed in letter OCAN128707, dated December 21, 1987, to change Procedure 1015.005, "Shift Supervisor Key Control", so that the key to the Operations key lockers would be maintained on the person of the Shift Supervisor (SS). In his absence from the Control Room, the SS was required to turn over the key to a Senior Reactor Operator (SRO) who would remain in the Control Room. This commitment was necessary due to the fact that some security keys were kept in the Control Room key lockers at that time. This is no longer the case.

There is currently no reason for positive control of the key to the Operations key locker by maintaining it on the person of the SS or transferring it to an SRO prior to leaving the Control Room. With no security keys stored in the Operations key locker, this task becomes an unnecessary administrative duty for the SS/SRO. For this reason, ANO is rescinding the commitment for key control of the Operations key locker.

Commitment to Include Training on the Condition Reporting Program in the Engineering Training Program

By letter dated April 7, 1989, the NRC transmitted a Notice of Violation and Proposed Imposition of Civil Penalty based on Inspection Report Nos. 88-35, 88-38, 88-42, and 88-48. In the enforcement action (EA 88-284), a violation was cited for failure to promptly correct identified conditions adverse to quality. ANO responded to the violation (313/8838-01) by letter OCAN058901 dated May 5, 1989. The following commitment was contained in this letter:

In addition to those actions already taken, AP&L plans to conduct further training of the Design Engineering Department on the CR [Condition Reporting] program. This will include instructions on the administration of the CR program, performing root cause analyses, and conducting operability/reportability determinations.... To ensure maintenance of individuals' skills, training on the CR program will be factored into the Engineering training program.

This commitment was made in response to situations in which issues concerning the operability of a system and the subsequent reportability determination were not promptly resolved. A contributing factor in two examples was the lack of timeliness in the completion of the necessary engineering analyses of the conditions. The commitment was intended to ensure that all Design Engineering personnel understood the details of the CR program (which was still new at the time the violations occurred) so that future analyses would be conducted in accordance with the program.

The implementation of the CR program has changed since 1989, particularly in the assignment of responsibilities. Training of engineering support personnel is also consistent with the recently issued 10CFR 50.120, "Training and Qualification of Nuclear Power Plant Personnel" requirements.

The ANO violation response committed to engineering training in four areas:

1. Administration of the Condition Reporting Program;
2. Performance of root cause analysis;
3. Conducting operability determinations; and
4. Conducting reportability determinations.

The engineering training program at ANO is implemented by the Engineering Support Personnel (ESP) Training Program, which was established in accordance with ANO site training needs and ACAD 91-017, "Guidelines for Training and Qualification of Engineering Support Personnel." Participation in the program is designated as either "mandatory" or "optional" based on the job tasks to be performed. The participants are provided with an overview of administrative processes as well as specific training for those individuals identified as requiring such training based on the job tasks performed. This is consistent with the systems approach to training required by 10CFR 50.120.

An in-depth review of the administration of the CR program is included in the overview of administrative processes, which is typically completed within six months after entry into the program as a mandatory participant. Design Engineering personnel receive this training if they are designated as mandatory participants. In addition, General Employee Training includes a brief overview of the CR program.

With regard to root cause analysis training, the current CR system requires that a root cause analysis be completed on all significant CRs. These root cause analyses are then reviewed through the Corrective Action Review Board process to assure adequate evaluations and actions. These requirements and the basics of root cause analysis are covered in the ESP orientation module. In addition, many of the more senior level personnel have completed specific root cause training classes that were offered in the past when root cause analyses were more routine within the Design Engineering Department. Training in the performance of root cause analysis is covered in the position specific phase of the ESP program. Personnel who require this training to be qualified to perform their job or a job-related task should have this requirement documented in their position specific qualification card. Because the training is given based on need as determined by a position task analysis, routinely training all Design Engineering personnel on root cause analysis is not necessary.

In 1989, procedure 1000.104, "Condition Reporting and Corrective Actions," allowed equipment to be determined "operable pending an Engineering Operability Determination." This was deleted in 1990 and the responsibility for operability determinations was restricted to the Operations Department. As stated in our letter of July 23, 1990, (OCAN079008, "Key Enhancements and Revisions to Condition Reporting Program"), operability determinations are performed by Operations with assistance provided by engineering and support groups on an as-needed basis. Procedure 1000.104 was revised to require an operability assessment by the Shift Technical Advisor (STA)/Shift Engineer (SE) if the impact of a condition on the associated system or component is not apparent or if the assessment requires engineering input. (The STA/SE is an Operations position.) The current improved process addresses the concern for "lack of timeliness" in performing operability determinations. Procedure 1000.104 requires that the initial operability and immediate reportability be determined within 24 hours of logging the CR in the Control Room. Although engineering personnel, including Design Engineering, provide technical input to an operability determination if requested, the STA/SE and the Shift

Superintendent retain the responsibility for the operability determination. Additional training is not necessary for Design Engineering to provide technical input to the operability determination since the skills to support good technical evaluations are part of the ESP program and other foundational training.

In 1990, the responsibility for making 10CFR50.73 reportability determinations was limited to the Licensing Department which has procedural guidance for reportability. Previously, the department managers were required to determine reportability with an independent review by Licensing. This change was communicated to the NRC in the Business Plan (Item B.2) attached to letter OCAN039001, dated March 14, 1990; the combined response to the SALP and the Diagnostic Evaluation. Determining immediate reportability in accordance with 10CFR50.72 is now the responsibility of the Shift Superintendent with an independent review by Licensing.

In summary, training on the Condition Reporting program, inclusive of the four areas listed above, is being provided to the individuals who need the training to perform their job tasks. Because of refinements to the CR program, training of all Design Engineering personnel in each of these tasks is no longer necessary. Training of engineering support personnel based on analysis of the jobs performed is required by 10CFR 50.120. The need for the commitment has been superseded by the changes in the CR program and the issuance of 10CFR 50.120; therefore, the commitment is being rescinded.

Commitment for Issuance of Modification Impact Reports

In Inspection Report 50-313;368/89-39, ANO was issued a violation (368/8939-04) for failure to effectively control drawings. Letter OCAN118907 dated November 9, 1989, formally documented verbal commitments made in response to the violation during the inspection period. Enhancements to the method of notifying drawing users of the impact that pending revisions might have on a drawing package were described in this letter, including a new computer database from which impact reports could be issued. OCAN118907 also stated, "Enhancements such as this will continue to be made to the extent that they supply the desired input," and then continued to describe the specific enhancements and a timetable for implementation of the improved methodology. The formal response to Violation 368/8939-04 superseded OCAN118907, and committed to "Modification Impact Reports" that would be made available to engineers, and other drawing users so that pending revisions could be taken into account when preparing modification packages. This letter, OCAN039010, stated that, "Compliance with the specifics of the violation was achieved by implementing the use of the Modification Impact Reports in December 1989. This process will be proceduralized by April 15, 1990."

ANO intended for drawing control to be an evolutionary process that would keep pace with technology, and to commit to the initial implementation of the 1989 enhancements. For example, the latest as-built information on plant drawings can now be accessed directly from any computer on site connected to the site network. Hard copy

Modification Impact Reports are no longer necessary, or desirable, with the availability of the Drawing Tracking System database on the plant computer networks. Further enhancements are planned to this database and other related databases as the computer systems are upgraded to keep pace with technology. For this reason, the response to Violation 368/8939-04 is being modified to return to the original wording from OCAN118907.