



January 19, 2001

C0101-06
10 CFR 50.90

Docket No.: 50-316

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Unit 2
LICENSE AMENDMENT REQUEST
EXTENSION OF EMERGENCY DIESEL GENERATOR ENGINE
AND BATTERY SURVEILLANCE REQUIREMENTS

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the Licensee for Donald C. Cook Nuclear Plant Unit 2, proposes to amend Facility Operating License DPR-74 to permit a one-time extension of certain Technical Specification (T/S) Surveillance Requirement (SR) intervals. I&M proposes to extend surveillance intervals associated with the emergency diesel generator (EDG) engines and station batteries that are currently required to be completed beginning June 27, 2001. Nuclear Regulatory Commission (NRC) approval would allow these requirements to be performed during the next refueling outage, but no later than December 31, 2001. This would preclude the need for a mid-cycle shutdown of the unit.

The affected SR for the EDG engines is SR 4.8.1.1.2.e.1. This SR requires inspection of the EDG engines at least once per 18 months. The affected SRs for the station batteries are SRs 4.8.2.3.2.d and 4.8.2.5.2.d. These SRs require performance of a battery service test for the Train AB, Train CD, and Train N batteries at least once per 18 months.

Attachment 1 provides a detailed description and safety analysis to support the proposed changes. Attachment 2 describes the evaluation performed in accordance with 10 CFR 50.92(c), which concludes that no significant hazard is involved. Attachment 3 provides the environmental assessment. Attachment 4 provides a battery aging curve from the manufacturer of the AB, CD, and N batteries. Attachment 5 identifies new commitments made in this letter.

A001

No previous submittals affect T/S pages that are included in this request. If any future submittals affect these T/S pages, then I&M will coordinate changes to the pages with the NRC Project Manager to ensure proper T/S page control when the associated license amendment requests are approved. No new commitments are made in this submittal.

I&M requests approval of this request by June 1, 2001, to support Unit 2 outage planning.

Copies of this letter and its attachments are being transmitted to the Michigan Public Service Commission and Michigan Department of Environmental Quality, in accordance with the requirements of 10 CFR 50.91.

Should you have any questions, please contact Mr. Ronald W. Gaston, Manager of Regulatory Affairs, at (616) 465-5901, extension 1366.

Sincerely,



R. P. Powers
Senior Vice President, Nuclear Operations

/dmb

Attachments

c: J. E. Dyer
MDEQ - DW & RPD
NRC Resident Inspector
R. Whale

AFFIRMATION

I, Robert P. Powers, being duly sworn, state that I am Senior Vice President, Nuclear Operations of American Electric Power Service Corporation and Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

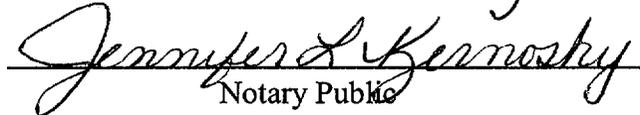
American Electric Power Service Corporation



R. P. Powers
Senior Vice President, Nuclear Operations

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 18 DAY OF January, 2001


Notary Public

My Commission Expires 5/26/2005

ATTACHMENT 1 TO C0101-06

DESCRIPTION AND SAFETY ANALYSIS FOR THE PROPOSED CHANGES

A. Summary of the Proposed Changes

Indiana Michigan Power Company (I&M), the Licensee for Donald C. Cook Nuclear Plant (CNP) Unit 2, proposes to amend Facility Operating License DPR-74 to permit a one-time extension of certain Technical Specification (T/S) Surveillance Requirement (SR) intervals. I&M proposes to extend surveillance intervals associated with the emergency diesel generator (EDG) engines and station batteries that are currently required to be completed beginning June 27, 2001. Nuclear Regulatory Commission (NRC) approval would allow these requirements to be performed during the next refueling outage, but no later than December 31, 2001. This would preclude the need for a mid-cycle shutdown of the unit.

The affected SR for the EDG engines is SR 4.8.1.1.2.e.1. This SR requires inspection of the EDG engines at least once per 18 months. The affected SRs for the station batteries are SRs 4.8.2.3.2.d and 4.8.2.5.2.d. These SRs require performance of a battery service test for the Train AB, Train CD, and Train N batteries at least once per 18 months.

The proposed change pertaining to the EDG engines is described in detail in Section B of this attachment. The proposed change pertaining to the station batteries is described in detail in Section C of this attachment.

B. Proposed Change to EDG Engine Surveillance Frequency

Description of the Current Requirement

T/S 3/4.8.1.1, "A. C. Sources – Operating," requires two separate and independent EDGs to be operable in Modes 1, 2, 3, and 4. T/S 3/4.8.1.2, "A.C. Sources - Shutdown," requires a single EDG to be operable in Modes 5 and 6. T/S 3/4.8.1.1 and T/S 3/4.8.1.2 both require, in part, performing SR 4.8.1.1.2.e.1.

SR 4.8.1.1.2.e.1 requires operability be demonstrated at least once per 18 months, during shutdown, by subjecting the EDG engines to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendation for this class of standby service.

Bases for the Current Requirement

Verifying the operability of the A.C. power sources by performing T/S SR 4.8.1.1.2.e.1 provides assurance that the performance of facility power sources in response to accidents analyzed in the Updated Final Safety Analysis Report (UFSAR) will remain within the CNP design and licensing basis.

The operability of the A.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for the safe shutdown of the facility, and the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50. The operability requirements for the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of the onsite A.C. power sources and associated distribution systems operable during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

Within certain of the SRs for systems and components at CNP, a frequency of 18 months is specified. Many of these SRs clearly state "...once per 18 months, during shutdown," which indicates that these tests/surveillances are to be performed during the refueling outages. The SRs contained in the existing T/Ss are designed to assure that the quality of equipment and components is maintained so that facility operation will be within the safety limits, and Limiting Conditions for Operation (LCOs) of the system will be met.

The operability of the minimum specified A.C. power sources and associated distribution systems during shutdown and refueling ensures that the facility can be maintained in the shutdown or refueling condition for extended time periods, and sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The 18-month frequency is based on ensuring sufficient capacity, capability, redundancy, and reliability of A.C. power sources to emergency safety feature systems so that the fuel, reactor coolant system, and containment design limits are not exceeded. The 18-month frequency for the EDG engine SR is consistent with the recommendations of Regulatory Guide (RG) 1.9, "Selection, Design, and Qualification of Diesel-Generator Units Used as Standby (Onsite) Electric Power Systems at Nuclear Power Plants," Revision 3, which takes into consideration unit conditions required to perform the SR and is intended to be consistent with expected fuel cycle lengths.

Need for Revision of the Requirement

SR 4.8.1.1.2.e.1 can only be performed with the unit shut down. The SR was last completed for the AB and the CD EDG engines on August 11, 1999, and September 20, 1999, respectively. In accordance with the T/S required frequency of "at least once per 18 months," the SR must be re-performed for the AB and the CD EDG engines no later than June 27, 2001, and August 6, 2001, respectively. These dates include the 25 percent extension allowed by T/S 4.0.2.

Completion of the SR for each EDG engine as described above was scheduled based on the availability of the associated ECCS trains for maintenance. The train availability schedules were based on the overall unit restart schedule that was current at that time. However, restart of the unit occurred later than expected, and the projected end of the current fuel cycle extends beyond the SR due dates. As a result, a one-time extension of the SR 4.8.1.1.2.e.1 frequency is needed to preclude a forced shutdown of the unit.

Description of the Proposed Change

I&M proposes to add a condition to DPR-74 to allow an extension of the Unit 2 SR of T/S 4.8.1.1.2.e.1. The proposed change would allow this SR to be completed during the next refueling outage, but no later than December 31, 2001. The proposed change would extend the 18-month surveillance interval, which is permitted to be as long as 22.5-months based on T/S 4.0.2, to a maximum one-time interval of less than 29 calendar months. The proposed license condition does not alter or change any other SRs. The proposed wording for the requested license condition is as follows:

"The emergency diesel generator engine inspection Technical Specification surveillance requirement 4.8.1.1.2.e.1 has been extended to allow its performance during refueling outage 13, but no later than December 31, 2001."

Bases for the Proposed Change

As described below, the EDG engines have demonstrated reliability by meeting performance goals specified in the CNP Maintenance Rule program, the CNP Station Blackout Reliability Program, and the CNP T/S Surveillance program.

Maintenance Rule Program

Both EDGs are classified as category "a(2)" in accordance with the CNP program for implementation of the Maintenance Rule, 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants." The a(2) categorization was achieved by demonstrating that the performance or condition of the Unit 2 EDGs was being effectively controlled through the performance of appropriate preventive maintenance, such that the engine

remains capable of performing its intended function. The EDGs have met the CNP Maintenance Rule program goals for both availability and reliability. The Maintenance Rule program uses the number of failures in the last 25 demands to evaluate performance of an individual EDG. Three failures in 25 demands would result in an "a(1)" classification under the Maintenance Rule. Neither Unit 2 EDG has experienced any Maintenance Rule failures in the last 25 demands.

Additionally, the Maintenance Rule program also requires monitoring of the accrued time that the EDGs are unavailable. Unavailability time is accrued when the engines are removed from service during a mode when they are required to be available. The unavailability criterion for an a(1) classification for an EDG is 432 hours in a 24-month period. The current unavailability times for the previous 24 months are approximately 22 and 20 hours for the AB and CD EDGs, respectively. These unavailability times resulted from planned maintenance outages for the engines. The previous 24 months encompass the extended shutdown during which the EDG engines were required to be available much less than during normal operations. The approximately 22 and 20 hours of unavailability were accumulated since restart of the unit approximately six months ago. Therefore, the rate of accumulation since restart has been well below that corresponding to the unavailability criterion which would result in an a(1) classification.

Station Blackout Reliability Program

Failure rates for the EDGs are also well below trigger values established under the CNP Station Blackout Reliability program developed in accordance with Nuclear Management and Resource Council (NUMARC) 87-00, "Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors," dated August 1991, and implementation of the station blackout rule, 10 CFR 50.63. The Station Blackout Reliability program identifies trigger values upon which to base evaluation of engine performance on both a per-unit basis and on a per-engine basis. These trigger values are 3 failures in 20 demands, 4 failures in 50 demands and 5 failures in 100 demands for a unit, and four failures in 25 demands for an engine. As stated above, neither Unit 2 EDG has experienced any failures in the last 25 demands. Additionally, there has been only one failure in the last 100 demands for both Unit 2 EDGs.

T/S Surveillance program

The CNP T/S EDG surveillance program requires monitoring the number of failures in the last 20 valid tests, where the criteria for determining the number of failures and valid tests is determined in accordance with RG 1.9, Revision 3. The T/Ss require that an engine be placed on accelerated frequency testing (i.e., tested every 7 days versus the normal frequency of every 31 days) when two failures occur in the last 20 valid tests. Accelerated testing is continued until there are less than 2 failures in the last 20 valid tests and there have been 7 consecutive failure-free tests. There have been no failures in the last 20 valid tests on either Unit 2 EDG.

Additional Considerations

Significant corrective and preventive maintenance was completed on both of the EDG engines during the extended shutdown that preceded the current operating cycle. This maintenance was based on an exhaustive review of the system and its design and licensing bases conducted during the CNP Expanded System Readiness Review. The maintenance included installation of new starting air compressors, installation of new air aftercoolers, replacement of the crankshaft oil seals, and inspection of cylinders on the AB engine (discussed further below). This maintenance was performed to enhance the reliability of the EDG engines, rather than to address performance deficiencies identified by the Maintenance Rule program, Station Blackout Reliability Program, or T/S Surveillance program. Currently, there are no outstanding corrective or preventive maintenance items that would adversely impact the availability of either EDG engine.

During the extended shut down, benchmark cylinder inspections were performed on the AB EDG engine, which had undergone approximately 450 starts and approximately 900 hours of run time since the previous cylinder inspection, based on operating histories maintained by the System Manager. The inspection revealed that the cylinders were in satisfactory condition, indicating that the accumulated starts and run time resulted in no significant wear in the cylinders or to the cylinder heads. I&M expects that extending the required completion date for SR 4.8.1.1.2.e.1 from June 27, 2001, to December 31, 2001, would result in approximately 6 additional starts and approximately 11 additional hours of run time for performance of monthly surveillance tests. This number of additional starts and hours of run time is very small when compared to the number of starts and hours of run time that occurred between the cylinder inspections. Therefore, the wear from these additional surveillance runs is expected to be negligible. I&M has no reason to believe that the wear from the additional surveillance runs would differ significantly for the CD EDG engine.

SR histories maintained by the System Manager for the Unit 2 EDGs indicate that the engines typically accumulate from approximately 70 to 230 hours of run-time between SR 4.8.1.1.2.e.1 inspections. The approximately 11 additional hours of run time for performance of monthly surveillance tests that would result from the extension would not cause the accumulated run-time between performance of the SR inspections to fall outside this range. Additionally, the SR inspection is conducted on a much higher frequency, with respect to operating hours, than the original equipment manufacturer (OEM) requires for EDG engines of this design. The OEM vendor technical manual for the CNP EDG engines recommends inspections at 1000, 4000, and 8000 hours. These intervals are significantly greater than the 230 hour maximum normal interval occurring at CNP.

Although not required by the T/S, I&M conducts quarterly analysis of the EDG engine lubricating oil. The results of these analyses provide an indicator of the condition of the EDG engines. The lubricating oil is tested for water content, which is an indication of an internal EDG engine leak, and various metal particulates (tin and/or lead), which would indicate excessive

parts wear or a bearing problem. The analysis results for the previous four years do not indicate any previous anomalies. These analyses are part of I&M's routine on-line maintenance program, and would trigger appropriate actions if abnormal results are observed.

I&M will continue conducting all other T/S SR requirements, such as monthly engine starts, fuel level checks, and fuel transfer pump checks. Additionally, all periodic preventive and predictive maintenance activities will continue during the remainder of the operating cycle. This will provide an ongoing opportunity to promptly identify and correct conditions that may impact EDG operation, and provide assurance that the EDGs will be available if needed.

Based on the information described above, the proposed extension would result in an insignificant impact on EDG engine performance, reliability, and monitoring.

C. Proposed Changes to the Station Battery Surveillance Frequencies

Description of the Current Requirements

T/S 3/4.8.2.3, "D.C. Distribution – Operating," requires two separate direct current (D.C.) bus trains (trains AB and CD) be energized and operable, with the tie breakers between these bus trains open, and each bus consisting of a 250-volt D.C. bus, 250-volt battery bank, and a full capacity charger, in Modes 1, 2, 3, and 4.

T/S 3/4.8.2.5, "D.C. Distribution – Operating – Train N Battery System," requires D.C. bus Train N be energized and operable consisting of a 250-volt D.C. bus, 250-volt battery bank, and a full capacity charger, in Modes 1, 2, and 3.

SR 4.8.2.3.2.d requires that the respective Train AB and Train CD battery bank and charger be demonstrated operable at least once per 18 months by performing a battery service test during shutdown (Modes 5 or 6). This test verifies that the respective Train AB and Train CD battery capacity is adequate to supply and maintain in operable status the actual or simulated emergency loads for the design duty cycle, which is based on a composite load profile. The composite load profile used must envelope both loss-of-coolant accident coincident with a loss-of-offsite power and station blackout load profiles. This testing is to be performed with the battery charger disconnected and the battery terminal voltage must be maintained greater than or equal to 210 volts throughout the test.

SR 4.8.2.5.2.d requires that the Train N battery bank and charger be demonstrated operable at least once per 18 months by performing a battery service test during shutdown (Modes 5 or 6). This test verifies that the Train N battery capacity is adequate to supply and maintain in operable status the actual or simulated emergency loads for its design duty cycle. This testing is to be

performed with the battery charger disconnected and the battery terminal voltage must be maintained greater than or equal to 210 volts throughout the test.

Bases for the Current Requirements

Verifying the operability of the D.C. power sources by performing T/S SRs 4.8.2.3.2.d and 4.8.2.5.2.d provides assurance that the performance of facility power sources in response to accidents analyzed in the UFSAR will remain within the CNP design and licensing basis.

The operability of the D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for the safe shutdown of the facility, and the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant D.C. power sources and distribution systems satisfy the requirements of GDC 17 of Appendix "A" to 10 CFR 50. The operability requirements for the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the D.C. power sources and associated distribution systems operable during accident conditions coincident with an assumed loss of offsite power and single failure of the onsite A.C. sources.

Within certain of the SRs for systems and components at CNP, a frequency of 18 months is specified. Many of these SRs clearly state "...once per 18 months, during shutdown," which indicates that these tests/SRs are to be performed during the refueling outages. The SRs contained in the existing T/Ss are designed to assure that the quality of equipment and components is maintained so that facility operation will be within the safety limits, and LCOs of the system will be met.

The operability of the minimum specified D.C. power sources and associated distribution systems during shutdown and refueling ensures that the facility can be maintained in the shutdown or refueling condition for extended time periods, and sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The 18-month frequency is based on ensuring sufficient capacity, capability, redundancy, and reliability of D.C. power sources to emergency safety feature systems so that the fuel, reactor coolant system, and containment design limits are not exceeded. The 18-month frequency for battery SRs is required to be performed during shutdown since it would require the D.C. electrical power subsystem to be inoperable during performance of the test. This SR frequency is consistent with the recommendations of RG 1.32, "Criteria for Safety-Related Electric Power Systems for Nuclear Power Plants," and RG 1.129, "Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," which state that battery service testing should be performed during refueling operations or at some other outage.

Need for Revision of the Requirements

SRs 4.8.2.3.2.d and 4.8.2.5.2.d can only be performed with the unit shut down. SR 4.8.2.3.2.d was last completed for the AB and the CD train battery banks on August 11, 1999, and September 15, 1999, respectively. SR 4.8.2.5.2.d was last completed for the N train battery bank on August 13, 1999. In accordance with the T/S required frequency of "at least once per 18 months," these SRs must be re-performed for the AB, CD, and N train battery banks no later than June 27, 2001, August 1, 2001, and June 29, 2001, respectively. These dates include the 25 percent extension allowed by T/S 4.0.2.

Completion of the SR for each battery bank, as described above, was scheduled based on the availability of the associated ECCS trains for maintenance. The train availability schedules were based on the overall restart schedule that was current at that time. However, restart of the unit occurred later than expected, and the projected end of the current fuel cycle extends beyond the SR due dates. As a result, a one-time extension of the SR 4.8.2.3.2.d and 4.8.2.5.2.d frequencies is needed to preclude a forced shutdown of the unit.

Description of the Proposed Change

I&M proposes to add a condition to DPR-74 to allow an extension of the Unit 2 SRs 4.8.2.3.2.d, and 4.8.2.5.2.d, which currently require that battery service tests be performed at least once per 18 months. The proposed change would allow these SRs to be completed during the next refueling outage, but no later than December 31, 2001. The proposed license condition would extend the 18-month SR intervals, which are permitted to be as long as 22.5 months based on T/S 4.0.2, to maximum one-time intervals of less than 29 calendar months. The proposed wording for the requested license condition is as follows:

"The station battery inspection and service testing Technical Specification surveillance requirements 4.8.2.3.2.d and 4.8.2.5.2.d have been extended to allow them to be performed during refueling outage 13, but no later than December 31, 2001."

Bases for the Proposed Change

The AB, CD, and N batteries are sized such that they are capable of supplying, and maintaining their associated emergency loads operable for the required period. The battery sizing calculations that analytically demonstrate that the batteries have this capability assume that the batteries have a certain capacity. As indicated in the table below, the previously measured battery capacities provide assurance that the capacity of the 2AB, 2N, and 2CD batteries will exceed that assumed in the calculations for the duration of the requested extension period.

Batt. No.	Date Installed	1996 I&M Capacity Test		1999 I&M Capacity Test		Rate of Decrease In Capacity	Approx. Age and Estimated Capacity at end of 2001	Capacity Assumed in Sizing Calc.	Margin
		Date	Cap.	Date	Cap.				
2AB	Sep. 1994	Apr. 1996	107.2%	Aug. 1999	105.67%	0.46% / yr	7.25 yrs / 104%	80.0%	24%
2N	May 1988	Apr. 1996	106.4%	Aug. 1999	101.75%	1.4% / yr	13.5 yrs / 98%	80.0%	18%
2CD	Nov. 1997	NA	NA	Sep. 1999	106.30	0% / yr	4.1 yrs / 106%	97.1%	9%

The 2AB battery demonstrated a capacity decrease rate of 0.46% / yr. during the period from April 1996 to August 1999. The manufacturer's aging curve for lead-calcium acid batteries, such as the 2AB, 2N, and 2CD batteries, is provided as Attachment 5. This curve shows that the rate of capacity decrease for the 2AB battery will remain relatively constant based on the age of the battery at the end of the extension period. Therefore, the 0.46% / yr. capacity decrease rate can be used to estimate the capacity decrease during the period of August 1999 through 2001. This results in an estimated capacity for the 2AB battery of approximately 104% at the end of the requested extension period, which is above the 80% capacity assumed in the sizing calculation.

The 2N battery demonstrated a capacity decrease rate of 1.4% / yr. during the period from April 1996 to August 1999. The manufacturer's aging curve provided as Attachment 5 shows that the rate of capacity decrease for the 2N battery will remain relatively constant based on the age of the battery at the end of the extension period. Therefore, the 1.4% / yr. capacity decrease rate can be used to estimate the capacity decrease during the period of August 1999 through 2001. This results in an estimated capacity for the 2N battery of approximately 98% at the end of the requested extension period, which is above the 80% capacity assumed in the sizing calculation.

The estimated capacity for the 2CD battery is based on the single capacity test that has been performed by I&M. This test, performed in September 1999, was a "modified performance test" in accordance with IEEE 450, 1987, "Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations," which combines the duty cycle with a constant current. Although the manufacturer conducts a performance test prior to shipment, it is not appropriate to establish a performance trend by comparing the manufacturer's test results to the CNP performance test results. The discharge rate (magnitude of current) used during testing will have a tangible impact on the effective capacity of a battery. The manufacturer's performance test uses a defined and constant discharge rate. The CNP test, however, is a modified performance test that varies the current demand, thereby, effectively, varying the discharge rate of the battery throughout the test. Although the modified performance test is an acceptable method of determining battery capacity, its results should not be expected to be comparable to the results of a constant current capacity test. Additionally, by

changing at least two parameters between the two capacity tests (i.e. age and load profile) the resultant data points are disqualified from use as trend data.

The 2CD battery will have been installed for approximately 4 years at the end of the requested extension period. The manufacturer's aging curve, provided in Attachment 5, shows that the battery capacity will remain relatively constant throughout this period. Therefore, the 106.30% capacity calculated during the September 1999 test conducted by I&M can be chosen as representative of the battery capacity that can be expected at the end of the extension period. This capacity is above the 97.1% capacity assumed in the sizing calculation. Even if the decrease rate of the oldest battery, the 2N, were applied to the 2CD, the projected capacity at the end of the extension period would be approximately 100%, which is still above the capacity assumed in the sizing calculation.

Additionally, the 2AB, 2N, and 2CD batteries passed their previous service tests, which were conducted August 11, 1999, August 13, 1999, and September 15, 1999, respectively. All other periodic testing and maintenance activities will continue and will, therefore, provide mechanisms for identifying and correcting degradation in the condition of the batteries. During the weekly SR, the specific gravity, voltage and temperature of pilot cell, and overall battery voltage are measured and logged. During the quarterly SR, all individual cell voltages, specific gravity, and temperature are measured. Battery room ambient temperature and D.C. bus voltage acceptability is verified daily. The weekly and quarterly data is monitored and trended by the system manager. Upon indication of battery deterioration, appropriate restorative action is taken in accordance with CNP procedures. CNP periodic battery testing complies with the requirements specified in IEEE 450-1987.

Although the Unit 2 250VDC System is currently classified as category "a(1)" in accordance with the CNP Maintenance Rule program, the classification did not result from Maintenance Rule failures of the batteries. As noted above, the 2AB, 2N, and 2CD batteries have successfully completed their previous capacity and service tests, and have not contributed to the "a(1)" status of the overall system.

The above considerations support the deferral of the 18-month service tests to the refueling outage as opposed to conducting an extra service test during a forced outage. The deferral of the above listed SR from June 27, 2001, the earliest of the service test due dates to expire, until the next refueling outage, but no later than December 31, 2001, would result in an insignificant impact on battery performance, reliability, and monitoring.

It should also be noted that the 97.1% capacity assumed in the sizing calculation for the 2CD battery is larger than the value of 80% capacity required in the battery capacity test of T/S SR 4.8.2.3.2.e. The battery sizing calculations were reconstituted as part of the design basis validation efforts prior to restart of the unit. The reconstituted battery sizing calculations demonstrated that a minimum capacity of 97.1% is needed for the 2CD battery to meet its design

basis, rather the T/S value. This was noted in NRC Inspection Report 50-315/2000007 (DRS); 50-316/2000007 (DRS). In accordance with NRC Administrative Letter 98-10, I&M has instituted administrative controls to preclude the use of the non-conservative T/S value. Prior to the end of refueling outage 14, I&M will eliminate the need for the administrative controls through plant modifications or through a change to the T/S.

ATTACHMENT 2 TO C0101-06

NO SIGNIFICANT HAZARDS CONSIDERATION EVALUATION

Indiana Michigan Power Company (I&M), the Licensee for Donald C. Cook Nuclear Plant (CNP) Unit 2, has evaluated this proposed amendment and determined that it does not involve a significant hazard. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

1. involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated;
2. create the possibility of a new or different kind of accident from any previously analyzed; or
3. involve a significant reduction in a margin of safety.

I&M proposes to amend Facility Operating License DPR-74 to permit a one-time extension of certain Technical Specification (T/S) Surveillance Requirement (SR) intervals. I&M proposes to extend SR intervals associated with the emergency diesel generator (EDG) engines and station batteries that are currently required to be completed beginning June 27, 2001. Nuclear Regulatory Commission approval would allow these requirements to be performed during the next refueling outage, but no later than December 31, 2001. This would preclude the need for a mid-cycle shutdown.

The affected SR for the EDG engines is SR 4.8.1.1.2.e.1. This SR requires inspection of the EDG engines at least once per 18 months. The affected SRs for the station batteries are 4.8.2.3.2.d and 4.8.2.5.2.d. These SRs require performance of a battery service test for the Train AB, Train CD, and Train N batteries at least once per 18 months.

The determination that the criteria set forth in 10 CFR 50.92 are met for this amendment request is indicated below.

1. Does the change involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated?

The proposed license conditions do not affect or create any accident initiators or precursors. As such, the proposed license conditions do not increase the probability of an accident. The proposed license conditions do not involve operation of the required electrical power sources in a manner or configuration different from those previously recognized or evaluated.

The proposed EDG engine SR revision involves deferral of the 4.8.1.1.2.e.1 requirement to the next refueling outage and does not reduce the required operable power sources of the Limiting

Condition for Operation, does not increase the allowed outage time of any required operable power supplies, and does not reduce the requirement to know that the deferred SRs could be met at all times. Deferral of the testing does not increase by itself the potential that the testing would not be met. The monthly EDG engine starts, fuel level checks, and fuel transfer pump checks will continue to be performed to provide adequate confidence that the required EDG engine will be available if needed. Therefore, it is concluded that the required A.C. sources will remain available and the previously evaluated consequences will not be increased.

The deferral of the battery service tests described above to the refueling outage does not involve any physical changes to the plant or to the manner in which the plant is operated. Therefore, the probability of an accident previously evaluated is not increased. The weekly and quarterly testing, performance monitoring by the system manager, and the current condition of the batteries (e.g., above 100 percent capacity) provide assurance that battery condition and performance will not deteriorate during the deferral period. Therefore, the consequences of the analyzed accidents for CNP will not be increased due to the deferral of these station battery SRs.

Therefore, based on the above discussion, it is concluded that the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously analyzed?

The proposed license condition does not involve a physical alteration of the EDG engines or a change to the way the A.C. power system is operated. The proposed license condition does not involve operation of the required electrical power sources in a manner or configuration different from those previously recognized or evaluated. No new failure mechanisms of the A.C. power supplies are introduced by extension of the subject SR intervals.

The proposed license conditions for deferral of the station battery SRs listed above to the refueling outage do not involve any physical changes to the plant or to the manner in which the plant D.C. power systems are operated. No new failure mechanisms will be introduced by the SR deferral.

Therefore, the proposed license condition does not create the possibility of a new or different kind of accident from any accident previously analyzed.

3. Does the change involve a significant reduction in a margin of safety?

Deferral of the specified EDG engine SR does not introduce by itself a failure mechanism, and past performance of the SR has demonstrated reliability in passing the deferred SRs. The required operable power supplies have not been reduced. Therefore, the availability of power supplies

assumed for accident mitigation is not significantly reduced and previous margins of safety are maintained.

The deferral of the station battery SRs to the refueling outage does not involve any physical changes to the plant or to the manner in which the plant is operated. Continuing weekly and quarterly testing, performance monitoring, and the current condition of the batteries provides assurance that the battery condition and performance will be acceptable during the deferral period in that degradations that may occur will be detected. Therefore, the equipment response to accident conditions during the deferral period will not be affected. Thus, the one-time deferral of these 18-month battery service test SRs does not involve a significant reduction in a margin of safety.

In summary, based upon the above evaluation, I&M has concluded that the proposed amendment involves no significant hazards consideration.

ATTACHMENT 3 TO C0101-06

ENVIRONMENTAL ASSESSMENT

Indiana Michigan Power Company (I&M) has evaluated this license amendment request against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. I&M has determined that this license amendment request meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50 that changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes an inspection or a SR, and the amendment meets the following specific criteria.

- (i) The amendment involves no significant hazards consideration.

As demonstrated in Attachment 2, the amendment does not involve a significant hazards consideration.

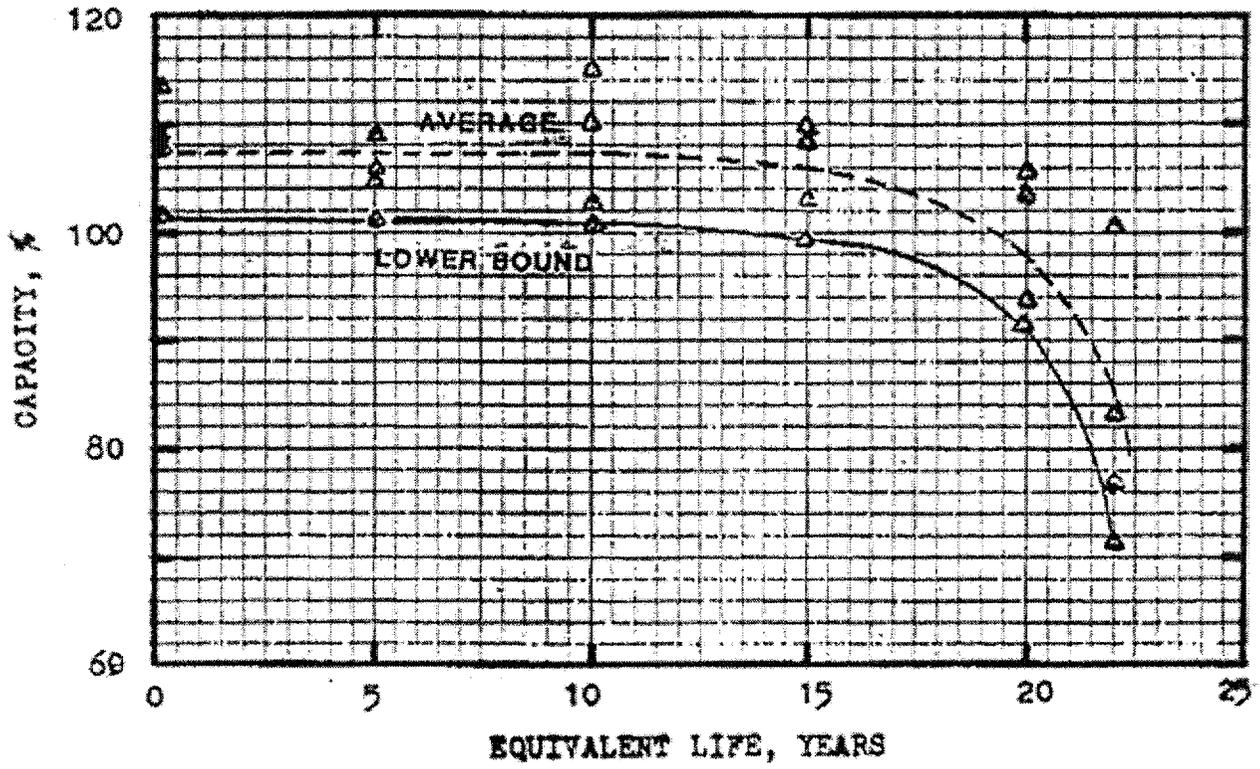
- (ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

The proposed amendment involves only an extension to certain emergency diesel generator engines and station battery SR intervals. The proposed amendment does not make physical changes to system configurations or their operation and does not result in the generation of any additional radioactive or non-radioactive effluents. Therefore, there is no significant change in the types or significant increase in the amounts of any effluents released offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed change will not result in significant changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no significant increase in individual or cumulative occupational radiation exposure resulting from this change.

ATTACHMENT 4 TO C0101-06



Manufacturer's Battery Aging Curve

ATTACHMENT 5 TO C0101-06

COMMITMENTS

The following table identifies those actions committed to by Indiana Michigan Power Company (I&M) in this submittal. Other actions discussed in the submittal represent intended or planned actions by I&M. They are described to the Nuclear Regulatory Commission (NRC) for the NRC's information and are not regulatory commitments.

Commitment	Date
I&M will eliminate the need for administrative controls to implement more conservative battery capacity requirements than are specified in SR 4.8.2.3.2.e through plant modifications or through a change to the T/S.	Prior to the end of refueling outage 14